If you are a Level 1 monitor, here are a few tips to help make your data as credible and useful as possible:

**Dissolved Oxygen**

- Please try to monitor in the morning if possible. Early morning is the time of day when dissolved oxygen levels are lowest, so we can better understand the worst conditions aquatic organisms face by monitoring at that time.

- If you find dissolved oxygen levels at or below 4 mg/L, please redo the test. If you again find such a low level, please contact your local DNR biologist by phone to alert them of a potential problem in the stream. You can find your local DNR streams biologist’s contact information on our program website: (http://watermonitoring.uwex.edu/ctymap/index.html)

- If, after adding starch to your dissolved oxygen sample, you find that the blue color appears stringy or clumpy, that’s a good indication that your starch has gone bad. Also, check other chemicals’ expiration dates annually. Let your local coordinator or Kris Stepenuck know if you need replacement starch or chemicals.

**Biotic Index**

- A question that is often asked by volunteers is “Why do so many organisms appear on the Key to Life in the River, but so few are listed on the Biotic Index data sheet?” The reason is that many aquatic macroinvertebrates do not use dissolved oxygen in the water for survival (instead they breathe atmospheric oxygen, like we do), and thus do not count in the biotic index score. If you would like to keep a record of organisms found but which are not included in the Biotic Index score, please list them in the comments section of the database.

**Streamflow**

- Do you monitor a stream that dries up at certain times of the year? If so, would you consider keeping track of its wet-dry periods? You can then enter the information to the Water Action Volunteers (WAV) online database in the comments section. With so much to be learned about climate change, tracking the wet and dry periods of streams may be able to provide valuable information about trends over the long term.

- The WAV streamflow method overestimates streamflow by about 24% on average. The WAV database will automatically correct for this overestimation, so you don't need to do anything different. However, please use a tennis ball float whenever possible to allow the correction equation to be most reliable.

**Prevent the Spread of Aquatic Invasive Species**

- If you monitor at multiple sites, please take time to brush off all dirt, remove all plants, and rinse all of your equipment with tap water between sites to avoid the spread of aquatic invasive species. Waders, nets and other non-electronic items should be rinsed and kept wet with a dilute bleach solution (1 tablespoon per gallon of water) for 10 minutes. Between site visits dry your equipment out thoroughly. It should initially dry and then remain dry for 5 consecutive days.

*Have fun,* and thanks for taking time to collect this information!

SEE REVERSE FOR LEVEL 2 TIPS...
Collectively, volunteer citizen scientists spend thousands of hours each season monitoring to help accomplish our goal of establishing trend data for Wisconsin streams. Here are some simple things you can do as a Level 2 monitor to minimize the spread of invasive species and help make sure that the data you collect are properly entered into the Surface Water Integrated Monitoring System (SWIMS) Database.

1. **Know your SWIMS station number.** Each physical location you sample is linked with a station in SWIMS and has a unique identification number (Station ID #). Knowing this number will help to ensure that your data are assigned to the correct station. Many stations have similar names, so writing your Station ID # on ALL monitoring data sheets and thermistor logs is very important.

2. **If you find dissolved oxygen levels at or below 4 mg/L, or pH is outside the range of 6-9, please check again** in a slightly different location in the stream. If you find the low results again, please recalibrate your meter and try one more time. If you still find such a low level for D.O. or a level outside of the 6-9 range for pH, please contact your local DNR biologist by phone to alert them of a potential problem in the stream. You can find your local DNR streams biologist’s contact information on our program website: [http://watermonitoring.uwex.edu/ctymap/index.html](http://watermonitoring.uwex.edu/ctymap/index.html)

3. **Double check your data after you enter them each month.** Go to your project page in SWIMS and click on the magnifying glass next to the field event you just entered. Check to be sure the data that are displayed are correct and complete. As you type in your data, if a field is not filled in correctly or completely SWIMS will not accept the entry. Going back and viewing your data is the only way to really make sure everything was saved correctly in the database.

4. **Be sure you are using the most up to date versions of the data sheet and logs, and that you fill these out completely.** The Level 2 manual and data sheets were recently updated - you can find these materials on our website at: [http://watermonitoring.uwex.edu/level2/methods_data.html](http://watermonitoring.uwex.edu/level2/methods_data.html). Please be sure to use the updated data sheets and calibration logs as every field we have included is important and is integral for the smooth function of our data quality checking system.

5. **Take good care of your equipment.** Keep the sponge in the D.O. probe chamber moist. If it does dry out, rewet the sponge and change the probe tip (after changing the tip, you will have to wait 12 hours before using it). Be sure the pH electrode stays immersed in electrode storage solution (storing the probe in distilled water is not OK). Please record all meter calibrations on your calibration logs, as well as any membrane changes or other equipment maintenance. Contact Lindsey Albright with any instrument issues or if you need additional storage solution.

6. **Ensure your site is monitored for 3-5 years.** If you cannot continue to monitor, try to find another volunteer or volunteer group to take over for you.

7. **If you monitor at multiple sites on non-connected waterbodies, please take time to rinse all of your equipment with tap or distilled water between sites to avoid the spread of aquatic invasive species.** Waders and other non-electronic items should be rinsed and kept wet with a dilute bleach solution (1-T per gallon of distilled or tap water) for 10 minutes. **Do not rinse electronic equipment with this solution! Rinse only with distilled water.** Dry your equipment out thoroughly between site visits. It should initially dry and then remain dry for 5 consecutive days before being worn in the water again.

*Have fun,* and thanks for taking time to collect this information!

SEE REVERSE FOR LEVEL 1 TIPS...