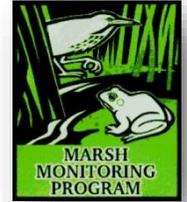


## Establishing your Marsh Monitoring Program Route

### What do you need to know.

**Where Can I Set Up a Route?** There are a few things you need to consider before establishing your route. It is helpful if you can obtain a detailed topographic map of the area you are interested in surveying.



### When setting up a route, consider the following:

- Establish routes only in marsh habitat. Marsh habitat is dominated by non-woody emergent plants such as cattails, rushes, reeds, grasses or sedges intermingled with shallow open water (see box below). Marshes can be found within other habitats such as along the edge of lakes and rivers and as part of other wetland types (e.g. swamps and bogs) but stations must be established in areas dominated (i.e. greater than 50%) by marsh characteristics.
- Survey routes consist of as few as 1 or up to as many as 8 sample stations.
- In smaller or less accessible marshes, it may be feasible to establish only 1 or 2 stations. This is OK. Small marshes are entirely acceptable, provided that marsh habitat predominates within your 100-metre radius semi-circle. Indeed, surveys of small marshes are very much needed to help determine the effects of marsh size on species diversity and abundance. If all of the marshes in your region are small, you can design a roadside route encompassing several scattered marshes, each with one or more stations.
- In very large marshes, several different routes can be set up in the same marsh by one or more volunteers as long as the sample stations do not overlap.
- Amphibian stations should be separated by at least 500 metres (550 yards) in order to minimize the possibility that individuals or choruses will be sampled twice. Amphibian survey stations can be back to back (eg. One facing east and a second facing west) but a separate habitat form must be filled out for each station.
- Marsh bird survey stations should be separated by at least 250 metres (275 yards). Because a broadcast tape is used Marsh bird survey stations cannot be back-to-back.
- While there is no maximum distance between stations, you need to be able to complete your route in one evening. We recommend that you locate your route within a reasonable distance of where you will spend the night.
- Remember to obtain permission from the landowner before entering private property. Don't hesitate to contact us for help in obtaining the landowner's permission.
- Finally, contact us to let us know where you have established your route. This will help us to ensure that no one else selects the same marsh for their route.

### What is a Marsh?

*A marsh is a low-lying wetland with water up to a depth of 2 metres (6 feet). The water can be still or slowly moving, permanent or temporary. Small numbers of trees or shrubs may occur but the common vegetation consists of a variety of plants such as cattails, rushes, reeds, grasses or sedges. In open water areas submerged and floating aquatic plants such as lily pads will often flourish. Classic examples of marshes include cattail marshes or wet meadows.*



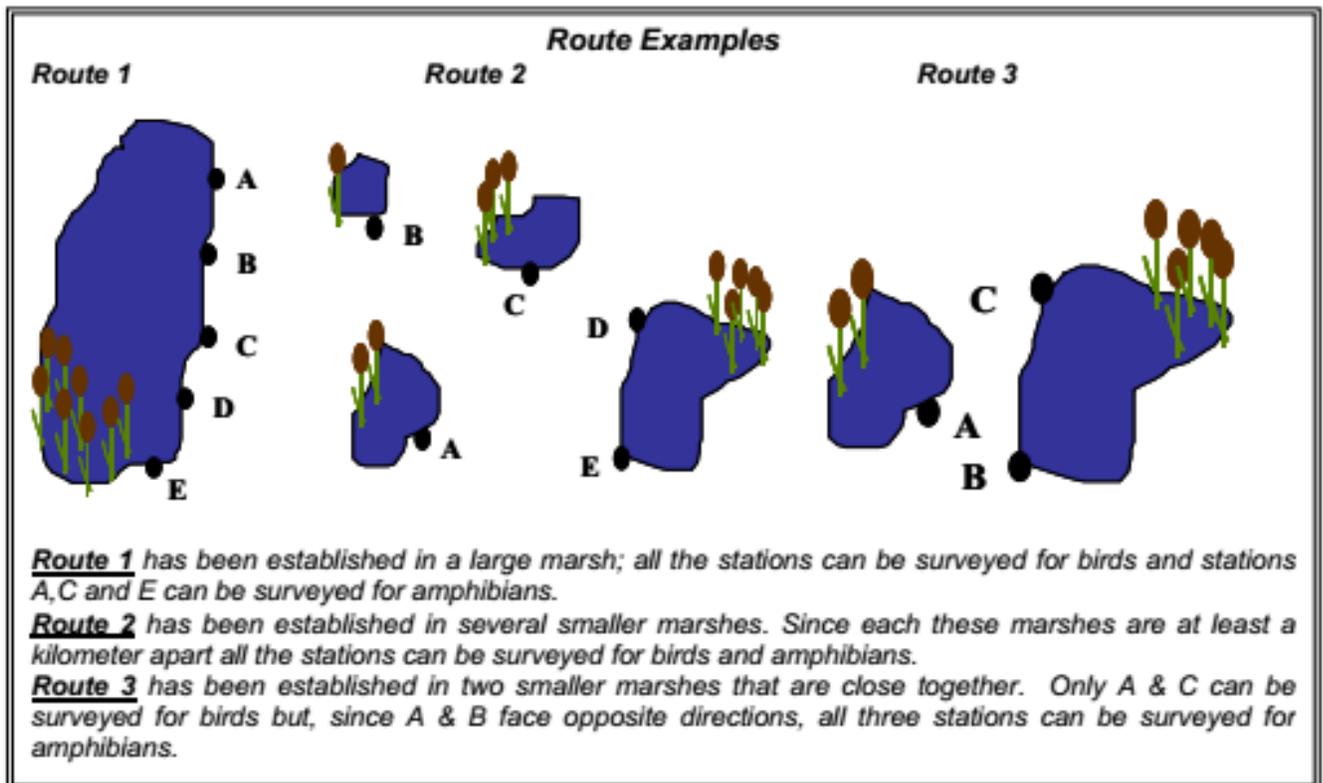
**Wet Meadow (grasses or sedges) Marsh**



**Tall Emergent Marsh**

**I've Selected a Route — How do I Set Up the Stations?** You should spend some time during daylight hours scouting for suitable sample stations and familiarizing yourself with the unique qualities of your marsh.

- Many routes can be surveyed by walking along the marsh edge. Stations along roadsides are fine as long as traffic volume during the evening is light (preferably less than 5 vehicles per 10 minutes). If you prefer to survey stations accessible only by boat or canoe, we heartily encourage you! In any case, you may find that rubber boots (or perhaps waders) are useful.
- If you are doing both amphibian and bird surveys along the same route, **try to do the two surveys at the same stations**. Because of spacing differences between the two kinds of surveys, you may be able to use every other bird station in order to space your amphibian stations out as required.
- Keep in mind that the amphibian surveys will be done after dark, so easy access to your stations will be an important consideration. Wear bright or reflective clothing if surveying along roadsides!
- When you visit a potential station, assess the habitat within the sample area. You should orient the station so as to maximize the amount of marsh being sampled. At the same time, your stations should be representative of the entire marsh. **Please choose station locations based on availability of marsh characteristics**. Do not choose a location because you know or suspect certain birds or amphibian species are present or if you believe it is a highly active marsh.
- Stations should be situated so that you can see and hear as much of the sample area as possible. For this reason, **it is useful to pick a slightly elevated focal point**. It is OK if shrubs and trees block your view of parts of the sample area, as long as the entire sample area can be surveyed by ear. Remember that visibility can be a problem when cattails are well grown in late June.



### **Measuring Your Pace**

Measure exact distances if you can. To do so you can use your vehicle (on a roadside route), a 100m measuring tape or a GPS. Otherwise, a good measure of distance can be obtained by counting paces. Before you establish your route, measure your pace. To do this, mark a distance of 50 metres (or 50 yards) on the ground. Walk this distance in your normal stride, counting every stride. Record this number. Now, when you set up your stations, you merely keep track of the number of strides you take for each distance interval.