Reduce the lawn

The Connection

Lawns are resource-intensive, contribute to greenhouse gas emissions, and they compete with the resources our trees need. Repetitive mowing can increase soil loss and harm tree root zones. Consider reducing the lawn to only the portion used for regular gathering and playing by converting the edges of the lawn into planting beds for trees, shrubs, and plants.

Take Action

Reduce the size of the lawn to be roughly 50% or less of the total yard and earn 2 acorns! (The total yard means the part of the yard that does not include buildings.)

Acorns

Tracks

Instructions

- ☐ Measure the property lawn size using the instructions below
- ☐ Make any necessary changes to reduce lawn size if over 50% of your total yard space (meaning outdoor area other than buildings) (*details below*).

Measure your lawn size

You can generally estimate how much lawn/sod the yard has by a general eyeball estimation. We are not trying to get this down to the exact inch but instead, make strides to prevent lawn/sod from being the dominant element in the landscape. The volunteer who will come certify the property is going to generally eyeball estimate this but they will ask you for the lawn size measurement when they come back to certify your property. You can measure your lawn size in 1 of 2 ways. 1) By physically measuring your lawn, building(s), and your property size, or 2) using this quick online free tool called scribble maps. Once you have your property size and lawn size you would use the simple formula below:

1. First, find your total yard area (minus the buildings)

   Total Yard Square Footage =
   (**total property area**) - **total building square footage**

2. Then calculator the maximum lawn size allowed:

   Maximum lawn size =
   Total Yard Square Footage/2

3. Then compare with your **Current Lawn Size** and see if it is smaller than the **Maximum lawn size**. <u>If this number exceeds</u> the maximum lawn size you need to remove some lawn to meet this goal. To calculate how much lawn to remove you need to remove you can use

   Lawn to remove =
   Current Lawn Size - **Maximum lawn size**

Measure with Scribble Maps

This seems like a lot of steps but it is a straightforward tool. The instructions for scribble maps are comprehensive and you do not have to follow them exactly, but they are detailed in case you have difficulty.

1. Navigate to Scribble Maps:
   `https://www.scribblemaps.com/

2. Select the button on the left that says “create your map now”

3. If this is your first time using scribble maps, a quick start window will pop up that gives a tutorial (see figure 1). You can watch this but we give all the instructions you need below so feel free to exit out of this window.

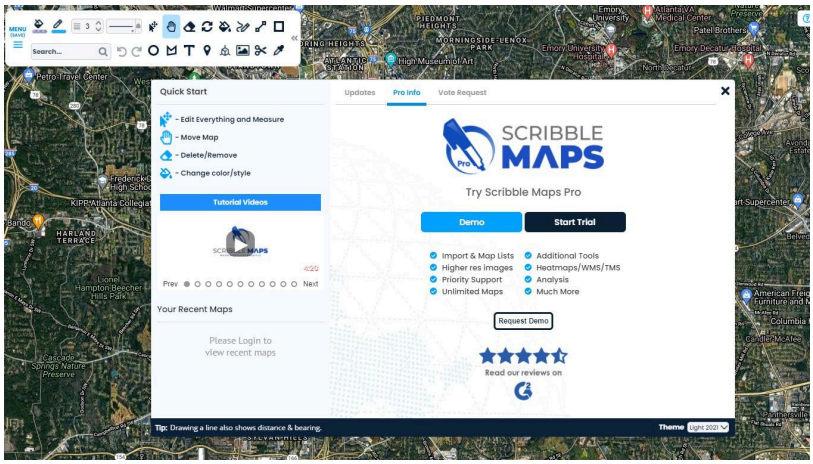

Figure 1: the pop-up window for scribble maps

4. First, change the map measurement units into feet by selecting the little gear symbol on the bottom left-hand corner of your map (see figure 2).

Figure 2: the gear symbol is on the bottom left-hand side

5. A box will pop up titled “settings” and you should select the option that says “Imperial” and then change the Length Unity to “Feet” and Area Unit to “Square Foot” using the drop-down box and then exit the setting box (see figure 3).

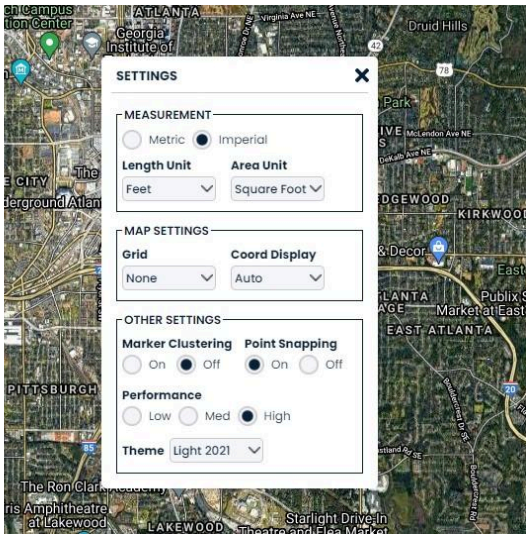

Figure 3: Pop-up settings window

6. In the top left-hand corner, type your address into the search bar and hit search (see figure 4)

Figure 4: Top left-hand window where you type the address and hit search

7. It will navigate to the property but use the plus sign in the top right-hand corner to zoom in closely to your property. The map will show a satellite view.

8. First, start by outlining the perimeter of the building by clicking on the polygon icon in the top-left toolbar (see figure 5).

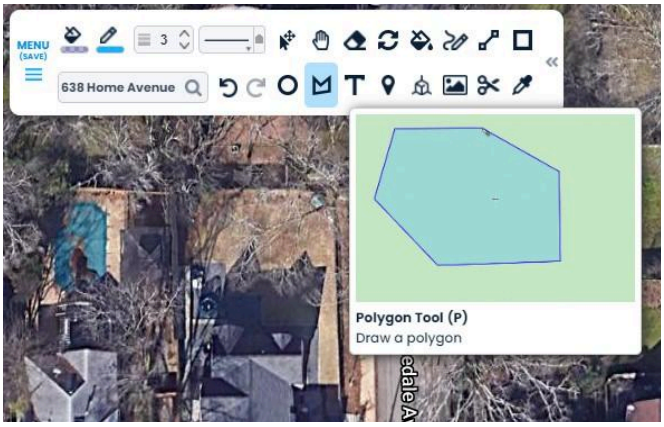

Figure 5 Displays the polygon tool

9. Using the cursor, outline the perimeter of the building by clicking on the corners of the roof, once you have traced the whole roof you can double click or type “x” to close the shape. This will look similar to figure 6 when a shape is drawn.

Figure 6 shows a closed polygon shape (in blue)

10. Next, select the “polygon tool” icon again
11. Repeat the process of outlining the perimeter of any additional buildings on the property (like sheds, garages, etc) until they are all traced. (See figure 7) **As a note, depending on how recent the changes to the property are, not all property elements might be shown in the satellite image. Just do your best to guess if you need.*

Figure 7 shows multiple closed polygon shapes (in blue) for buildings and sheds

12. Next, add up all the square footage for each of the building shapes on the property only (in this example, each blue shape in the picture above). To do this, select the “edit/measure tool” in the top right corner with the arrow icon shown in figure 8.

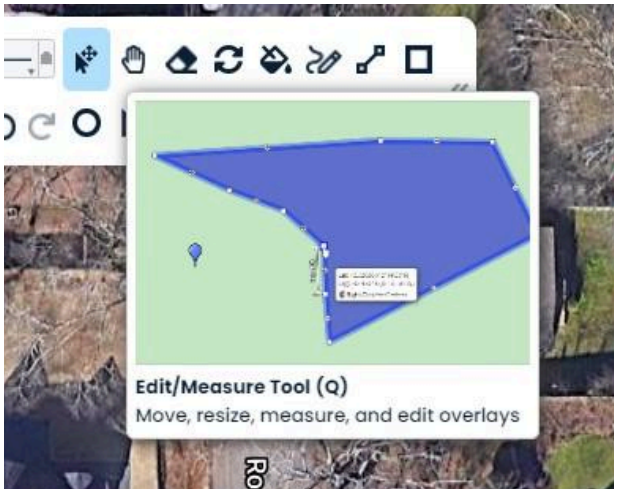

Figure 8 shows the edit/measure tool in the top left-hand toolbar

13. Your cursor will appear like a hand and hover the hand over the first shape you want to measure, a pop-up box will appear shown in figure 9.

Figure 9 shows the pop-up box with details that will show up after step 13

14. Write down the “area” measurement from the pop-up box and repeat by hovering over and writing down the “area” for the rest of your shapes.

15. Calculate the total square footage for all buildings on the property by adding the square footage of each shape together this is the **total building square footage**.

16. If at any point you make an error and would like to delete a shape, simply select the “delete” tool in the top left corner that looks like an eraser icon shown in figure 10. Your cursor will appear as an eraser and you can hover over a shape to delete the boundary, fill, or a specific point.

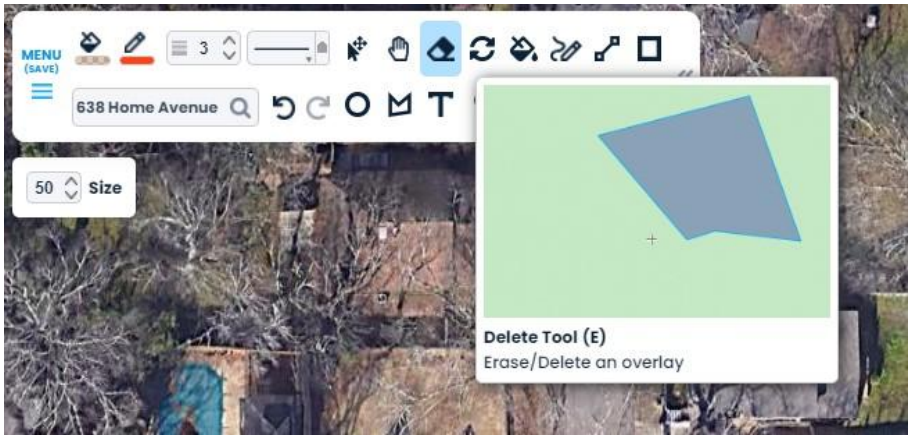

Figure 10 shows the eraser icon

17. Next, you will measure the total property size but first, make sure you can identify the property boundaries. You might be able to see this by the fence or some other element in the landscape, but if you need, you can change the base map to show property boundary lines by clicking the map icon in the bottom right corner of your screen that says “hybrid.”

Figure 11 shows the different base map options available in the bottom right-hand corner

18. Once you do this a series of five map options will pop up. Select the one that says “road.” Your overall map will now appear in grayscale and the property lines will be shown in very light gray shown in figure 11.

19. Before you start the next part, I recommend changing the colors of your next shapes. This makes it much easier to see. Change your fill color by selecting the paint bucket button on the top left cover and using the plus sign to select a new color from the color window like yellow. Change your border color by clicking the pen icon next to the paint bucket and using the plus sign to select a new color from the color window like yellow (shown in figure 12). ***You can pick any color, but contrasting color to the building shapes to make it easier to see.***

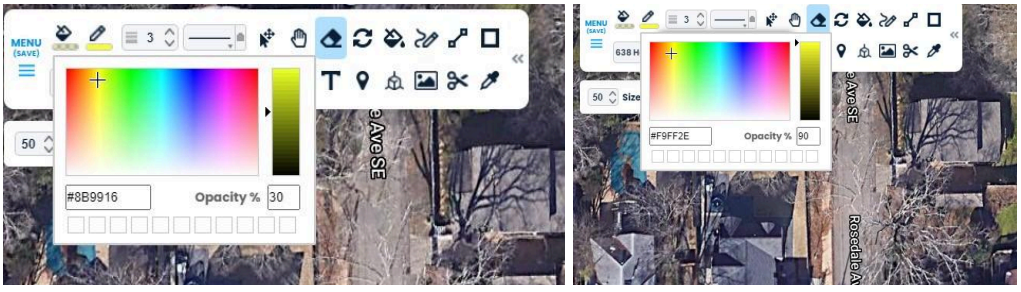

Figure 12 shows the paint bucket and pen in the top left-hand corner and the color window that pops up

20. If the color window is still up you can select anywhere off the color window to close the window.

21. Reselect the polygon tool (see figure 5 if you forget where the polygon tool is)

22. Now the eyedropper will appear and you hover over a corner of the property and click, moving along and tracing the boundary of the property. When you have finished tracing either double click or type “x” to close your shape (figure 13)

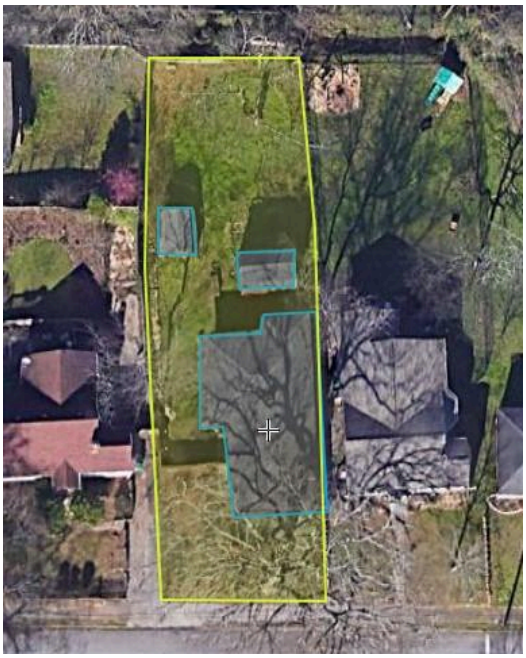

Figure 13 shows the property shape drawn over the building shapes

23. Now, find the square footage for the property (in this example, the yellow shape in the picture above). To do this, select the “edit/measure tool” in the top right corner with the arrow icon. (see figure 8 if you forget where the edit tool is)

24. Your cursor will appear like a hand and hover the hand over the property shape and a pop-up box will appear.

25. Write down the “area” measurement from the pop-up box, this is your **total property area** (see figure 14).

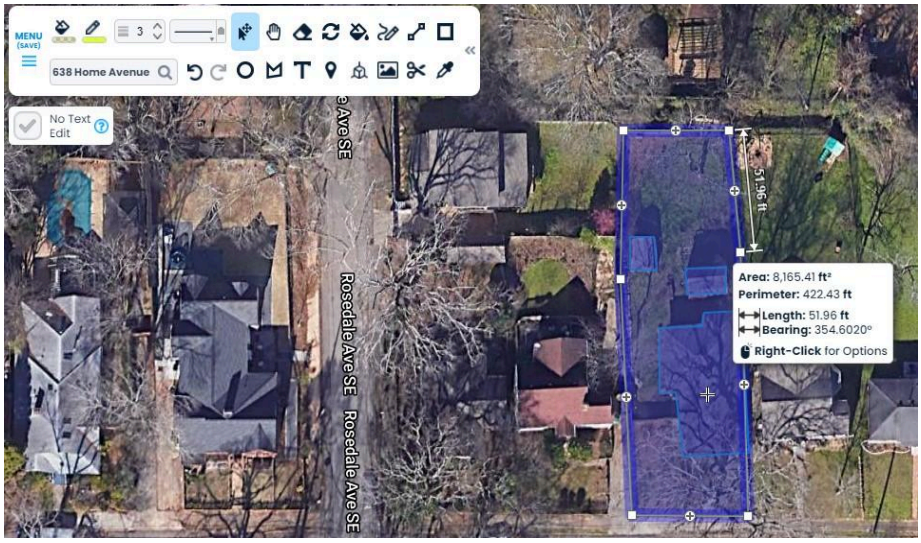

Figure 14 shows the pop-up box displaying the property measurement

26. Now calculate the total yard square footage:

    Total Yard Square Footage =
    (**total property area**) - **total building square footage**

27. Now calculate the maximum lawn size allowed:

    Maximum lawn size =
    Total Yard Square Footage/2

28. Now, clear all the shapes on your drawing by selecting the delete tool and clicking on each shape and outline to delete and repeating until all your shapes are gone.
29. Lastly, select the “polygon tool” icon again and try to outline only the shape of the lawn by outlining the perimeter of your property’s lawn. **As a note, depending on how recent the changes to the property are, not all the property elements might be shown in the satellite image. Just do your best to guess if you need.*
30. Now, measure the size of the lawn using the same “edit/measure” tool and write this number down, this number is the **Current Lawn Size** (see figure 15).

Figure 15 shows the pop-up box displaying the lawn measurement

31. If this **Current Lawn Size** number is smaller than the **Maximum lawn size** calculated in step 27, no action is needed. If this number exceeds the maximum lawn size you need to remove some lawn to meet this goal. To calculate how much lawn to remove you need to remove you can use

Lawn to remove =
Current Lawn Size - **Maximum lawn size**

Sod/Grass Removal Techniques

Sheet Mulching

One of the easiest ways to reduce turf is utilizing a method called sheet or lasagna mulching! It is slower than some other methods but very simple and it is not labor-intensive. Essentially, it is layering cardboard or paper over the area you'd like to remove and covering it with mulch, wood chips, or straw. You can let this stay as a mulched area or let it break down for a while and then plant into it (see figure 1).

Figure 1 shows sheet mulching, for a more detailed step-by-step see the below (Cahill, n.d.), (Hetrick, 2014).

1. The first step is to collect cardboard boxes, brown paper, or newspapers. You can save your recycling and ask your neighbors for their shipping or packaging boxes!
2. When you are ready break down and flatten the boxes but leave them in one piece. Remove all of the tape from the box as well as any tape, stickers, and staples.
3. Mow the area you want to remove as short as possible. Then you can mark out the area of lawn you'd like to remove/cover with marking paint or laying string or a hose on the ground (marking the area out is optional, it just helps guide you in the next step).
4. Layer at least 1 layer of cardboard (or if using paper, you will need about 6 layers of newspaper or brown paper) to cover the entire area. You will want to overlap the sides of the newspaper or cardboard by at least 6 inches to prevent any gaps. You can rip, trip, or fold as you need to make the shapes.
5. Wet down the paper or cardboard
6. Top the paper or cardboard with mulch, wood chips, or straw and wet it again.
7. You will need to leave this for a minimum of (2) months before it has broken down and shaded the grass enough before you can plant into it. An occasional soak (unless you have a few showers of rain) will help it break

down more quickly. The longer you leave it the better. Applying sheet mulching in the fall or winter and leaving it until spring before planting is a great approach.

8. When ready to plant, there is no need to remove the cardboard or paper, it will naturally biodegrade! You just push aside the mulch/straw and dig a hole big enough to plant your plant through the soft/mostly decomposed cardboard.

Smother Method

Figure 2 The polyethylene was put in place and the sod strips were placed over the edges of the poly and anchored in place using sod staples. (Charbonneau, 2011)

This method is similar to the above sheet mulching but if you do not want to gather paper and cardboard, you can simply cover the area you want to remove lawn with a thick, dark, tarp and weigh the tarp edges down after you mow the area as short as possible (figure 2). This will block the sunlight to your sod and kill it in that location but it will also take time. You can mulch over your tarp if you do not want to see it in the meantime but it will make it more challenging to later remove your tarp. The tarp must stay in place for at least (2) months but longer is better. The drawback is that the soil you are left over with is not as good of quality as the sheet mulching method. With sheet mulching, you are adding organic matter back to the soil and the smother method prevents organic matter and water from reaching that part of the soil (temporarily).

Till Under

Figure 3 *"3/18/15: Tilling area before applying newspaper. Note dug out the perimeter." (Plakos, 2015)*

This method is quicker but more labor-intensive and it requires purchasing, renting, or borrowing a tiller (for smaller areas you can do this with elbow grease and a shovel). (Ryan, n.d.), (Caroll, n.d.), (Plakos, 2015)

1. Determine if you will be using a tiller and look into tiller options at places like home depot or sunbelt rentals. Ask what brands they have and research an instructional video so you understand how they work and operate. Tillers can be very challenging to use depending on the quality of your soil and how compacted it is.
2. Avoid any area that is close to large trees and roots as the tiller will damage healthy trees. When working under tree root zones, the sheet mulching and smother methods are best.
3. Prepare your area to be tilled, you want to remove any rocks, sticks, stones, pipes, or items that might get caught in the tiller.
4. Mow the grass as short as possible.
5. Water the soil you plan on tilling (it does not need to be saturated but give a decent soak) and let it soak in for about 15 minutes.

6. Till the area with your tiller (figure 3). You will need to go over the area multiple times which will loosen up the soil each time and help break up sod clumps. Repeat as many times as you need until the final area looks like exposed soil.
7. Use a rake to shift the soil and smooth it out. Gather any large grass clumps and toss them aside so they do not start re-growing in your new area.
8. You can install your plants if you are ready to plant into it and then mulch around the entire bed with 4-6 inches of mulch, wood chips, or straw. Alternatively, you can mulch the entire area with 4-6 inches of mulch, wood chips, or straw and leave until you are ready to plant.

Lawn alternatives

Tree/Shrub Beds

Corners of lawns are often too narrow to use for recreation and are inconvenient spaces to mow. Softening the borders of a lawn and creating curved shrub and tree borders are excellent ways to reduce lawn! Also, consider locations that are problem spots or too shady for the lawn. Check out some pictures below for ideas on how to chip away at the size of the lawn.


Figures 4 and 5 show different ideas for carving out lawns to make space for planting beds (Vitrax, n.d.) and (Petersik, 2014)

Ecological Landscape Alliance offers some simple landscaping templates for Corner Gardens, Mailbox Gardens, and Sidewalk Strips which are great ways to reduce lawn. You can see the corner garden example in Figure 6 and find this information on their website.

Website:
https://www.ecolandscaping.org/11/developing-healthy-landscapes/ecological-adscaping-101/native-plants-for-the-small-yard-easy-beautiful-home-gardens-that support-the-local-ecology/

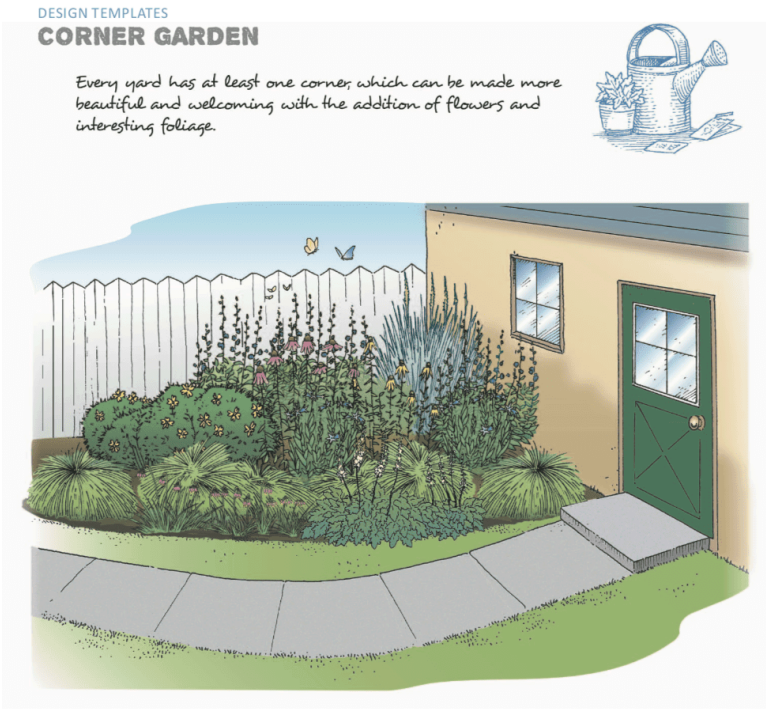

Figure 6 is a Corner Garden illustration representation (Sundberg, 2018).

Perennials/Grasses or Low Growing Groundcovers

There are many non-traditional lawns you can plant that are more Environmentally friendly than a perfect grass lawn. Once established, most will greatly reduce the maintenance and fertilizer required to thrive. Take into account the amount of sun, moisture, soil type, and traffic as you consider lawn alternatives, and look forward to a more creative green space plus more time to enjoy your non-traditional lawn (Nielsen, 2021).

- **Thyme**: This is a fragrant, very low-growing herb with an abundance of delicate flowers. There are a variety of cultivars suited for a range of soils.

- **Moss**: Consider embracing and expanding the natural moss in your yard. Moss is very soft, and very low height, and never needs mowing. There is a

wide range of cultivars, some of which can be purchased and laid similar to turfgrass. Most cultivars prefer some moisture and may need to be weeded from time to time.

- **Creeping Jenny**: Add some bright green (chartreuse) color to your yard by planting this vining, low-growing perennial. This vine prefers full sun or part shade, and moist soil.

- **Green and Gold** (*Chrysogonum virginianum*): this is a low-growing hardy native plant that prefers at least part shade and moisture. The cheerful bright yellow blossoms appear from May to October.

- **Phlox** (*Phlox subulata, Phlox divaricata*): are more hardy native evergreen options. Phlox cultivars have a range of blossom colors and heights.

- **Meadow**: check out the "pollinator meadow" goal for more information about adding a meadow

From Our Partner: Amphibian Foundation

"[The Amphibian Foundation] is an Atlanta-based nonprofit that leads one-of-a-kind conservation research programs to address threats in the southeastern United States and across the globe. [They] provide unique educational opportunities for all ages to learn about amphibians and inspire conservation. Established in 2016 by Mark and Crystal Mandica, [they] collaborate with partners in the fight against amphibian extinction."

Website: www.amphibianfoundation.org/

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