<u>Three tools in this document:</u>

The following tools will help you with site assessment, planning, and sharing your site conditions with others.

1. **"Using Thurston County GeoData Site" will provide some tips for using this robust tool!**
   a. The tutorials and training links on the main page are worth exploring to take full advantage of all this site offers.
   b. However, we call out two specific uses for the purposes of your site assessment, planning, and sharing your site with us:
      i. the capacity to **measure** area and linear distances;
      ii. the ability to annotate and draw on your parcel's aerial view to create your site map.

2. **Measuring large spaces with ArcGIS** (for Thurston County residents, this likely doesn't provide any benefits over GeoData, but you might check to see if you prefer this tool).

3. **"Estimating Irregularly Shaped Areas,"** a resource from Sound Native Plants. This is especially useful for doing field measurements where aerial photos won't work, such as when the area to be measured is blocked by trees or different than it was when the site was photographed.

Using Thurston County GeoData Site

Thurston County provides access to a lot of information about your site and its context in the broader community. The GeoData website is an incredibly powerful tool and you can start by exploring the options and layers available here:
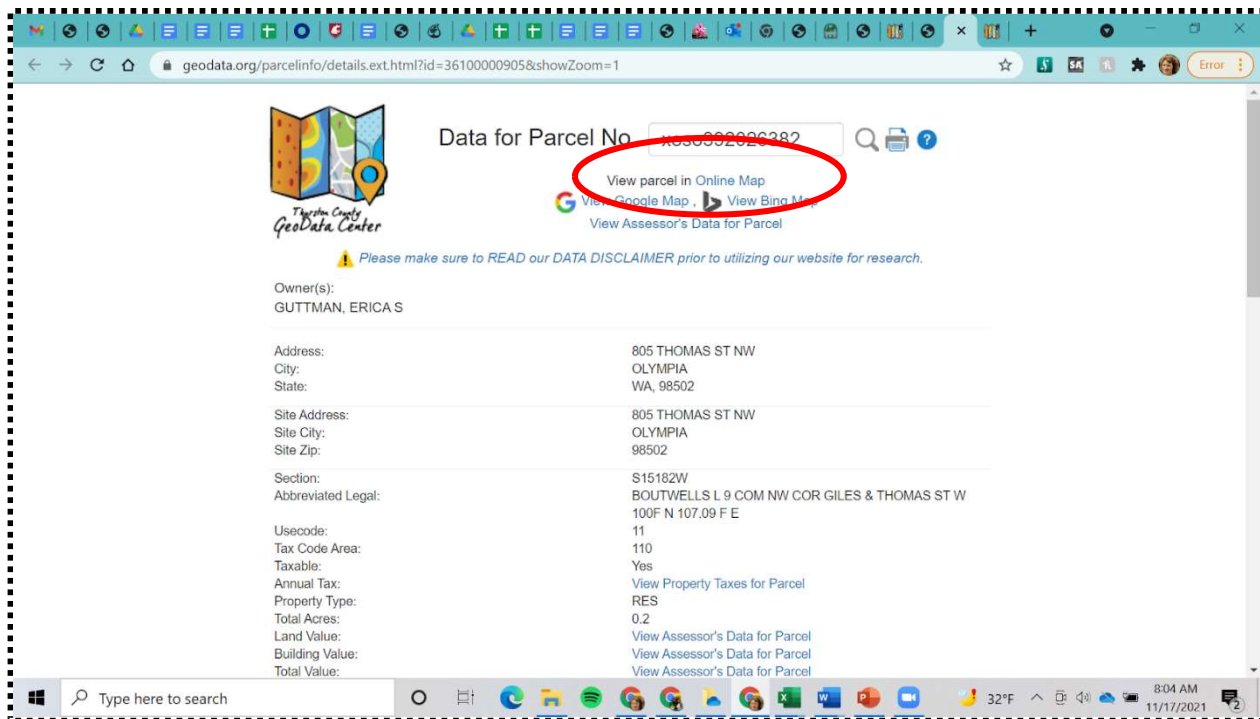**https://www.geodata.org/faqOnlineMapsBasicStartGuide.html**

Simple measurements: If you just want to measure area or distance from your structure to the property line, for instance, this site can help you with that, too.

Start here to find your parcel: https://www.geodata.org/quick-parcel-search.html
Starting with "Option 2: Enter Address, Parcel #, or Section to View **Property Information Report**" brings up this screen with facts about your property below this crop.
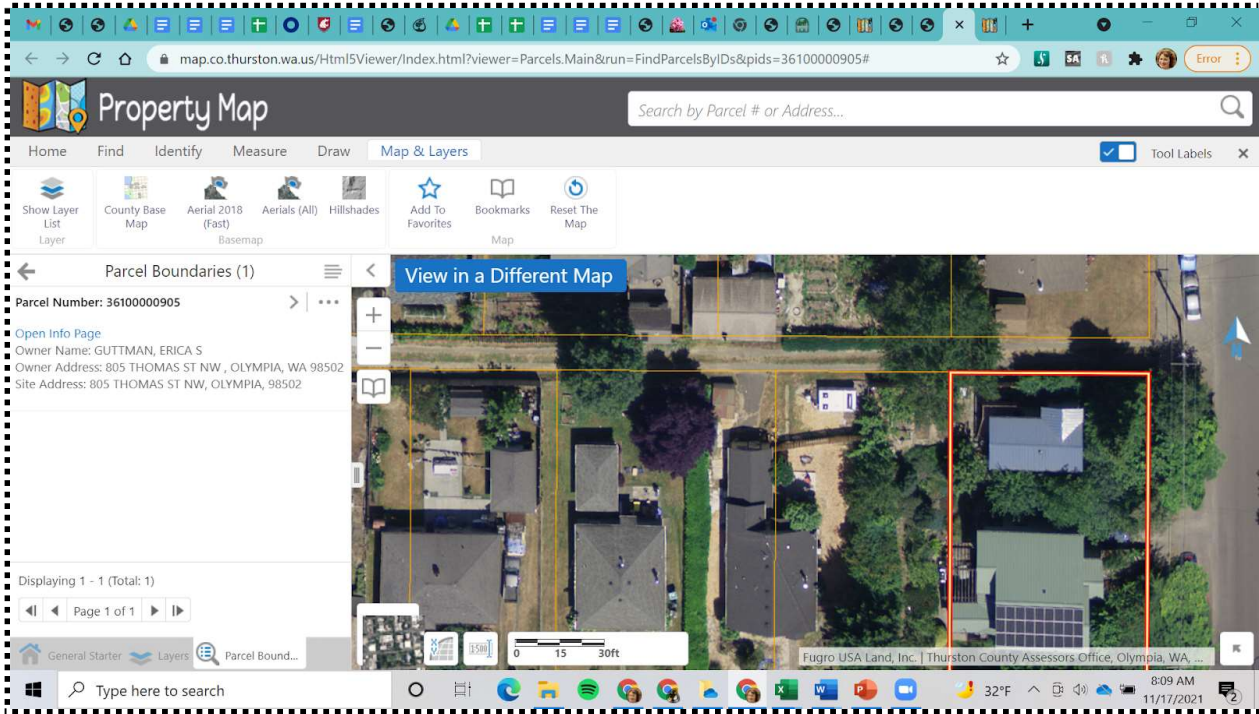
To see a map of your parcel, click on "view parcel in online map."

From the online map, you'll see this:

Choose "maps & layers" and pick the option you prefer. (Note from the starting link above, you can get to these options as well, but if measurement is your goal, you don't need the "everything map," which takes more time to load and manipulate. This is a fast way to see your site and measure.)

Next load up the view you want (note the speed options!), and from the tools bar, select "measure" to calculate linear distance or area square footage or acreage.
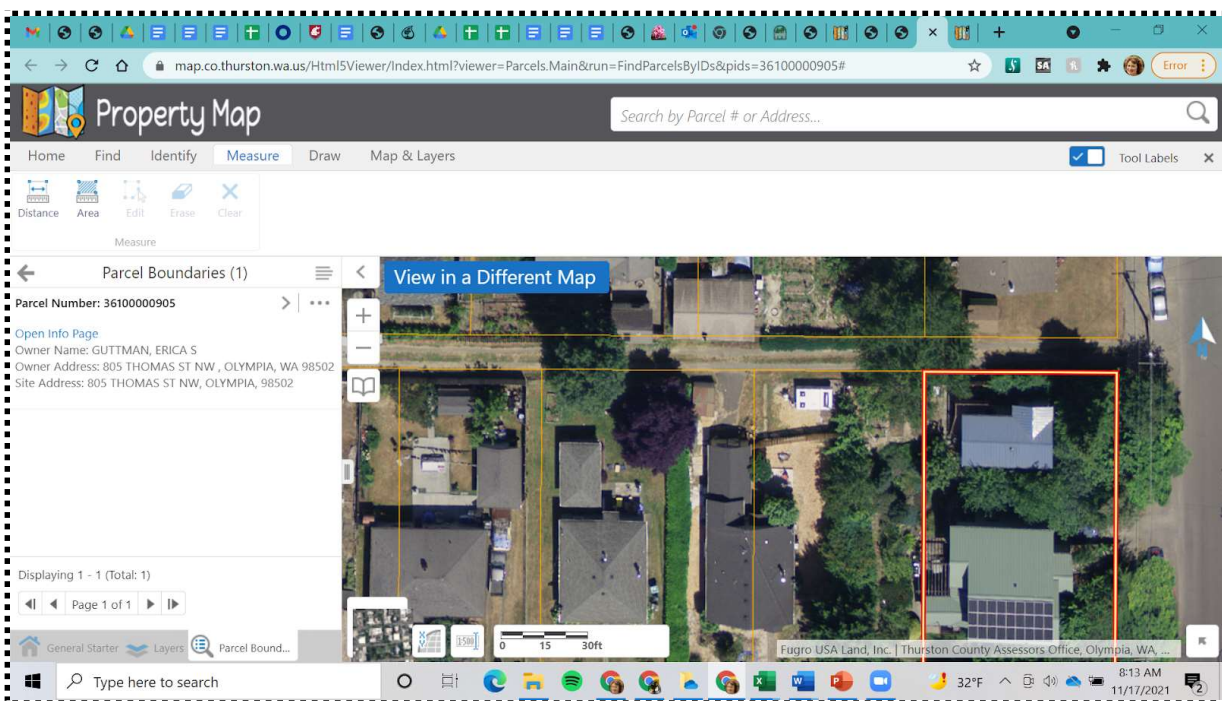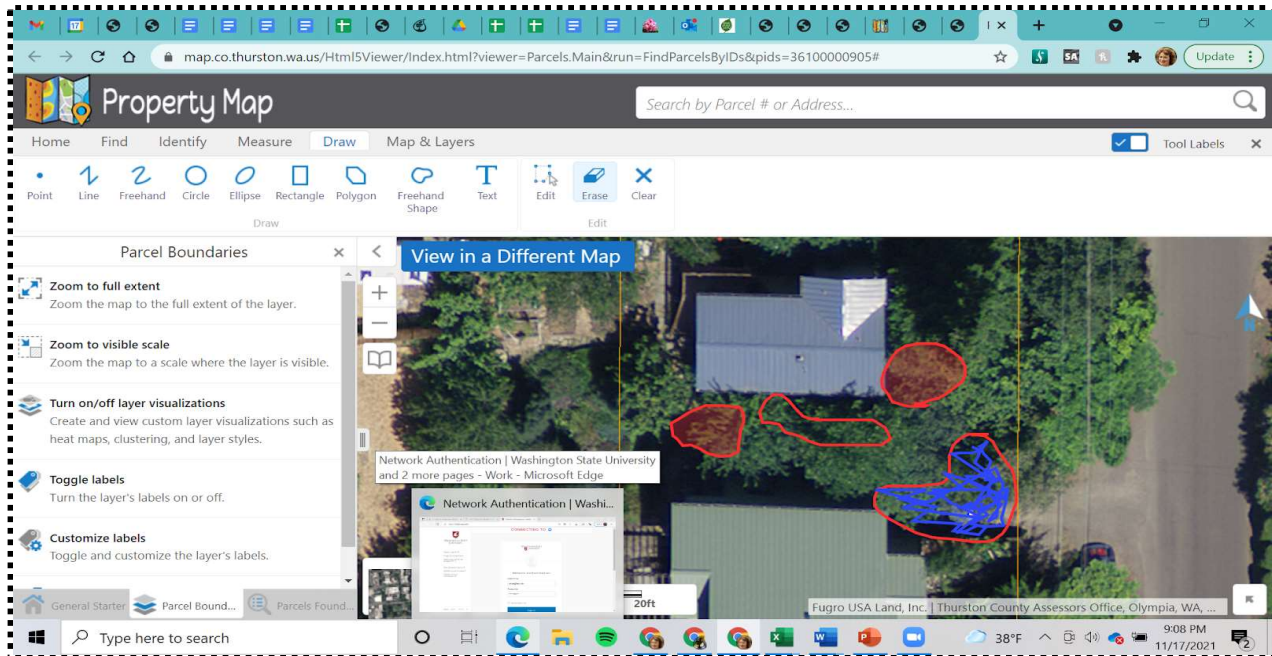
Here's an example of how that can look:
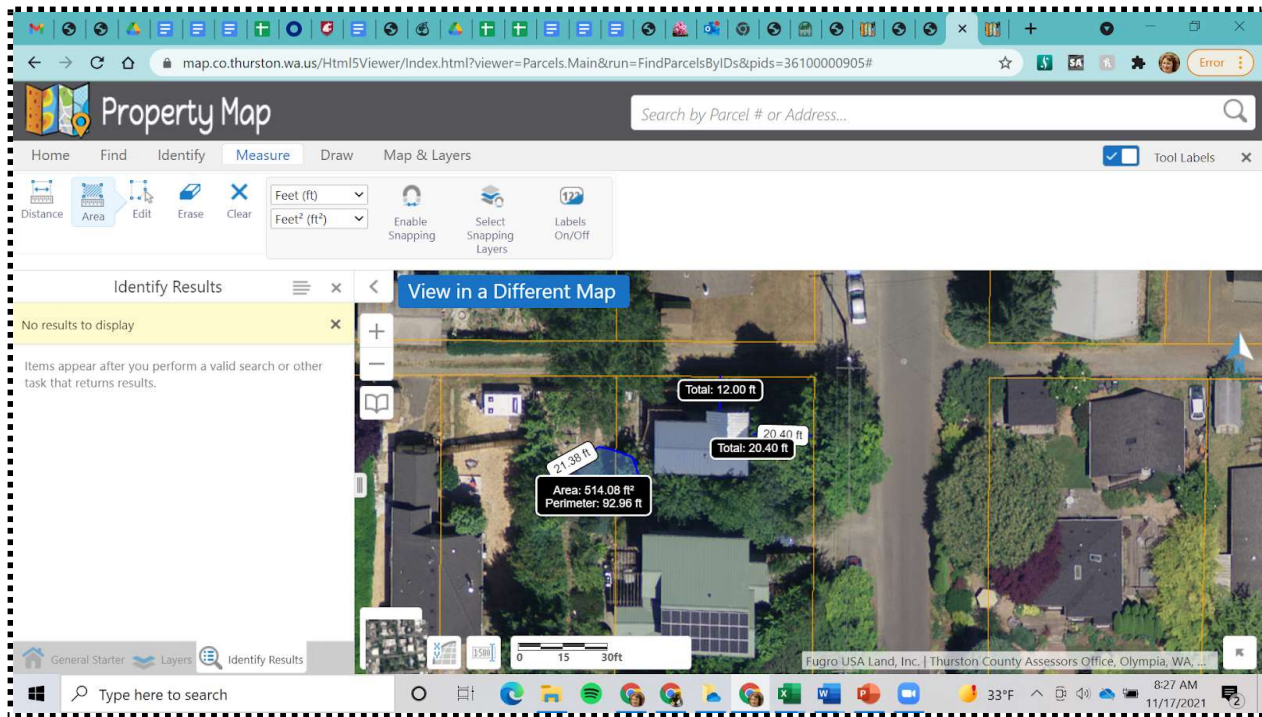
Drawing on your site map: *Note in "tools" that you can also draw on your site!*
This is a great way to illustrate concerns you have, ideas you have, placement of things that aren't visible in the aerial view, changes to the site since the aerial view was taken, and more!

Measuring Large Spaces in Planning for Site Assessments

Here is one easy way to get rough measurements in square footage or acreage using Arc GIS. Go to this website:
http://www.arcgis.com/home/webmap/viewer.html?useExisting=1

- Click on "basemap."
- Choose "imagery" or "imagery with labels."
- Type site's address in to the upper right box.
- Click on "measure" next to this box, then click the appropriate icon in the box -- typically, the "area" icon, which appears first.
- Within the dialogue box where you've selected "measure," go to the pull-down menu and select the units (square feet, acres, etc.) that you want to measure in.
- Once that's selected, with your mouse, click a corner of the area to be measured, and continue to click until all the area is outlined. Double click to release.
- That's it!

Example measurement:
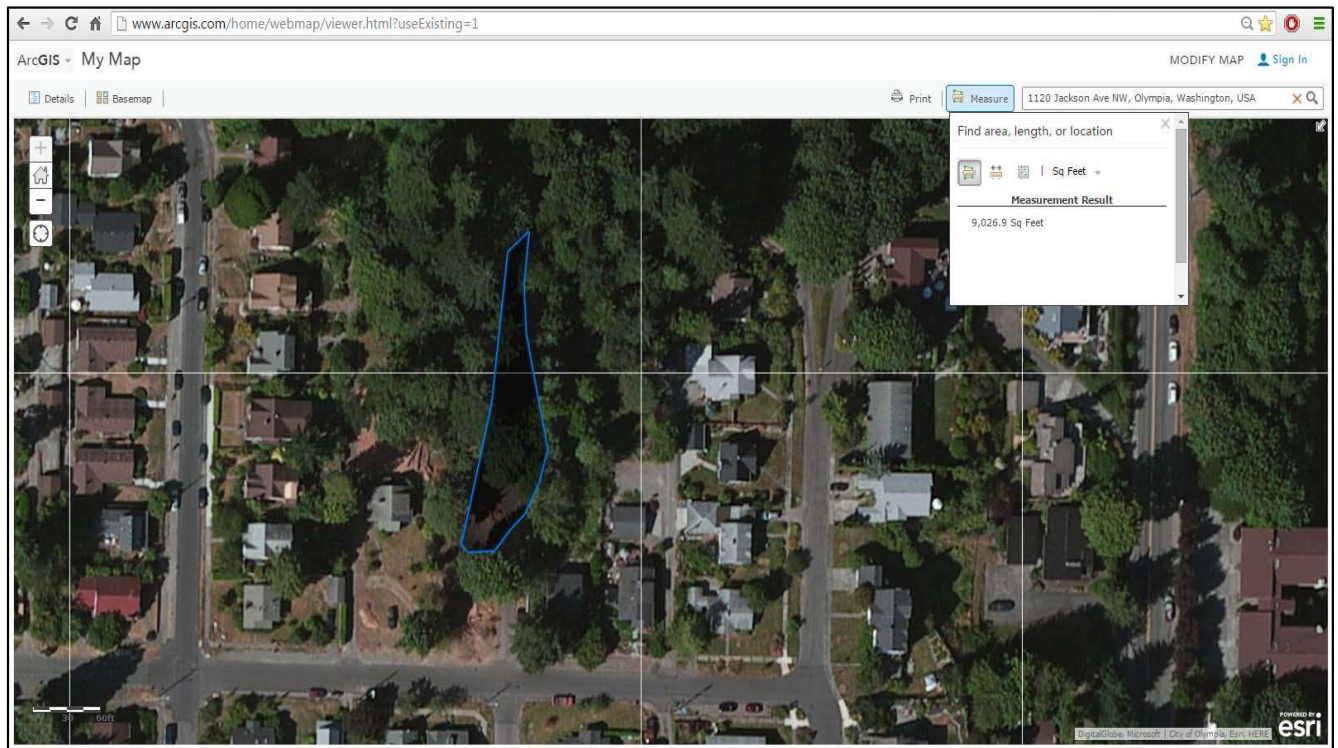
A Workshop on
Shoreline Management & Stabilization Using Vegetation

Here are two ways to estimate irregular areas for planning purposes. If you have a scaled drawing, map, or aerial photograph, photocopy the next page onto a transparency and use that. If you are working from a field sketch, the technique below will give you a good estimate from field measurements. The more measurements you can take, the more accurate the estimate will be. The measurements could be made with a tape, rangefinder, or by pacing off.

Step 1: Make a rough sketch of the area on paper. Install stakes at the two farthest ends and mark the points on the drawing. Measure the length and record it on the drawing.

120'
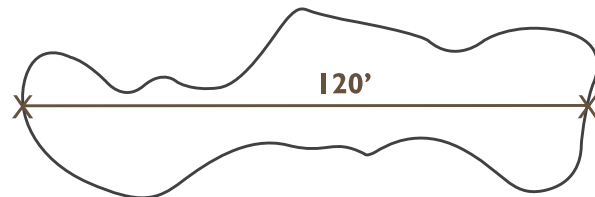
Step 2: Divide the length line into an even number of equal segments, marked on the drawing. More segments will give you better accuracy. Record the segment length as "L".

L = 20'
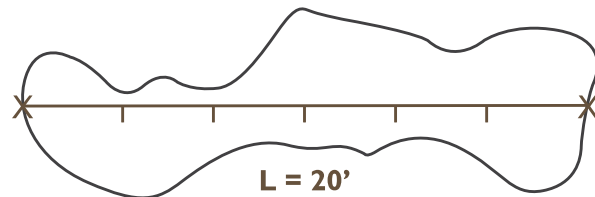
Step 3: Draw a line across the area perpendicular to the length line, at both ends of the length line and at each segment mark. Label the first line A and the last line B. Label each line at a segment mark with consecutive numbers, starting with S1.
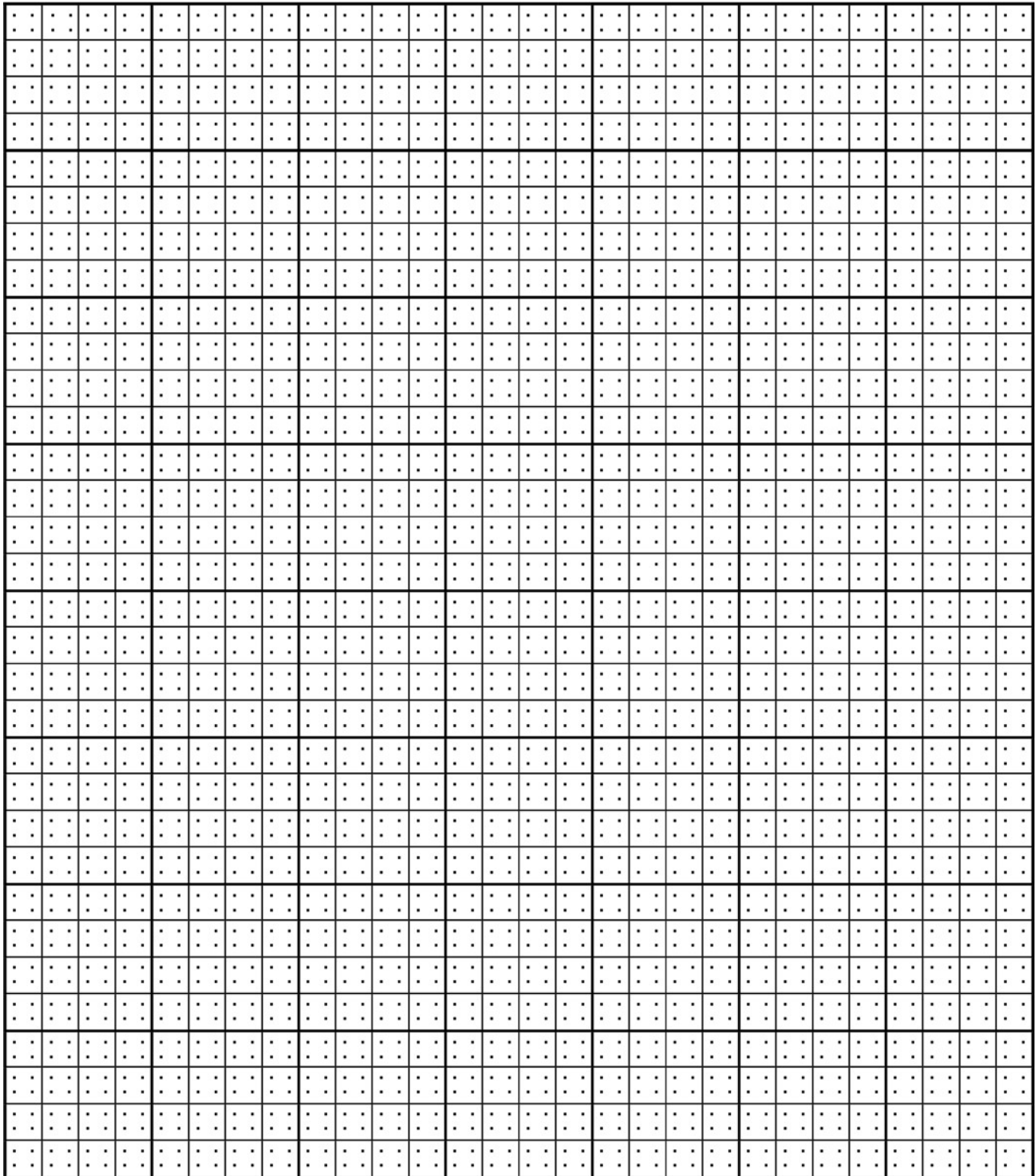
A S1 S2 S3 S4 S5 B
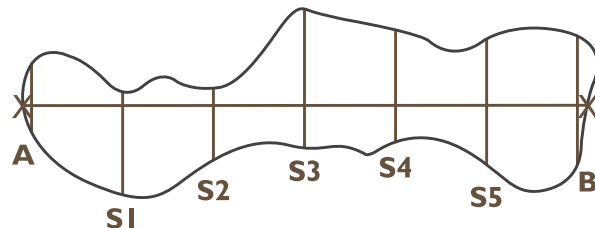
Step 4: Measure or estimate the length of each line.

A = 10'   **S3** = 28'   **B** = 18'
S1 = 22'   **S4** = 20'
S2 = 12'   **S5** = 18'

Step 5: Enter the results into the following equation:

Area = L/3 x [(A + B) + 2(sum of even-numbered lines) + 4(sum of odd numbered lines)]

20/3 x [(10+18) + 2(12+20) + 4(22+28+18)]
6.7 x [28 + 2(32) + 4(68)]
6.7 x (28 + 64 + 272)
6.7 x 364
2438.8 sq. ft.

WA: SOUNDNP017BL   OR: LCB#8781

Place grid over area to be measured. Count the number of dots within the area to be measured. Multiply by the appropriate conversion factor from the table. For scales not shown on the table, use the following formula to calculate the conversion factor:

Conversion factor = (length equal to 1")^2 /64

For example, if the scale is 1" = 25' the conversion factor would be:

Each dot = 25^2/64 = 625/64 = 9.766 sq. ft.

Scale: 1" =	Ratio	Area per square inch	Conversion factor: Each dot =
20'	1:240	400 sq. ft.	6.25 sq. ft.
30'	1:360	900 sq. ft.	14.0625 sq. ft.
40'	1:480	1600 sq. ft.	25 sq. ft.
50'	1:600	2500 sq. ft.	39.0625 sq. ft.
60'	1:720	3600 sq. ft.	56.25 sq. ft.
100'	1:1200	10000 sq. ft.	156.25 sq. ft.
500'	1:6000	5.74 acres	0.0897 acres
1000'	1:12000	22.96 acres	0.359 acres
1 mile	1:63360	640 acres	10.00 acres