

Riparian Management Course

Session 4

Instructions for Measuring Shapes and Lines Using Google Earth Pro

Background to Google Earth Pro

Google Earth Pro is a **free** online GIS software that allows you to observe locations across the world at the touch of a button, in just seconds. It has the same basic functions as Google Maps, just with enhanced features and functionality.

Purpose of this Activity

Measuring shapes and lines while creating a planting design in Google Earth Pro will give you more specific details about your planting areas when developing a management plan. In addition to being useful in determining seedlings to be planted in a particular area, these tools can also be used for other land use planning such as measuring grazing areas, and determining the length of fencing to be installed.

This document is supplementary to the video titled “Measuring Shapes and Lines Using Google Earth Pro”. Together, the video and this document will help you:

1. Measure features in and around your riparian area with ruler tool
2. Find the area of your riparian management areas
3. Determine seedlings to be planted in a particular area
4. Change the color of lines, polygons and other drawings on google earth pro

Measure features in and around your riparian area

On the map you developed after session 1, select an area and/or feature that you would like measure. To measure a feature:

1. Identify the ‘ruler’ tool on the toolbar found at the top of the page
2. Once the tool has opened, select your measurement option (ie. Line, polygon, circle etc.)
3. If making a line or circle, click once at the beginning of the area you wish to measure, and once at the end of the area
4. If making a path or a polygon, make points around the length or perimeter of your feature
5. Navigate through the dropdown menu to find the units you wish to use for your measurement
6. Click ‘save’ if you wish to save the feature. You can select this item from ‘temporary places’, which can be found in toolbar on the left hand side, and save the feature in a relevant project folder.

Find the area of your riparian management areas

You may have already drawn out your polygons and features for the last assignment. You can still find the perimeter and area of you features with the following steps:

1. Navigate to the relevant project folder in the left hand menu
2. Right click on the feature you want to get the area for, and select ‘properties’

3. Go to tab labeled “measurements”. Scroll through the drop-down menu and select appropriate units
4. When you have completed all changes, click OK to save your work.
5. *Optional:* In the name of your feature, you can add comments like area, amount of seedlings etc as a reference.

Area measurements can be used for many reasons, but particularly can be used to **determine the number of seedlings to be planted** in your project area. For more information on how to do this, review Table 5 on page 66 of the ‘Manual for Riparian Forest Buffer Establishment in Alberta’.

Changing the color and shading of polygons

You can change the color of the polygon or feature you are working on by selecting the “Style, Color” tab on the same properties page as described in the last step.

1. In addition to changing the colour of the area, it is recommended that you change its opacity to ~40%. This will allow you to see the land covered by the polygon.

Saving Your Polygon

If you are happy with the drawing, you can then **save your item into a relevant project folder**

1. Right click on ‘my places’ in the menu on the left hand side of the page
2. Click ‘add’ and then ‘folder’
3. Make a relevant name for the folder (ie Riparian Area 1)
4. Drag or copy/paste your drawing “labeled riparian area 1” from “temporary places” to the folder you just created.

Saving Your Work and the Polygon as an Image File

Once you have completed this step you can **save your work and save the image**. To save your work:

1. Go to ‘File’ in the top left hand corner of the page
2. Click ‘save’ and then ‘save my places’

To save your map as a JPEG image:

1. Go to ‘File’ in the top left hand corner of the page
2. Click ‘save’ and then ‘save image’
3. Name your map by clicking on the box titled ‘Untitled Map’, and enter a relevant name (Riparian Area 1)
4. Click ‘save image’

Navigate to a folder in your computer where you wish to save this item, give it a descriptive title, and save it. You may wish to save it to the Riparian Management Course Dropbox folder provided to you, if you wish to receive feedback.

Questions?

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Resources

Google maps area calculator

<https://www.daftlogic.com/projects-google-maps-area-calculator-tool.htm>

Toporama: A free Natural Resources Canada resource for reliable topography too (may not have a fine enough scale for some designing activities):

<https://atlas.gc.ca/toporama/en/index.html>

Additional resource for topographical maps: <https://contourmapgenerator.com>

Many counties also have GIS software and regional maps available for download and use on a variety of programs like Google Earth Pro, ArcGIS etc. Contact your local county office for more information on topographical maps and other GIS mapping resources for your area.