

Appendix M: Location

There are two types of location reporting for the Atlas. The first is reporting the location of your atlassing session (checklist or point count), while the second involves reporting the precise location of a rare species or a breeding colony of a colonial species.

Reporting location for an atlassing session

If you are not using the app, a simple way of keeping track of atlassing locations is to mark them in pencil on a printed copy of your 10-km square map or use a dry erase marker on a laminated version for later data entry. Once you have entered the data to the NatureCounts website, you could erase the marks. When you are entering your data online you will have the ability to indicate where you atlassed through a Google Maps interface on NatureCounts. See [Appendix N](#) for a video on how to enter your data on the NatureCounts website. The interface will allow you to zoom in to an Atlas square and choose one of five “observation types”: single location, travelling count, area search, incidental or entire square.

Single location: Indicate a single location on the map where the observations were made. Choose this option if you made a stationary count (such as a 10 minute count of birds from a boat launch), or if your observations were made in a small area, covering less than 30 m in any direction (such as your yard).

Travelling count: Draw lines to indicate the path you took during your atlassing session – distance is automatically calculated on the website. This is a good option if you made observations while walking along a road or a path.

Area Search: If your checklist is restricted to a particular area, such as a woodlot, wetland or field, you can draw lines around the boundaries of the area you surveyed on the data entry website. The area of the polygon you draw is automatically calculated.

Entire square: Select the entire square (not recommended). Observations entered at the square level cannot be linked to habitat, whereas the previous options tie observations to habitat, allowing for a better understanding of bird-habitat relationships. Choose this option if a landowner indicates that they do not want observations tied to their property.

If you are using the NatureCounts app to enter your data, your location will be automatically recorded by the app, and you will select the observation type on the app. [See this link](#) for instructions on how to use the app for data collection.

Reporting location of Rare or Colonial species records

If you are using the app, you will be prompted to provide details on rare and colonial species records (see [appendix K](#)). A future upgrade of the app will allow you to define the location by clicking on a map. But until that upgrade is operating (hopefully in the spring of 2021), you should either determine your coordinates using a GPS or phone app, or determine the UTM

coordinates using an Atlas square map (see below). Please record the coordinates of rare species or breeding colony locations as precisely as possible while at the site. While there is an opportunity to mark the location of such species on a Google Map when entering data online, noting the location at the site will ensure you do not accidentally select the wrong location should there be a delay between the sighting and data entry.

Recording UTM coordinates

Atlas squares are based on the Universal Transverse Mercator (UTM) grid. UTM coordinates are composed of a zone designation and two numbers recorded in meters; the first is an 'Easting' and the second is a 'Northing'. The Easting is always reported before the Northing.

Using a Square Map to determine UTM coordinates

It is straight-forward to determine the UTM coordinates of a location by using Atlas Square Maps as shown in Figure M1. The 1 km Eastings are shown along the bottom of the map and increase from left to right. The 1 km Northings are shown along the left border of the map and increase towards the top of the map. Since UTM's are recorded in meters the 1 km designations always end in "000". These maps also have 100 m "tick" marks between the 1 km grid lines. To determine the appropriate Easting for a location, place a ruler vertically across the map to determine which mark on the bottom of the map is closest to the location. To determine the appropriate 100 m Northing, place the ruler horizontally across the map in the same manner. Always record the Easting *before* the Northing, which you can remember with the rule that an Easting is always *smaller* than a Northing.

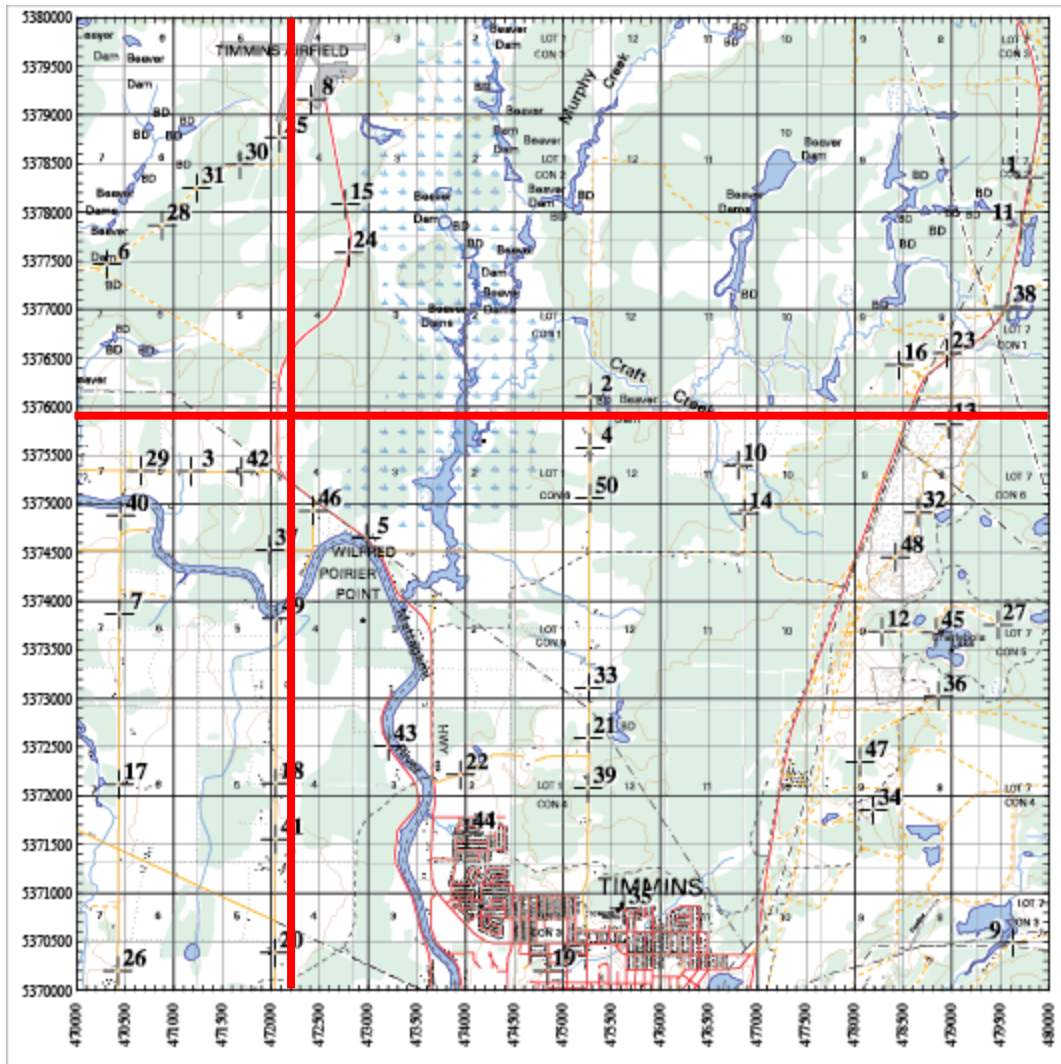


Figure M1. Example of an Atlas square map (17TMP77). Along the bottom, Eastings are indicated for every 1000 meters (one kilometer) with grid lines extending from every kilometer and tick marks at every 100 meters. Along the left side, Northings are indicated for every 1000 meters (one kilometer) with grid lines extending from every kilometer and tick marks at every 100 meters. The UTM coordinates corresponding to the intersection of the red lines are 472200 (Easting) and 5375900 (Northing).

Using a GPS to determine UTM

If you have a GPS unit, record the location while you are on site. Make sure you set the device to the **NAD83** datum (usually under navigation setup or something similar) when using UTM. If the wrong map datum is used, the locations of nests, colonies or point counts can be off by as much as 200 meters! Using any other map datum will most likely provide incorrect (and therefore unusable) coordinates, and this makes future analyses of bird-habitat relationships very difficult. Please read your GPS owner's manual for more instruction on how to set the map datum. An internet search is often a quick way to look up how to change the settings on your specific device.

When you take a GPS reading, ensure the device's reported accuracy is 100 m or less (sometimes you have to give it a few seconds to acquire enough signals), please record the 2-character Zone designation (a value between 15 and 18), as well as all 6 digits of the Easting and all 7 digits of the Northing. (If your GPS unit gives you 7 digits for the Easting, do not record the initial "0".) If you do not have a GPS unit, use your square map to determine the coordinates of your location to the nearest 100 meters.

Using a GPS to determine what square you are in

If you have a GPS unit, set it to display coordinates in UTM format and select Map Datum NAD83. If you know which 100-km block ([Figure 1](#) in the Instructions for General Atlassing) you are in, you can determine the other digits of the square number by reading the zone and the 5th number from the right of the easting and northing. Make sure you read the Easting *before* the Northing, which you can remember with the rule that an Easting is always *smaller* than a Northing.

Example: You are in Point Pelee National Park, which you know is in block LG, and your GPS reads:

Zone: 17T

Easting 374700

Northing 4643300

You immediately know you are in square 17TLG74.

Atlassing at the edge of a square

Atlassing very close to the boundary of a square may be challenging. You may find it difficult to know exactly which square you are in at times. It is worth making note of landmarks that help determine which square you are in ahead of time, or use your GPS as indicated in "Using a GPS to determine what square you are in". Using a square map for reference, you can ensure that you are within the square boundaries by keeping your UTM coordinates within the ranges shown on the map. For the map shown in Figure 1 this would correspond to Eastings between 470000-480000mE and Northings between 5370000-5380000mN.

If, while atlassing near the square boundary in square A, you see a noteworthy bird in square B, make a note and add that as an incidental record in square B, but do not include it on your square A checklist.