Audubon | VERMONT

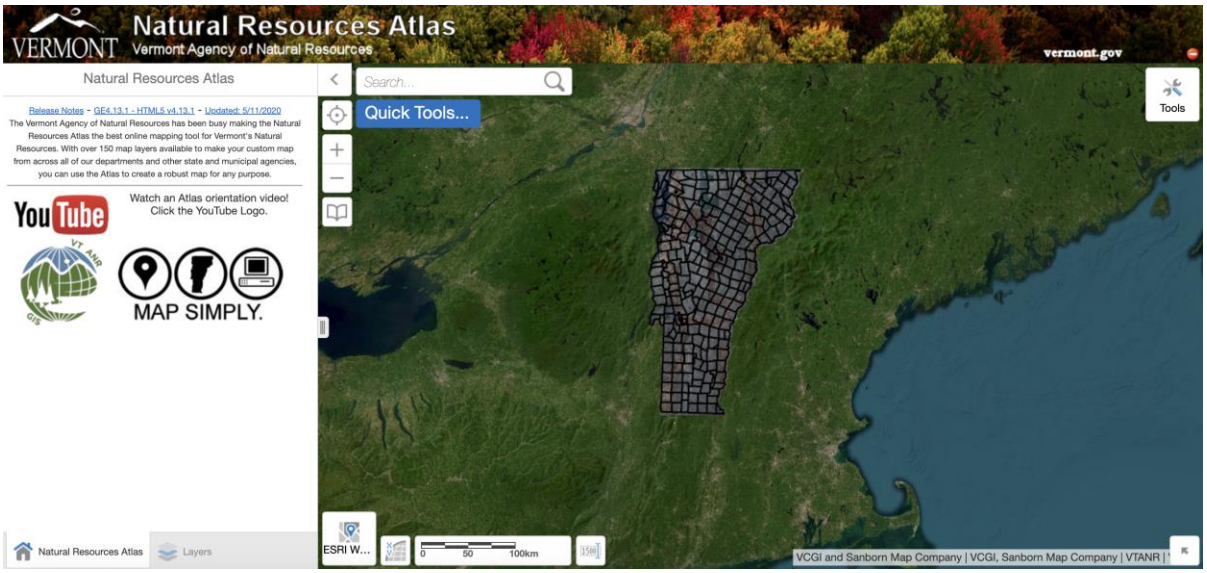
Conducting a Landscape Analysis using the Vermont ANR Atlas and Vermont BioFinder

Background:

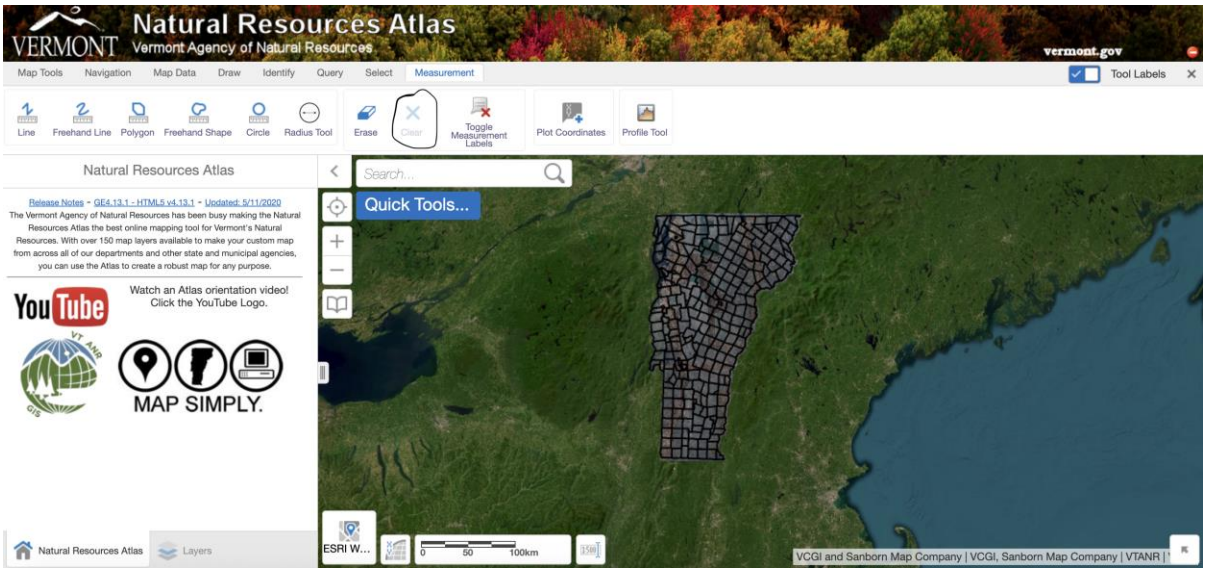
One of the key components of a written report after a property visit by the Landowner Technical Assistance Team is conducting a landscape analysis of the different habitats and connectivity blocks of the surrounding area. Audubon Vermont uses the standard area of 2500-acres to define a landscape. This analysis can be done easily online and is accomplished in two parts; one with the ANR Atlas (for assessing the amount of different land covers) and one with BioFinder (for assessing how important different habitats are for connectivity. Doing the ANR Atlas analysis first is best, because you will need to know the approximate boundaries of the circle before drawing it freehand on Vermont Biofinder

Landscape Analysis using the ANR Atlas:

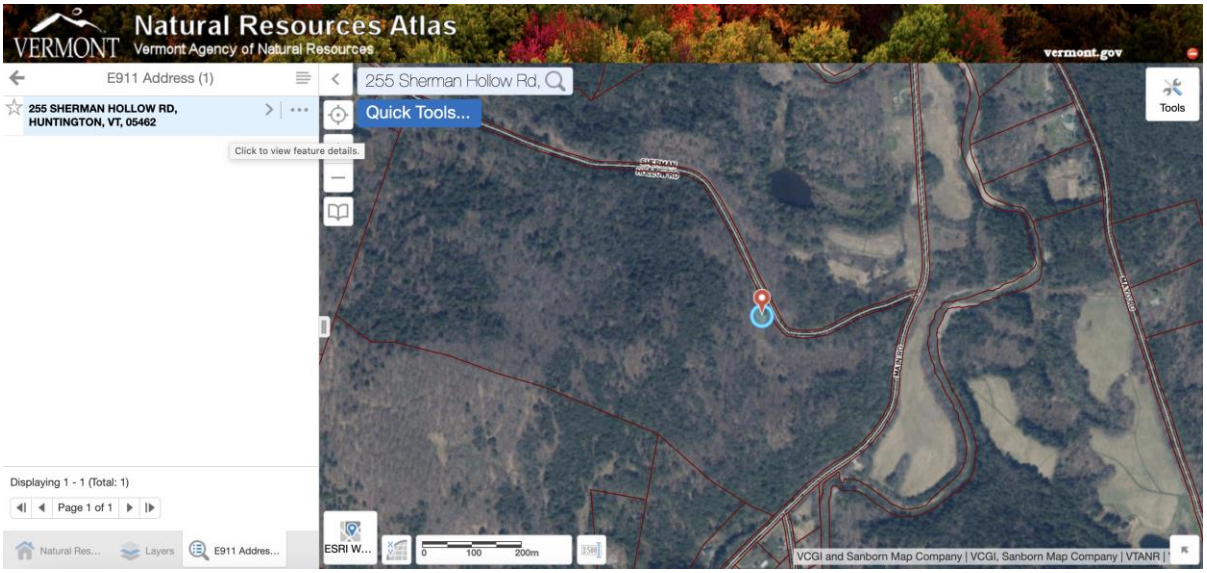
1. Go to https://anrmaps.vermont.gov/websites/anra5/, the ANR Atlas main page.



2. Click on the ‘Tools’ icon in the top right corner > ‘Measurement’ > ‘Clear’ to clear all previous drawings.



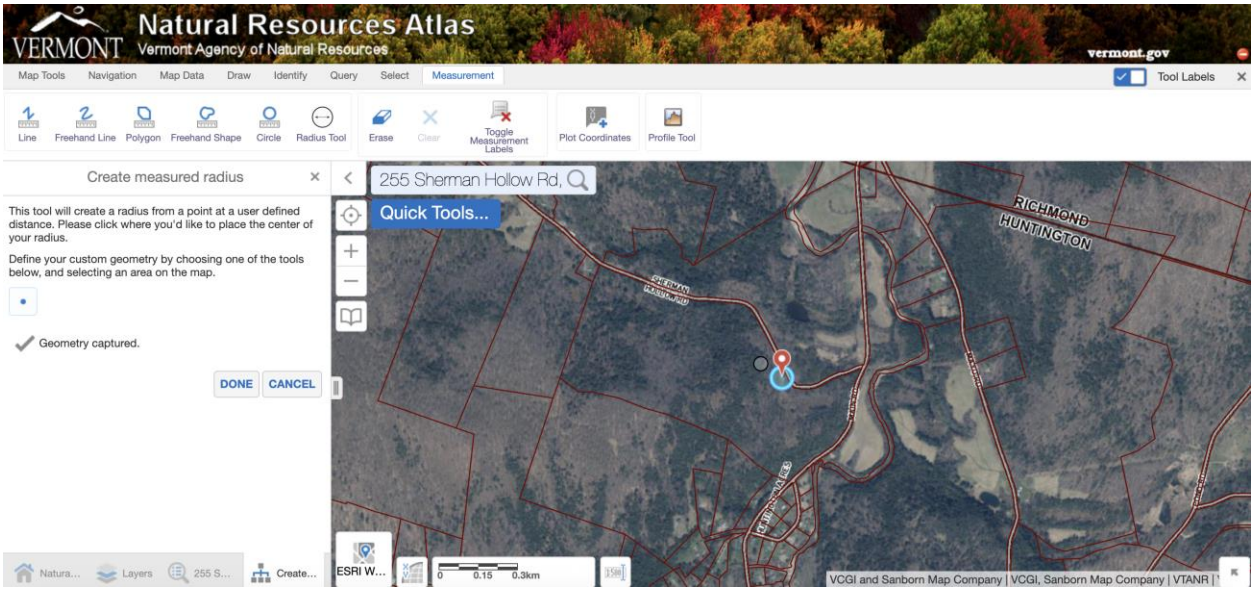
3. In the search bar, search for the address of the property (where the center of the 2500-acre area landscape will be), then click the magnifying glass to enter the search. The search result will typically yield an E911 address and multiple VCGI addresses. The E911 address tends to the accurate and most centered on a property, so that is the one to choose.



4. Be sure to click on the E911 address to see the details of the layer. This will keep the pin on the property when creating the 2500-acre landscape. Once the address is

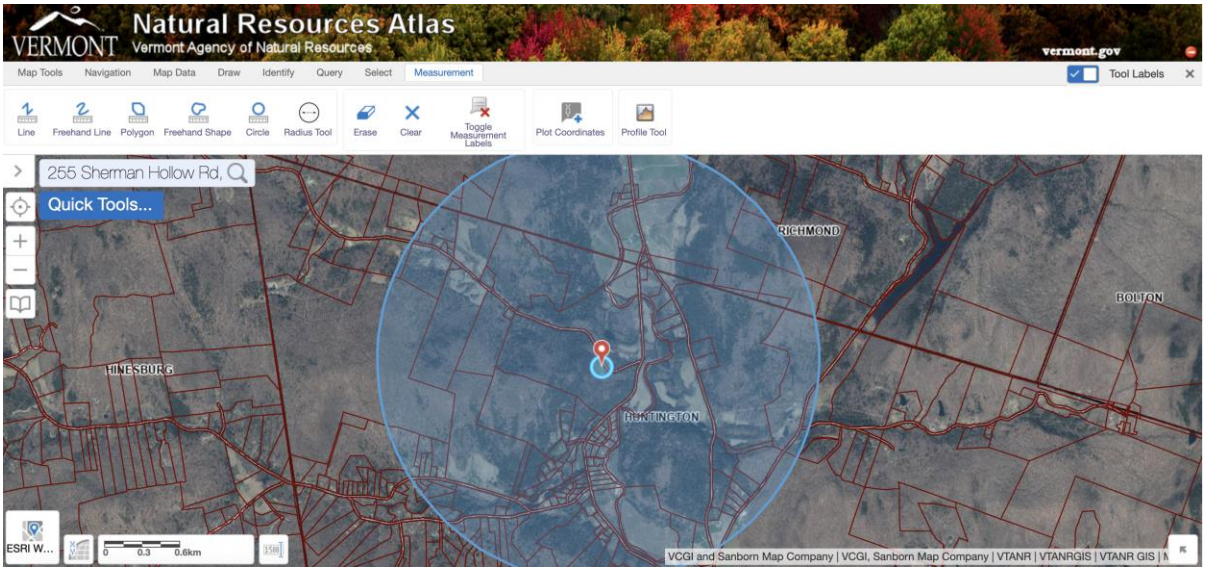
selected, click on the left arrow to collapse the data frame.

5. Click on the ‘Tools’ icon > ‘Measurement’ > ‘Radius Tool’. Select a point on the property, as close to centered as possible. Once the checkmark saying ‘Geometry captured’ appears, click on ‘Done’.

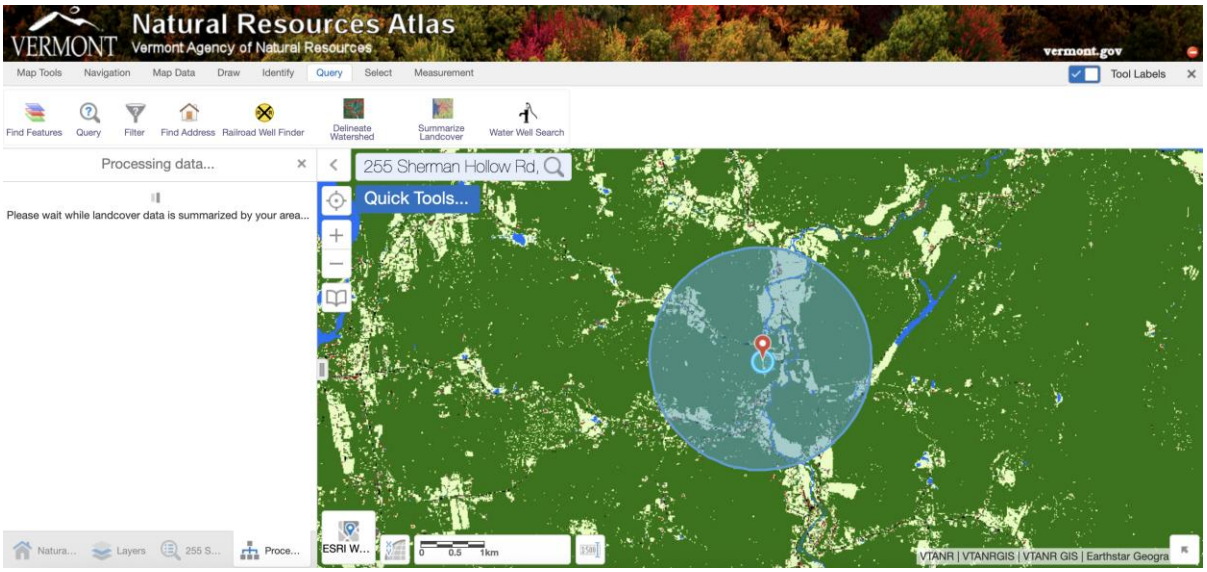


6. You will then be prompted to enter in a number for the radius of the circle in feet. Type in 5888 for the radius distance, which will result in a circle 2,498 acres in size. Once the radius distance is entered, press ‘Done’, then press ‘Ok’. The ~2500-acre

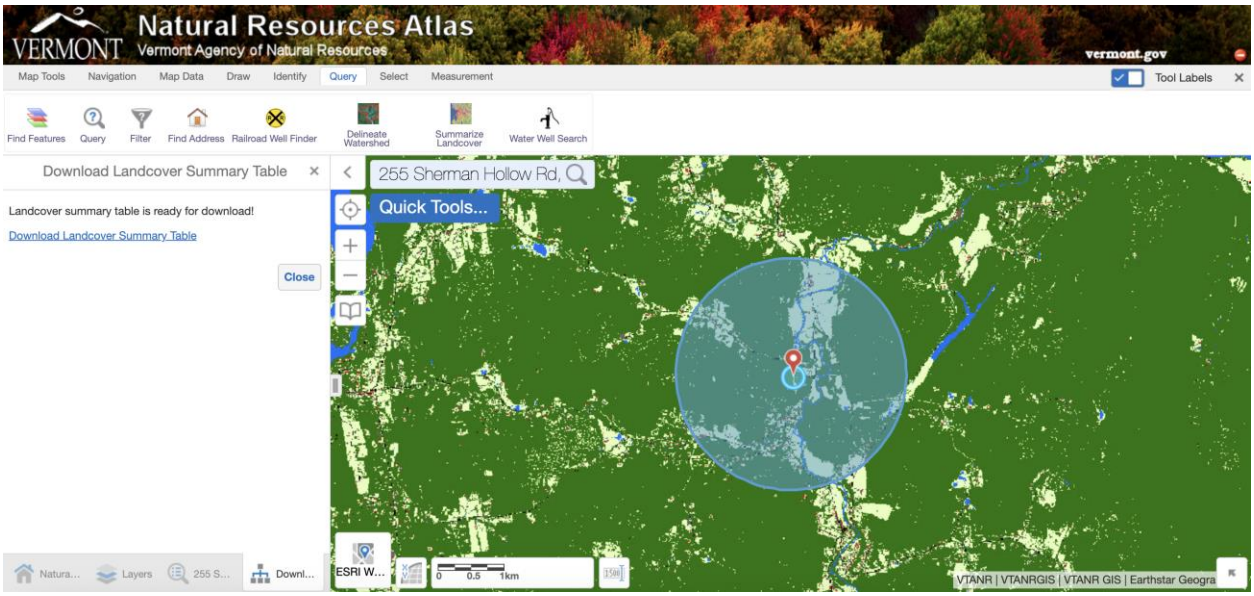
circle will show up on the screen around the selected property.



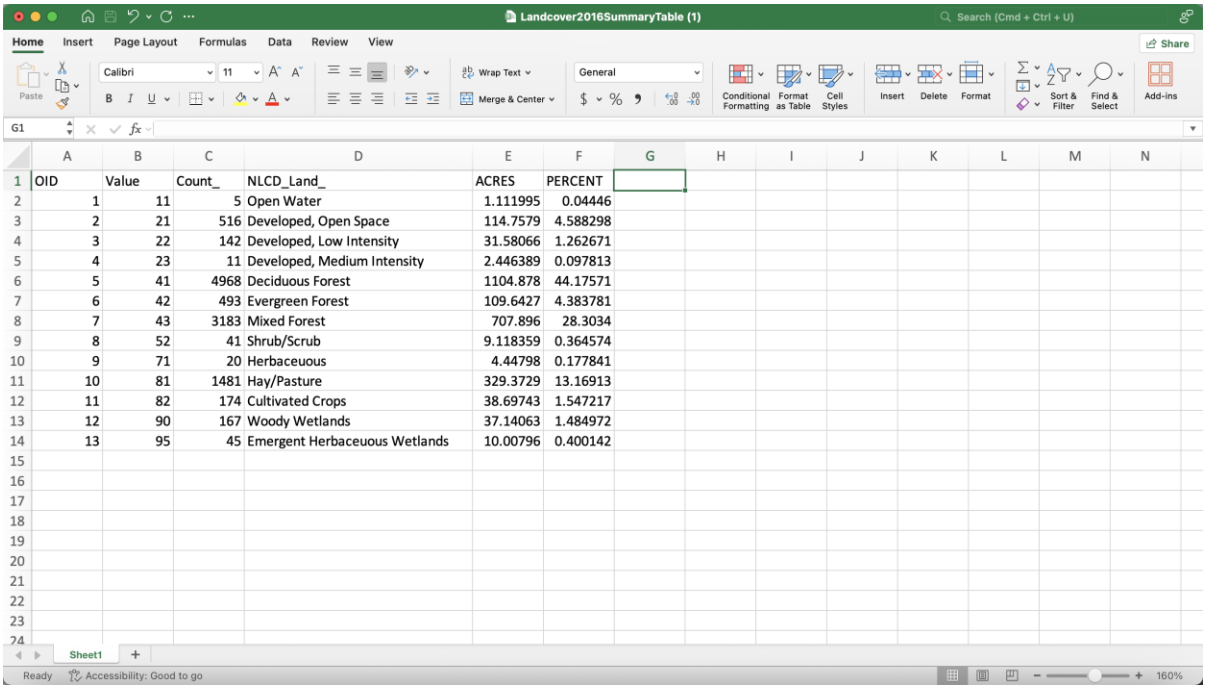
7. In the tool bar along the top, select ‘Query’ > ‘Summarize Landcover’. The screen will become colored, and a dropdown menu will appear with the default option being to upload a shapefile. Click on the dropdown arrow, select ‘Use Existing Drawing(s)’, then press ‘Next’. The system will begin to summarize the data, which takes a few minutes.



8. Once the landcover data is ready, click on the blue link to download the data, which will send the information to an Excel spreadsheet.



9. Once you download and open the Excel spreadsheet, it will look like the picture below. It is up to the user to add columns for forest vs non-forest, and the acres/percent of each land category can simply be assigned to the forest column or non-forest column. This allows for easy calculation of what percent of the 2500-acre landscape is forested, and vice versa.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	OID	Value	Count_	NLCD_Land_	ACRES	PERCENT								
2	1	11	5	Open Water	1.111995	0.04446								
3	2	21	516	Developed, Open Space	114.7579	4.588298								
4	3	22	142	Developed, Low Intensity	31.58066	1.262671								
5	4	23	11	Developed, Medium Intensity	2.446389	0.097813								
6	5	41	4968	Deciduous Forest	1104.878	44.17571								
7	6	42	493	Evergreen Forest	109.6427	4.383781								
8	7	43	3183	Mixed Forest	707.896	28.3034								
9	8	52	41	Shrub/Scrub	9.118359	0.364574								
10	9	71	20	Herbaceuous	4.44798	0.177841								
11	10	81	1481	Hay/Pasture	329.3729	13.16913								
12	11	82	174	Cultivated Crops	38.69743	1.547217								
13	12	90	167	Woody Wetlands	37.14063	1.484972								
14	13	95	45	Emergent Herbaceuous Wetlands	10.00796	0.400142								
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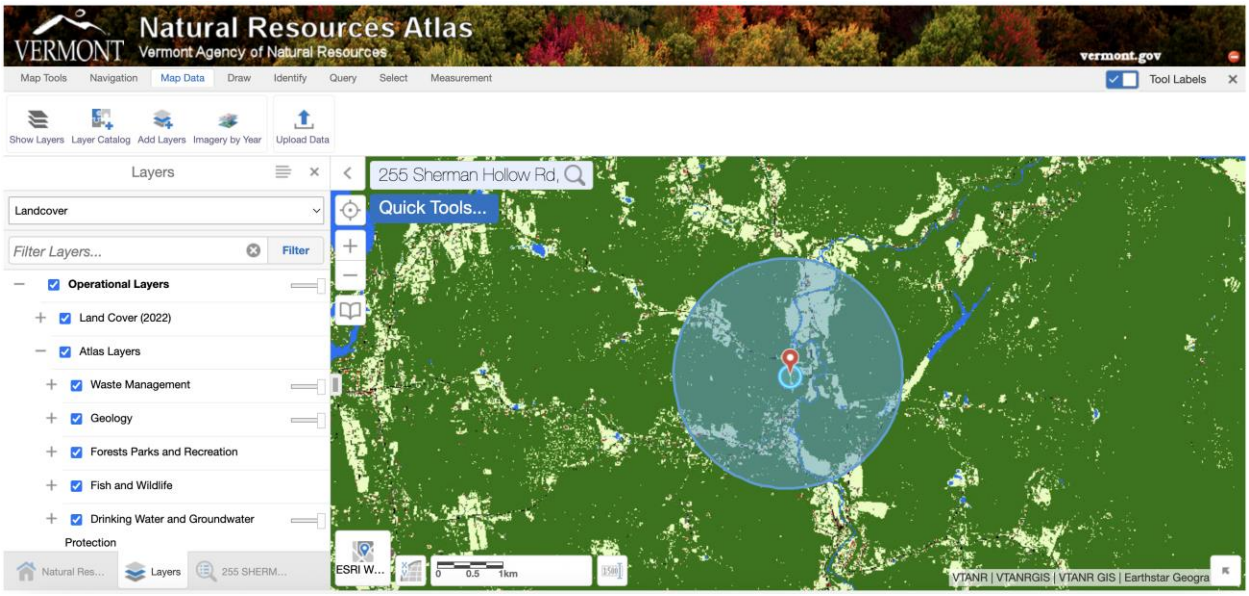
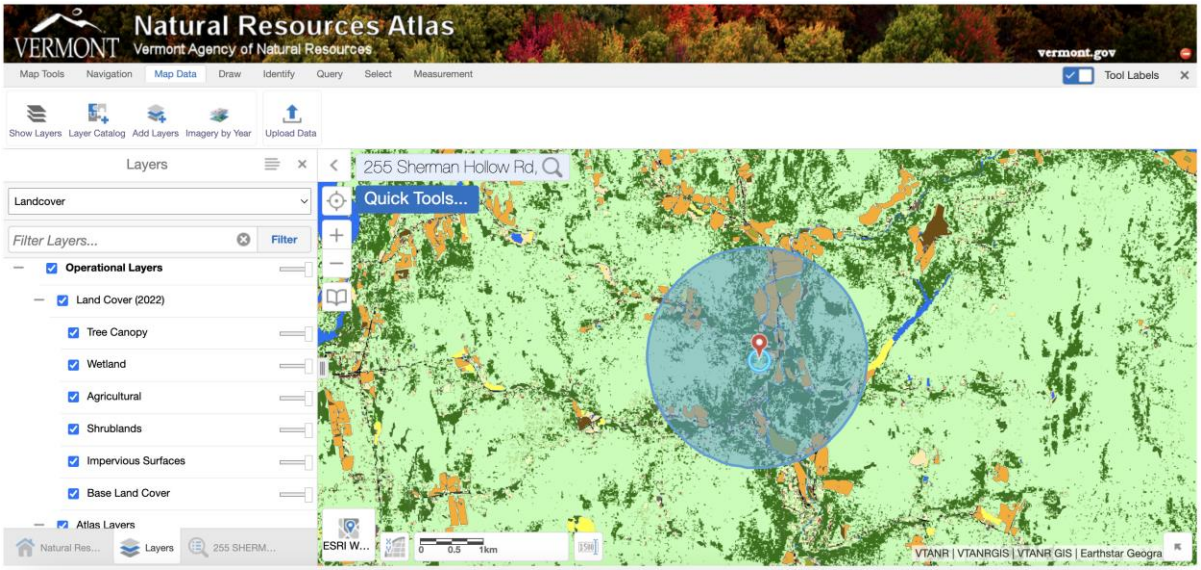
To include a visual representation, continue onwards with step 10. If you just need the quantitative data, you're done with this section!

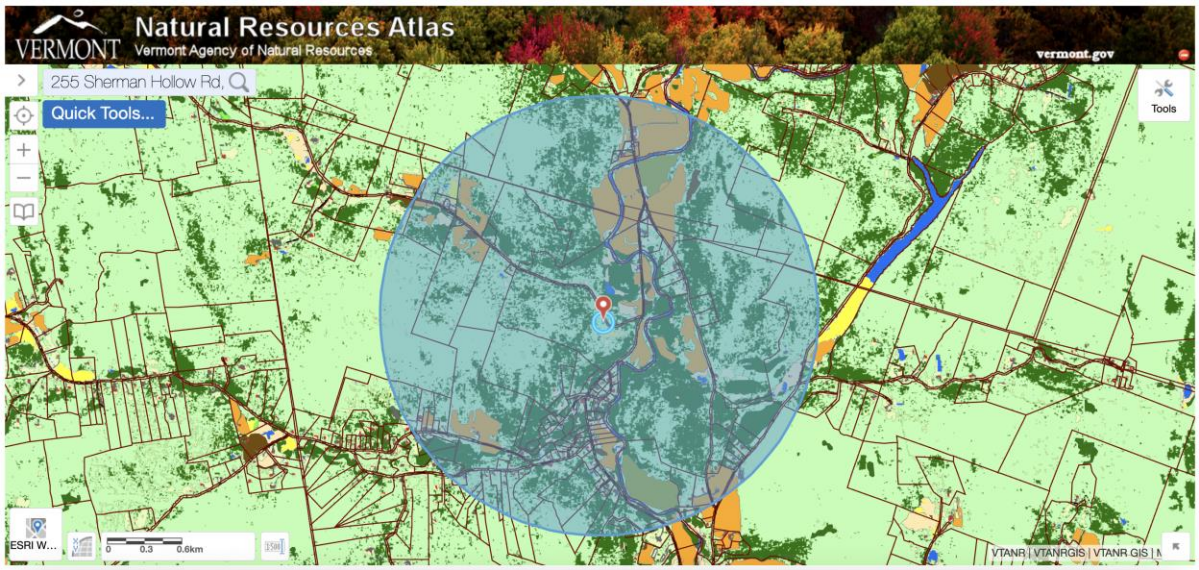
10. Once the landcover data has been downloaded, click on the left arrow to close the data frame, then navigate to tool bar and click on ‘Map Data’ > ‘Show Layers’.



11. Click on the ‘+’ next to Land Cover (2022) and select all sub-categories that are unselected (Tree Canopy, Wetland, Agricultural, Shrublands, and Impervious Surfaces). Base Land Cover should already be selected. Once all these layers are selected, the view will look like this.



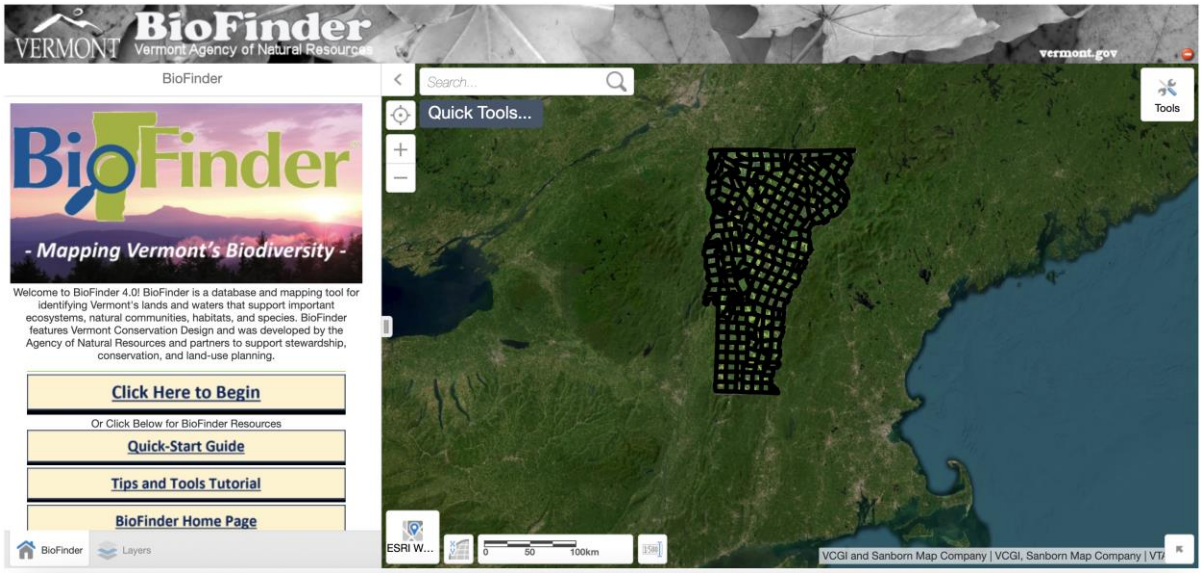
You can close the layers tab and x-out of the tool bar to make the view bigger, allowing property boundaries to be captured in a screenshot, like the one below.



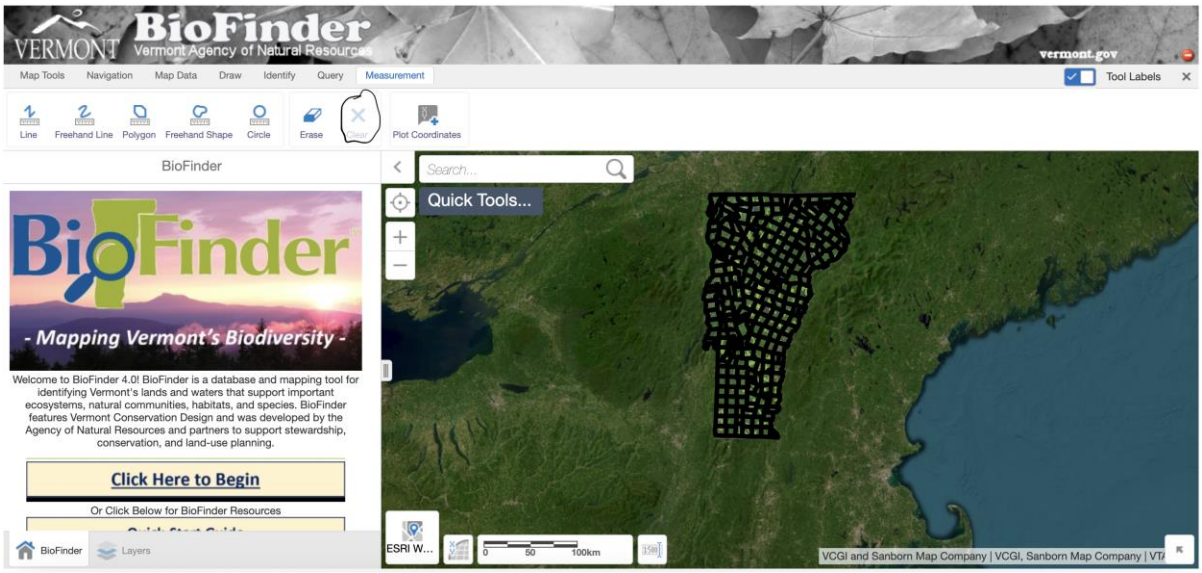
Here is what each color represents. Light green is deciduous tree cover. Dark green is coniferous tree cover. Yellow represents shrubland. Orange represents hay/agricultural land. Blue represents water/wetlands. Brown represents property boundaries and roads.

Landscape Analysis using BioFinder:

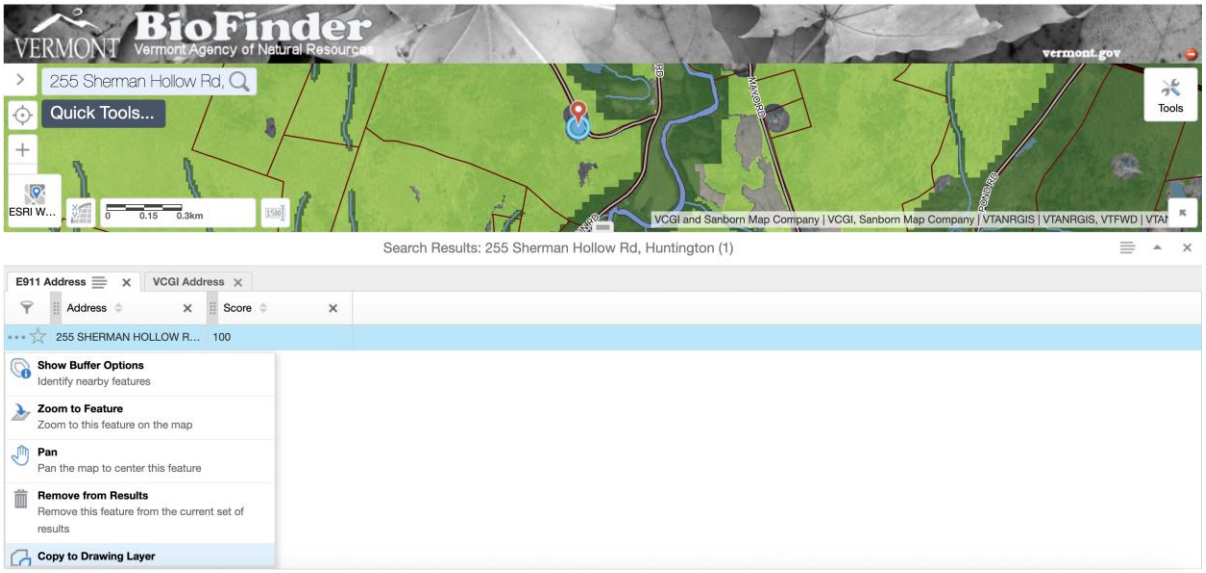
1. Go to https://anrmaps.vermont.gov/websites/BioFinder4/, the BioFinder main page. Click on the left arrow to close the data frame introducing Bio Finder



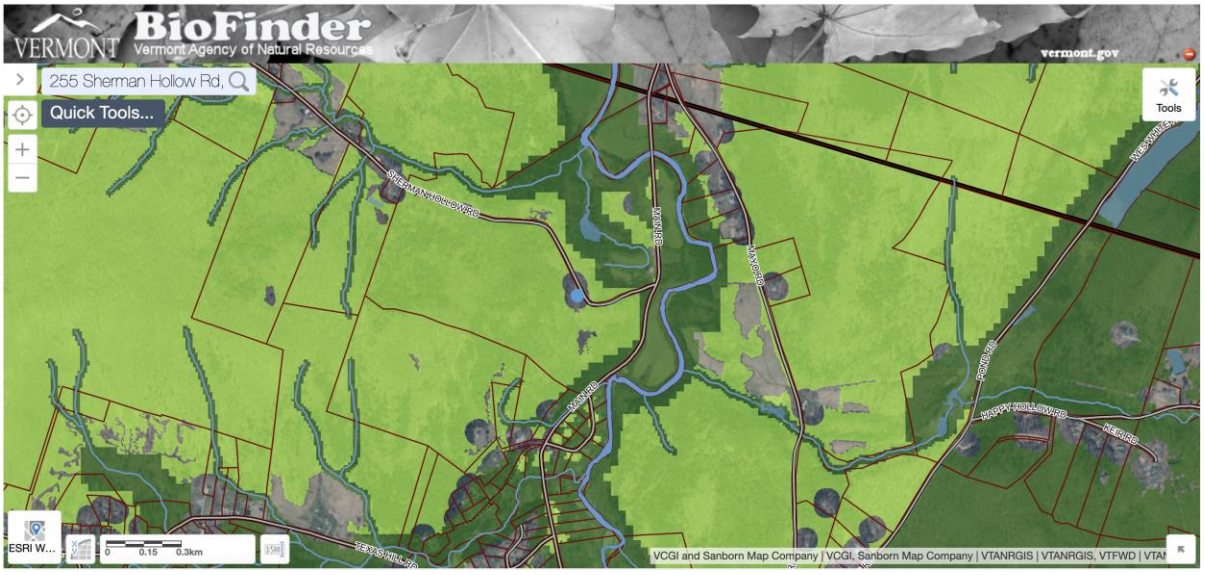
2. Click on the 'Tools' icon in the top right corner > 'Measurement' > 'Clear' to clear all previous drawings.



3. In the search bar, search for the address of the property (where the center of the 2500-acre area landscape will be), then click the magnifying glass to enter the search. The E911 address tends to the accurate and most centered on a property, so that is the one to choose. Click on the 3 horizontal dots next to the E911 address and then select ‘Copy to Drawing Layer’, placing a blue mark on the property.



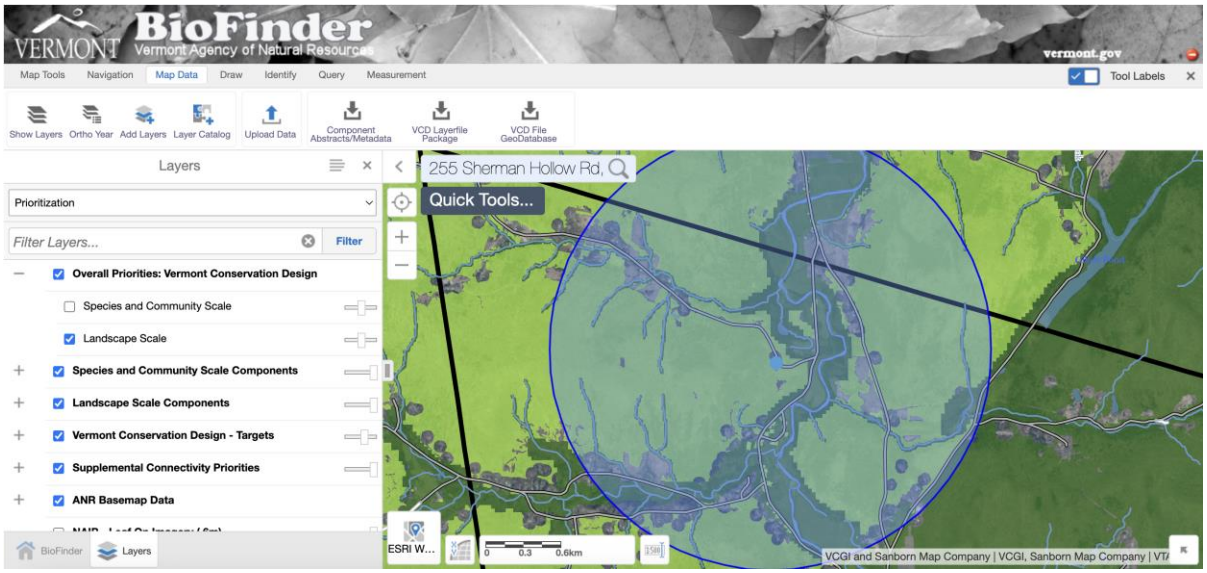
Once that is done, X out of the search results panel, so your screen looks like this, below:



4. Click on the ‘Tools’ icon > ‘Measurement’ > ‘Circle’. Unfortunately, you have to draw the radius of the circle yourself by clicking a point on the property and then dragging

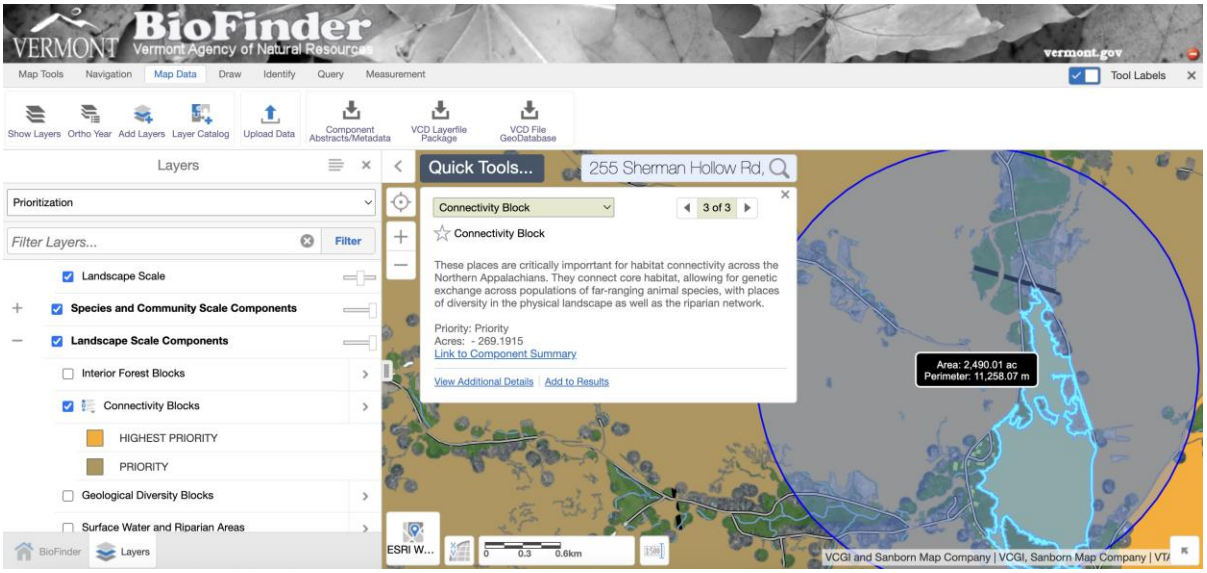
the circle until it is 2500 acres in size. You can use the extent of the circle on the ANR atlas to guide your guess, but ultimately this step is trial and error until you have a circle the correct size. Once the circle is made the screen should look like this.

5. In the tool bar at the top, click on ‘Map Data’ > ‘Show layers’

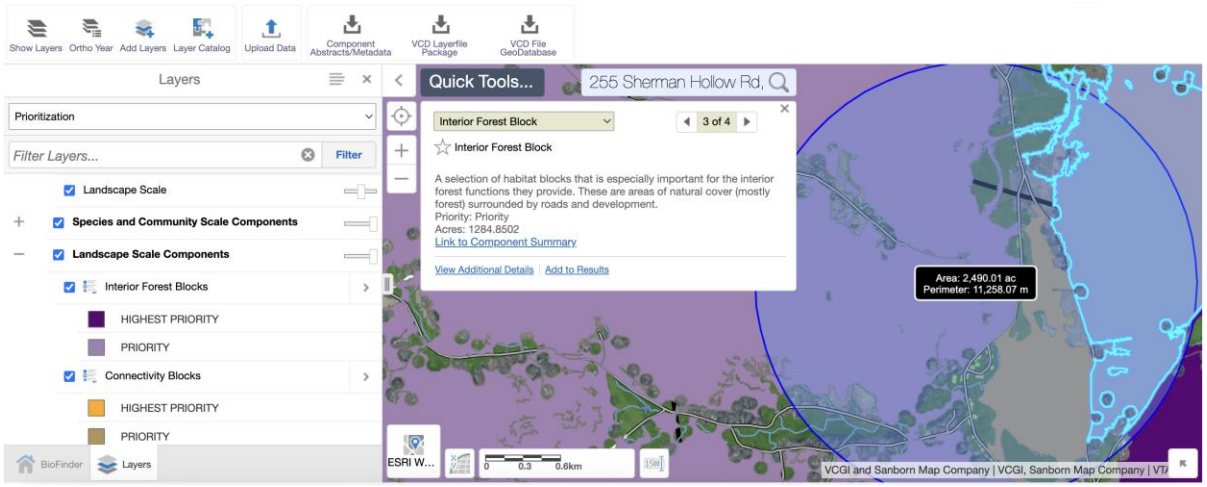


6. Click the ‘+’ next to Landscape Scale Components, then select ‘Connectivity Blocks’. The brighter yellow color represents area with the highest priority for wildlife connectivity. Clicking anywhere on the yellow allows an in-depth look into each individual block, allowing you to see the priority it has and how large the block

is.



7. Select ‘Interior Forest Blocks’. The brighter and darker purple represents higher priority for forest function. Clicking anywhere on the purple allows you to see each individual block’s priority level and size.



And that’s it! You can close the tool bar and data frame for a better visual, but that’s the last step