

Water Collection Procedure

March 2006 - updated January 2009

I. Safety

REMEMBER - YOUR SAFETY COMES FIRST !

- If your sample site is on a public byway:
 - ◆ Wear your orange safety vest!
 - ◆ Do not be tempted to walk down the river bank. You risk falling, and, the water there is not suitable for testing anyway.
 - ◆ After collecting water, walk to a safe area and complete your work there.
- In winter months: if the river surface is frozen, try your best to break through with a heavy object. If the ice is too thick, then give up, move on to your next site, and inform the tester.
- In addition to natural sources, the rivers are also fed by storm sewers and sewage treatment plants. While this does not pose a health risk, wash your hands after handling the samples.

II. Contamination

Even the slightest contamination can ruin our tests !

- You are collecting water samples for laboratory testing. Lab tests measure in the parts-per-million range, which means they are very sensitive and can be easily contaminated.
- Do not use your own jars or bucket. Only use materials supplied by the club.
 - ◆ Do not use kitchenware. Invisible residue from food, water softeners, soap, and dishwashers will contaminate our tests.
- Materials supplied by the club should only be used for water collection. Do not use them for household purposes.
- All materials must be clean and odor free.
 - ◆ There is a world of difference between “kitchen clean” and “laboratory clean”.
 - ◆ If in doubt about the cleanliness of our materials, thoroughly rinse them with distilled water and then air dry in a clean place, avoiding vapors from dishwasher, laundry, humidifier, and garage chemicals.
- If a lid is rusty, place a clean, plastic sandwich bag or wax paper over the jar’s mouth and then screw the lid on. Do not use aluminum foil (metal may react) or cling wrap (contains chemical coating).
- While collecting the water sample, be careful not to contaminate it:
 - ◆ Do not collect water near litter, plant/animal debris, or river banks.
 - ◆ In shallow rivers, do not drop the bucket in the water or allow it to scrape the bottom or stir up sediment/mud.
 - ◆ While raising the bucket from the river, do not let it scrape the bridge, as contaminants can fall into it.
 - ◆ Do not let the rope enter into the bucket.
 - ◆ Do not put your hands in the bucket.
 - ◆ Do not dip the glass jar into the bucket.

III. Preparation

Before you leave your house, you'll need:

- bucket w/rope
- one glass jar (w/lid) for each sample site
- thermometer
- utility tape
- felt tip marker or ballpoint pen
- wristwatch
- optional:
 - ◆ a box or container may prevent the glass jars from bouncing around in your car
 - ◆ cell phone in case you need to contact tester
 - ◆ gloves to protect hands from rope-burn

IV. Procedure

Most sample sites are selected such that you can position yourself in the center of the river. The center current provides the best water samples, because it is normally the deepest and fastest part of a river, and free of debris. It is normally easiest to stand on the downstream side of a bridge, because on the upstream side, the bucket may float under the bridge and be difficult to retrieve.

Testers expect to receive your samples by 9:00am (unless they request otherwise), so please be respectful of their time. If you are unable to make this time, please call the tester or project coordinator by Friday at the latest. If you are unable to collect on your Saturday, please call the project coordinator by Wednesday at the latest.

1. Glance upstream to check for approaching canoeists or fisherman, and then lower the bucket into the water. A full bucket of water is heavy to lift, so half is fine.
2. Raise the bucket, grab it with your hands, and swish it around to rinse the sides of the bucket. Dump out the water away from your sample site (on a nearby bank or in the grass) so as not to disturb your sample site.
3. Return to the sample site and lower the empty bucket into the water.
4. Raise the bucket. If you are standing on a roadway (such as WB1 - Beecher Avenue bridge), move to a safe, off-road area and continue the job there.
5. Place the glass jar on the ground. Holding the bucket, pour river water into the jar, filling it halfway. Tighten the lid, shake, and then empty into the river.
6. Place the glass jar on the ground. Holding the bucket, pour river water into the jar until approximately $\frac{3}{4}$ full, and tighten the lid. This is the official sample.
7. Drop the thermometer into the bucket.

8. For a label, place a large piece of utility tape on the jar. While the thermometer is adjusting to the water temperature, you can start writing your data on the label:

- your name
- today's date and time
- site ID and name (e.g. "EB1 - Churchill Woods")
- water temperature

9. Remove thermometer and empty the bucket into the river.

10. After all sites have been collected, drive the jars to the tester's house. Ring doorbell, and exchange your water samples for empty jars that you will use on your next collection date.

11. If the tester does not answer the door, leave the jars in a safe location and make a courtesy phone call to the tester to notify them the time that you left your samples on their doorstep, and to arrange for you to pick up empty jars for next time.

Passersby will often be interested in your water collecting. You can refer them to our website, where your water samples are tabulated:

<http://illinois.sierraclub.org/RPG/watermonitorproj.htm>

Remember - you are key to our successful water testing program!!

Appendix A - Sample Sites

SC = Salt Creek

EB = DuPage River - East Branch

WB = DuPage River - West Branch

All sample sites are bridges, except EB3 and EB4, which are on the shore.

ID	Name	City	GPS (lat, long)
SC 1	Prairie Path	Elmhurst	N41° 53.169' , W87° 57.571'
SC 2	Eldridge Park	Elmhurst	N41° 51.962' , W87° 57.162'
EB 1	Churchill Woods	Glen Ellyn	N41° 53.191' , W88° 2.555'
EB 2	Butterfield Rd.	Lombard	N41° 49.912' , W88° 2.858'
EB 3	Burlington Ave.	Lisle	N41° 47.707' , W88° 4.789'
EB 4	St. Joseph Creek	Lisle	N41° 48.014' , W88° 4.113'
WB 1	Beecher Ave.	Winfield	N41° 52.160' , W88° 9.781'
WB 2	Warrenville Grove	Warrenville	N41° 49.256' , W88° 10.337'
WB 3	Centennial Park	Naperville	N41° 46.265' , W88° 9.314'

Note: Traditionally, WB2 was the Prairie Path bridge southeast of the intersection of Butterfield and Batavia roads (N41° 49.496', W88° 10.735'), and was labeled "Route 56" (to avoid confusion with SC1 and EB2). Around October, 2007, the bridge was rebuilt with high rails that prevented bucket retrieval, and we permanently moved WB2 approximately 1/3 mile downstream (south) to the concrete bridge in Warrenville Grove park, the nearest safe and publicly accessible bridge. Future construction in the vicinity of WB2 may necessitate additional, temporary moves of it.