

<u>Maps</u>

#### BEFORE GOING INTO THE WOODS, ALWAYS DETERMINE A SAFETY PLAN AND RECORD YOUR COMPASS BEARINGS. DON'T FORGET TO SHARE THEM WITH SOMEONE WHO IS NOT IN THE FIELD WITH YOU.

#### **PLEASE NOTE:**

If a boundary line is needed due to legal proceedings, a surveyed line may be required and a professional's advise should be sought. Many jurisdictions across North America have similar requests or laws:

"Old boundary evidence such as wire fences and tree blazes should always be preserved. If you are re-blazing the line, old blazes should never be destroyed. Rather, mark the tree above or below the existing blaze. Painting the blazes with bright red paint increases the visibility of the line."

When looking to reestablish boundary lines, look for, and identify as much old signs as you can. Flag these signs. Ribbon is inexpensive and can easily be removed if placed in the wrong position. Only when you feel confident in the line you have marked should you consider more permanent markings.

## STEP ONE: FINDING A PROPERTY'S BOUNDARY LINE INFORMATION

#### **Deeds and Surveys**

Properties on Prince Edward Island are usually referenced by a PID (Property Identification) Number. This number can be found on property tax bills. Deeds can be found at the Provincial Registrars Offices located in Charlottetown (for Kings and Queens Country) and Summerside (for Prince County). They will include some form of property description, often Schedule A (a simple

meets and bounds description to a legal survey with coordinates, azimuths and distances in between). The key is to use this available information to find a starting point for the property and have a description of where the property is situated.

Many forms of maps exist. Old map books like the reproduced *Meachams Atlas 1880* and *Cummins Atlas 1928* are sometimes available at <u>www.islandimagined.ca</u>. The Province also offers interactive maps at <u>www.gov.pe.ca/maps/</u>. It is very important to remember that these maps are geographic representations of where things are located and are not legal surveys. Although surveys and aerial photographs may have been used in their production, they are not considered to be 100% accurate.

Maps are usually quite reliable to find road intersections, field edges and large water features. Often times, fields and timber harvests followed boundary lines and are discernable on aerial photos.

## GPS/GIS

<u>GPS</u> - Geographic Positioning System is a satellite-based radionavigation system that provides geolocation and time information to a GPS receiver. The number of satellites, strength of signal, and capacity of the GPS unit can all contribute to the accuracy of the projected location. GPS units could be accurate anywhere from within 100 metres to submillimeter. For mapping purposes, the accuracy is often referred to as "Survey Grade."

<u>GIS</u> - Geographic Information System is, in essence, a digital/electronic map that can be used to view and calculate positions on the earth. Data is calculated and projected onto a surface. An issue that often occurs: data may be collected or displayed in different projections and therefore as a result, different datasets displayed on the same surface may not always line up. GIS, as with maps, are a geographic representation and may not be 100% accurate.

Today's electronics can combine these two technologies into one application enabling us to see where a GPS thinks we are on a GIS map in real time.

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# STEP TWO: HOW TO FIND BOUNDARY LINES IN THE FIELD

Go to the starting point that was identified during Step One, and start looking for signs of the old boundary line. Begin where you think it should be (this could be a GPS location as well) and then slowly work away from that point in concentric cirlces until you find a reliable sign or feature to work from.

## <u>Survey Pins, Posts and Jig Poles</u>

The key to finding boundary lines in the field is having a known starting point. Surveyors also do this by using registered monuments or "Survey Grade" GPS. When a property gets surveyed, the surveyor will usually mark corners or turning points with a **survey pin** placed in the ground. **Survey posts** can also be used.

Today, pressure treated wood or metal stakes are common for survey posts, while in the past, they may have been metal or cedar.

Survey pins placed in the ground may have a post placed close by to help with locating it. Or another tool commonly used to help with location is a "**jig pole**" (basically a stick, tree stem, or stake with lots of ribbons and/or paint to make it visible).





### <u>Fences</u>

During early land clearing operations, stones were removed from fields and moved to the edges. Often these field edges followed the property lines.

Often, wire fences ran along boundary lines. These old fences can now be found as wire protruding from trees as the trees have grown up and around the wire over the years.

Furthermore, roads and ditches may have been created between neighbours along boundary lines. Later, after field abandonment, forest grew on these sites and these remnant features can be found running in straight lines



### <u>Cut Lines</u>

On most occasions, when a boundary line was established and maintained, a 2-4 ft path was cleared along the line to facilitate movement and visibility. Small trees and branches up to 8 ft high were removed.

### Signs of this could be:

- One side of the tree stems cleaned of branches or cut off branch stems on trunk.
- Small stumps or logs along path with saw cuts of marks along the side of larger tree trunks.

## Tree Blazes and Flagging Tape

Often after a boundary line was surveyed or established, it was marked between corners with **tree blazes**. These blazes tended to be 6-7 inches long, 3-4 inches wide, and 4-5 ft off the ground. Often these blazes were painted with **red paint**, and the number of blazes on each tree depended on their position on the line. For example, a tree in the middle of the line would have blaze marks on four sides, while a tree on the side of the line would have only 3 (one to the inside line and one on either side of the tree indicating the direction of travel).

**Flagging tape** has a lot of uses. For boundary lines, trees would be marked along the direction of travel. The tap can be a single band wrapped around the tree stem, or a hanging ribbon. Corners are marked with three pieces of flagging tape on a single stem, while turning points are marked with two pieces.

Following flagging tape is less accurate than following tree blazes as flagging tape is often placed on tress close to the line, but may not be directly on the line. They are not as permanent as blazes and some tape may have been left for other purposes in the same area.



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# STEP THREE: HOW TO FOLLOW A BOUNDARY LINE IN THE FIELD

When following or re-establishing a boundary line, you will often use a combination of techniques:



#### <u>Using a Compass</u>

In many cases, the boundary line you wish to follow may be parallel or perpendicular to another feature in the area you are working. You can measure the bearing/azimuth (the angle between North, measured clockwise around the observer's horizon, and either the sun or moon) of the other feature and use it to calculate the direction you wish to follow. Sight your compass from your starting point and follow that direction. Continually check backwards to confirm you are traveling straight.

### **GPS Units**

Use a real time GPS/GIS software tool to monitor where you are going. This could be a GPS unit like Garmin, or your phone with location turned on, or even a GPS watch. Technology has advanced quite a bit with personal devices such as cellphones and their GPS capabilities. And with the Avenza mapping system now available to Conservation Guardians, accurate GPS location is simple and affordable.





#### <u>Signs</u>

Not signs in the traditional sense, but signs and markings of past boundary lines (such as blazes, fences or cut marks, as mentioned previously).

## Eyeball - Does it look and feel right?

Constantly look for confirmation and signs of an old boundary line. Where did you end up while following your compass? Where does the GPS place you?



### How to go around something while following the line, A.K.A.Boxing



When walking a boundary line, you may come across a pond or an area that you are unable to walk through. If this occurs, there is a way to go around an obstruction while not losing the boundary line called "boxing." Boxing is as it sounds, you treat the obstruction as if it was a square and use ninety degree turns to move around the obstacle. To do this, you must first pick a target on the opposite side of the obstacle as your goal to get to. Then flag your starting position and walk a line to the "corner" of the "box", turning ninety degrees once there and walking another line , following this technique until you reach your target.

Once there, check you back bearing with your compass, or your tracks on you GPS to make sure you are lined up with your starting point.

# ACKNOWLEDGMENTS

Island Nature Trust would like to give a big thanks to Mark Arsenault from the Department of Forest Fish and Wildlife for the great job he did in walking Conservation Guardians and staff alike through Boundary Blazing and Identification.

> FOR MORE INFORMATION, PLEASE CONTACT US!





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