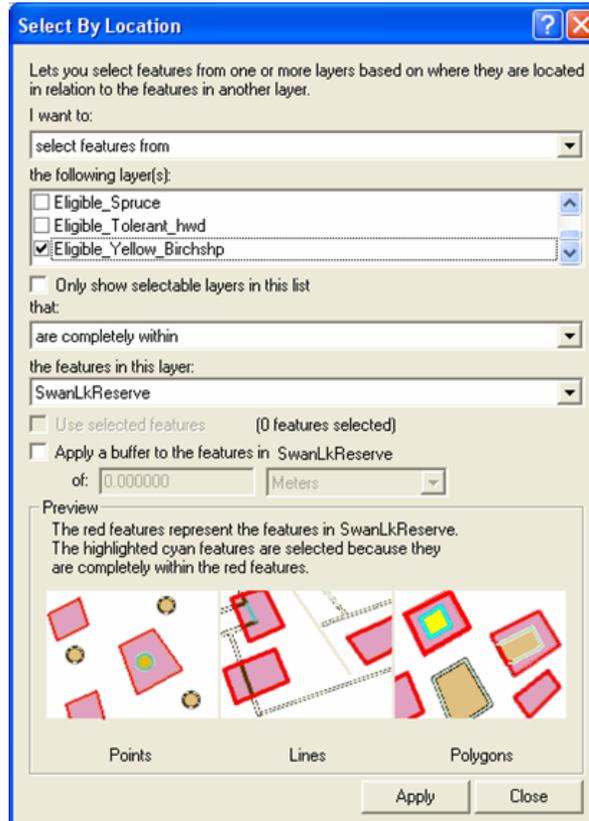# TREE TIPS

Technical Notes

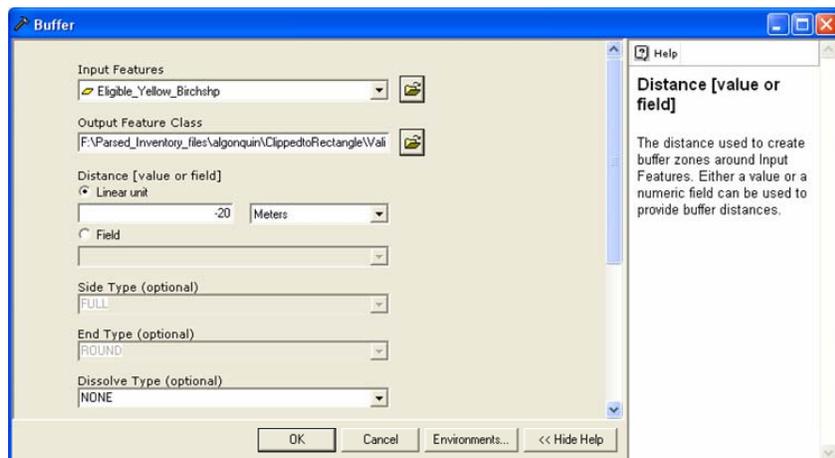**CREATING RANDOM POINT SAMPLES IN POLYGONS FOR PRISM CRUISING**
ArcGIS 9

ISOLATING AND BUFFERING POLYGONS

1. Run a selection query to focus on desired polygons.

2. Open ArcToolbox. Double click "Analysis Tools", then "Proximity", and lastly "Buffer" which will open the Buffer Wizard.

3. Set the input shapefile, the one with the selected features, and the buffer distance (Positive numbers for an exterior buffer, negative numbers for an interior buffer). Also set the correct units for the buffer distance.

   - Although there is no spot to tell the wizard to use the selected features, the buffer wizard will only buffer the selected features.

Step 1

Step 2

Ontario   Tembec   Natural Resources Canada   Ressources naturelles Canada
Canadian Forest Service   Service canadien des forêts
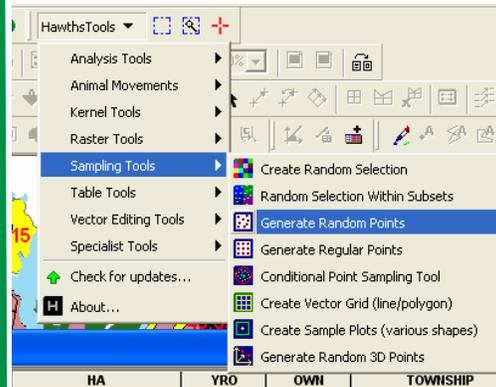
GENERATING RANDOM POINTS

4. Open the Attribute Table

5. By looking at the HA field, select the polygons that fall within the classes outlined in Table 1. Select only the polygons the fall within one single class.

   - To select polygons in the Attribute table, left click in the left margin beside the record.

6. Open the Hawths Tools menu, move the mouse pointer to "Sampling Tools", then left click on "Generate Random Points".

7. Set the input layer to the buffer shapefile created, check the "Use Selected Features Only" box, check the "Prevent Points…" box and set to the water shape-file so that no points are generated in the water. Next, check the "Enforce Minimum Distance…" box to set the threshold for how close the generated points can be. After that, select the "Generate this number of points per poly-gon" button and set the "Polygon Unique Id field" to the field containing the stand number and set the "…number of points per polygon" to the class cho-sen from Table 1. Lastly, set the path to the desired location for the new point shapefile and set the name of the new point shapefile.

Table 1: Stand Sample Parametres

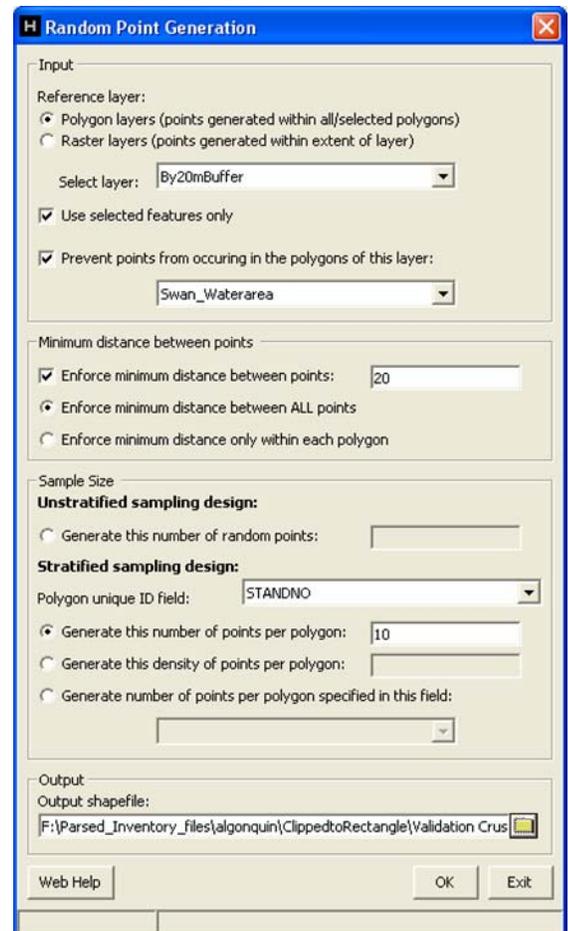| Stand Size	# of Plots	Station Spacing
<10 ha	10	20
10-20 ha	20	20
>20 ha	20	40

Step 5

Step 6

Hawths Tools

www.spatialecology.ca

DNR Garmin

www.dnr.state.mn.us/mis/gis/tools/arcview/extensions/DNRGarmin/DNRGarmin.html

or search DNR Garmin

Step 7

CREATING UNIQUE ID NUMBERS

8. Open the Attribute table for the Random Sample point shapefile that was just created.

9. Click on the "Options" menu in the lower left portion of the window and "Add Field".

10. Create a Short Integer field named UniqueID

11. Select all the points with the same stand number.

12. Right Click on the UniqueID title and select calculate

13. Load the sequential ID.cal then press OK*

14. Follow Steps 1 through 4 to create a unique ID for the points within each selected stand.

15. Add a text Field with a length of 25 characters and call it "Ident"

16. Calculate the values for this field, uncheck "Advanced" to clear the other formula and input this formula:

[STANDNO] & "_" & [UniqueID]

ADDING POINTS TO YOUR GARMIN GPS

17. Plug your Garmin GPS into your computer

18. Open DNR Garmin

19. Click the File Menu, move the mouse pointer over "Load From", then "File" and finally choose the Random Points shapefile.

20. Click the Waypoint Menu and then click "Upload" The waypoints should now be in your GPS unit with the records in the "Ident" field as the name.
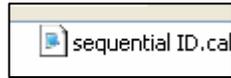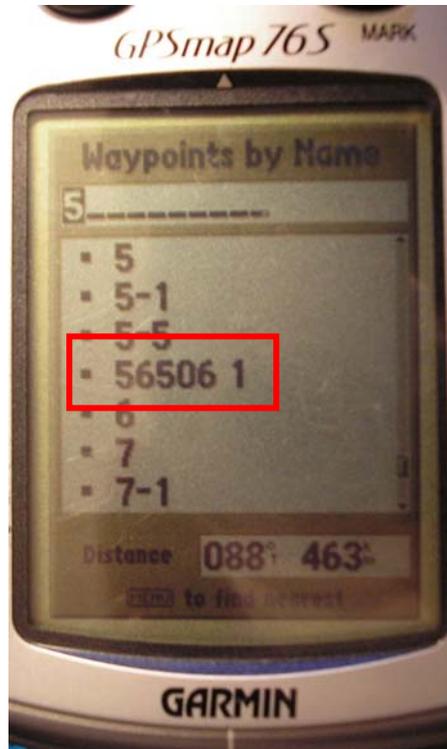

Step 11
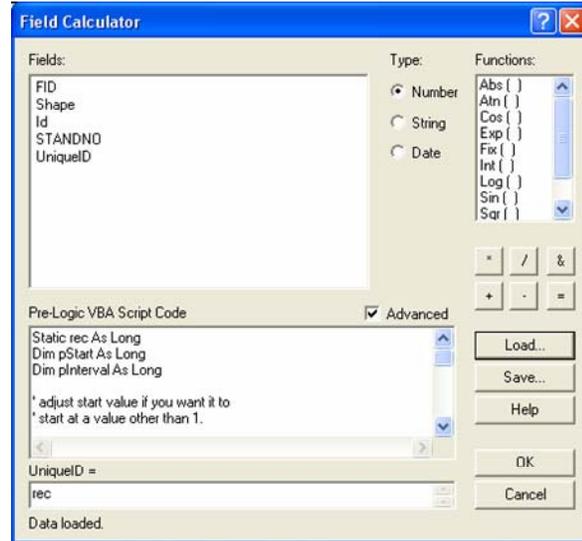
Step 11
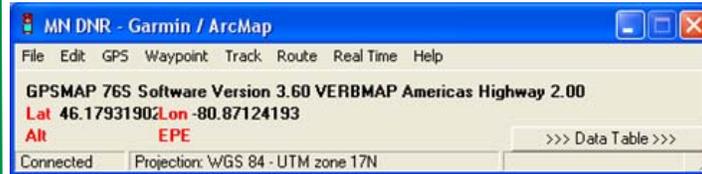
Step 17

Step 20

* Sequential ID formula:

```
Static rec As Long
Dim pStart As Long
Dim pInterval As Long

' adjust start value if you want it to
' start at a value other than 1.
' For example, 1000.
' ===========================
pStart = 1
' adjust interval value if you want it to
' start at a value other than 1.
' For example, 2.
' ===========================
pInterval = 1
If (rec = 0) Then
rec = pStart
Else
rec = rec + pInterval
End If
__esri_field_calculator_splitter__
rec
```