

Great Lakes Coastal Wetland Monitoring Program

Standard Operating Procedures for Habitat Surveys (at bird and frog survey points)

1. Samples.
 - a. The habitat survey will be conducted once at each point each year (1 sample).
 - b. Habitat surveys should be conducted in conjunction with bird surveys to economize on travel time. When an assistant is available, as is typically the case when working in pairs, then the assistant can conduct the habitat survey at the same time that the other person is conducting the bird survey.
 - c. Conduct the entire habitat survey while standing at the same location used for bird and/or frog surveys, or by traveling reasonably short distances from the survey location for better vantage. You do not need to travel into the plot(s) to complete the habitat survey.
 - d. Often observers will not be able to view the entire survey plot(s) due to visual obstructions of various kinds, including the inability to access the wetland because it is located on private land. When this happens, make your best guess based on what you can see.
 - e. Habitat surveys are meant to be rapid assessment estimates; once familiar with the method and definitions, a typical habitat survey for a single station should take no more than a few minutes to complete.
2. Sample period.
 - a. Habitat surveys are best conducted in conjunction with the first bird survey visit, typically in late-May to mid-June. At this time, marsh vegetation has grown enough to complete a meaningful habitat survey but has not grown so tall to obscure observing all or hopefully most of the survey plot(s).
 - b. It is acceptable, but potentially more challenging, to conduct habitat surveys in conjunction with the second bird survey visit, or at any other time, if required. There will be some points where vegetation development is delayed, and these points may best be surveyed in conjunction with the second bird survey visit, so please use your judgment to determine the best timing of habitat surveys.
 - c. For points that are surveyed only for frogs, and not for birds, a separate visit during daylight hours will be required to complete the habitat survey. This is best done when in the general area in conjunction with the first bird survey visit, but see exceptions in 2a and 2b immediately above.
3. Before (or just after) the survey. Fill out the following:
 - a. Day: two-digit day of the month, 01-31.
 - b. Month: two-digit month as a number, May = 05, June = 06, July = 07.
 - c. Year.
 - d. Site #: the wetland number, i.e., the four digit number identifying the site (use zeros in front to make up four digits; e.g., site 792 = 0792).
 - e. Amphibian Survey Y/N: enter "Y" if the point is surveyed for frogs; enter "N" if the point is not.
 - f. Bird Survey Y/N: enter "Y" if the point is surveyed for birds; enter "N" if the point is not.
 - g. Point ID# [for Amphibian Survey]: the point number within a particular wetland site, assigned as a single-digit number such as 1, 2, 3, etc., where the point count is conducted.
 - h. Point ID# [for Bird Survey]: the point number within a particular wetland site, assigned as a single-digit number such as 1, 2, 3, etc., where the point count is conducted.
 - i. Name: First initial and last name with no spaces, e.g., DTozer, BHowe.
4. During the survey.
 - a. See "Habitat definitions" below for some useful information for understanding particular terms used on the habitat survey field sheet. More detailed *general* guidance for completing habitat surveys can be found in "Marsh Monitoring Program Participant's Handbook Getting Started," although keep in mind that the instructions in that handbook are specific to surveying volunteer half circle points.
 - b. Make a sketch (even if it's a very rough one) in the map section of the habitat survey field form to help visualize the spatial extent of the different habitat features within the plot(s). This sketch is also often critical for correcting "odd" values after the field season.
 - c. Record the compass bearing (0-360°) that the observer faced in order to conduct the point count. Use zeros in front to make up the three digits (e.g., 005, 090).
 - d. Estimate the proportion (%) of the forward-facing half-circle plot that is covered by each of the different habitat features listed in **section A** and enter the information in the FRONT column, ensuring that the

sum of all of the proportions in the column equals 100%. Repeat the process for the full circle plot, which includes the forward-facing and rear-facing half circle plots, and enter the information in the ALL column. If you are unsure which habitat feature applies, then make your best guess. Note that when entering proportions they need not be padded with leading zeros as long as they are right-justified.

- e. Color in the appropriate bubbles in response to questions in sections **B through G**. If you are unsure at any time, then make your best guess. Note that **sections H and I** can be ignored for now, as methods are being developing for these.
- f. Estimate the proportion (%) of the total herbaceous emergent vegetation cover within the forward-facing half-circle plot that is occupied by each dominant emergent vegetation species and enter the information in the FRONT column of **section G**, ensuring that the sum of all of the proportions in the column does not exceed 100%. Repeat the process for the full circle plot, which includes the forward-facing and rear-facing half circle plots, and enter the information in the ALL column. Note that if there are many dominant emergent vegetation species, then only record data for the four most common ones.

5. Habitat definitions.

- a. **Herbaceous emergent vegetation cover.** Non-woody plants that are rooted in the marsh bottom, but rise up and out of the water. Commonly-occurring examples are cattails, grasses, sedges.
- b. **Large patches of open water / floating plants.** Pools of water that are at least approximately 2 x 2 m with little if any emergent vegetation but potentially with floating vegetation. As a rule of thumb, if you could at least float a small canoe in it (and maybe even paddle around a little), it probably belongs in this category.
- c. **Wetland permanency.**
 - i. *permanent* - almost never dries up; water is usually quite deep (knee to chest deep).
 - ii. *semi-permanent* - can dry up in some years of low precipitation (or if water level is periodically drawn down); water is usually fairly shallow (not much more than knee deep).
 - iii. *seasonal* - usually flooded in spring and early summer but tends to dry up in late summer or in dry years. Even when flooded, the water is shallow (not much more than calf deep).
- d. **Overall marsh size.**
 - i. *tiny* - between 1.5 and 2.5 hectares (3.5-6 acres).
 - ii. *small* - between 2.5 and 5 hectares (6-12 acres).
 - iii. *medium* - between 5 and 25 hectares (12-60 acres).
 - iv. *large* - between 25 and 50 hectares (60-125 acres).
 - v. *huge* - greater than 50 hectares (>120 acres).

(recall that 1 ha is 100 m x 100 m, and that a 100-m-radius-full-circle is 3.1 ha)
- e. **Interspersion.** Please ignore for now. Methods are being developing for this.
- f. **Water depth.** Please ignore for now. Methods are being developing for this.
- g. **Dominant emergent vegetation.** Any species that accounts for more than ~10% of the total herbaceous emergent vegetation cover.

6. Data entry.

- a. Manual data entry is not required. The handwriting on the field forms is readable by Teleform Scanning software and associated hardware by Bird Studies Canada in Port Rowan, Ontario.
- b. At the end of each field season, each regional team will retain a scanned backup copy of all habitat survey field forms, ideally stored on multiple computers. Each regional team will also email Doug Tozer (dtozer@birdscanada.org) their scanned backup copy to further safeguard against loss of files.
- c. After satisfactory scanned backup copies have been retained and stored, each regional team will mail the original hard copies of all of their habitat survey field forms to the following:

Doug Tozer
P.O. Box 160 (Courier: 115 Front Street)
Port Rowan, Ontario, Canada
N0E 1M0

- d. If mailing costs are prohibitive, it is permissible for a regional team to hand-deliver the original hard copies to Doug Tozer at the annual winter planning meeting.
- e. Note that the original hard copies need to be sent because the scanning process works best on the originals.