

FIELD PROCEDURE: SAMPLING SITE SKETCH MAP

EQUIPMENT NEEDED:

- pencils with erasers
- paper (pref. Rite-in-the-Rain; in a pinch, you can use the back of a data sheet)
- clipboard
- tape measure
- sighting compass
- flagging tape
- permanent marker
- If you're installing permanent monuments, you'll need the Reach Establishment Kit including: rebar & caps, spikes, sledgehammer, hacksaw, helmet, and goggles.

This procedure will guide you in drawing a simple sketch map which will help you document the location of a "point" sampling site (where, for instance, only water chemistry and flow are measured). This map will allow you and others to be consistent in sampling the same spot.

Once you've created this sketch, a copy will be filed in your stream's binder in the Streamkeepers office, and another copy will stay in your team's forms folder, so you'll be able to refer to it or make revisions as necessary each time you visit your reach. (If you do make revisions, please let staff know so they can change the copy in the office's stream binder.)

This sketch is easy!: Your goal here is just to get the information down, so straight lines, scale, and "compass trueness" are not important in the sketch, as long as you get the proper information across.

NOTE: In the instructions that follow, measurements follow the "lay of the land." So if you're measuring up a hill, you extend the tape going up the hill rather than on a level.

1. Decide roughly where your sampling site will be; see "Identify Prospective Monitoring Reaches" in the New Reach Establishment protocol. If possible, make the sampling site a place that will be easy for you and others to find and access.
2. Complete as much of the "New Site Questionnaire" as you can before going out in the field.
3. At your site, decide on a "zero-point," an easily-identified point near where your monitoring will occur, and to which exact sampling locations can be referenced (such as when you collect macroinvertebrates). Ideally this will be a prominent landmark which you can flag and draw on your map, such as a big conifer, boulder, bridge, fence post, or end of a path. Otherwise, you can install a piece of capped rebar.
4. At the top of your sketch, include:
 - Stream name, which in general is the name of the stream plus the stream-miles to the nearest tenth (but see staff regarding exceptions)
 - Date you surveyed for the map
 - First initials and last names of all map sketchers
 - An approximate North arrow
 - Approximate elevation in feet, which you should already have determined while completing the New Site Questionnaire (see New Reach Establishment protocol)
5. Draw a rough map or write directions explaining where to park, and then how to walk to the site from the parking place. Include approximate distances and compass directions as needed.
6. If not prohibited, place some kind of marker near the sampling site. Capped and flagged rebar is best (materials available at the office), or else flagging hanging from a nearby tree or bush. Mark the flagging with your site name and

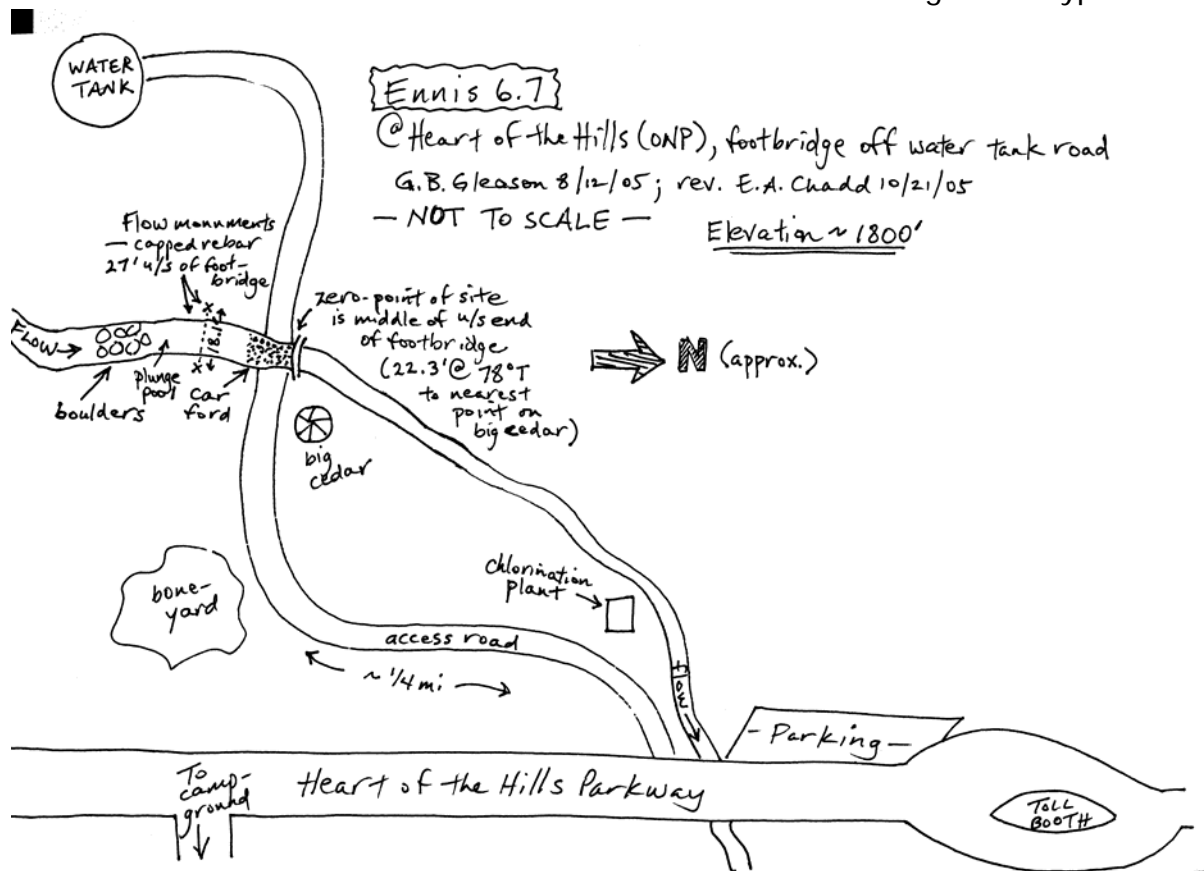
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give instructions for getting from the flagging to the central sampling point, if it's not directly across from the flagging. Try to minimize the visual pollution from the flagging, and yet make sure it's visible. Usually you can find a branch nearby to hang it from.

7. On your sketch map, reference the sampling-point to two prominent nearby landmarks, as well as your monument/flagging. Distances and directions (even approximate) are helpful.
8. Draw the stream on your sketch and indicate the direction of its flow.
9. If all measurements (e.g., flow and water chemistry) are being taken within 50 feet of the identified sampling point, that's exact enough. If they're further apart than that (for instance, if the best spot to measure flow is more than 100 feet downstream of the best spot to measure water chemistry), mark each sampling point separately.

10. Install permanent flow-monitoring monuments if you have been instructed to do so (see New Site Questionnaire and Flow protocol). These will be either rebar driven solidly into the ground above bankfull and sawed off as necessary, or spikes driven into trees. Label these monuments with flagging marked "flow lbm/rbm" to help distinguish them from the brush. If you can't put the flagging on the monument itself, hang it nearby and explain where the monument is in relation to the flagging. Include on your map:
 - a) The flow-monitoring monuments, indicated as "flow lbm" or "flow rbm", and as "rebar" or "nail in tree."
 - b) Distances and azimuths (see "Compass Use" protocol) to each monument from the landmarks described above in #6.

11. Sketch any other information you deem useful about the stream and riparian areas. Include observations about such features as vegetation types and



locations, pools and riffles, gravel bars, downed logs, and human alterations.