

# What is Your Phosphorus Footprint?

Lakes are influenced by nutrient loading from the land around the lake. Nutrients such as phosphorus are much more concentrated within the watershed than they are in the lake itself, and the movement of these nutrients from land to water can be accelerated by changes to the land. Those changes to land can then change the biological productivity of the lake and lead to changes in plants, algae, fish, and reduced water clarity.

One of the important controls over nutrient movement to the lake is the path and volume of water moving through the riparian zone. Of course, the movement of water towards the lake is complex. It will vary with soil characteristics, slope, topography, storm sizes and time of year. To estimate your phosphorus footprint you need to consider the movement of water and how it is affected by pervious and impervious surfaces.

At the Lake Leaders Institute, we will examine some fundamentals of water movement and explore new research for estimating the impact of land management on phosphorus movement. We will also give you a chance to experiment with a tool being developed to help improve stormwater management. You can participate in this research by spending a few minutes recording some details about your lakeshore lot and bringing that information to the Institute.



## How do I start?

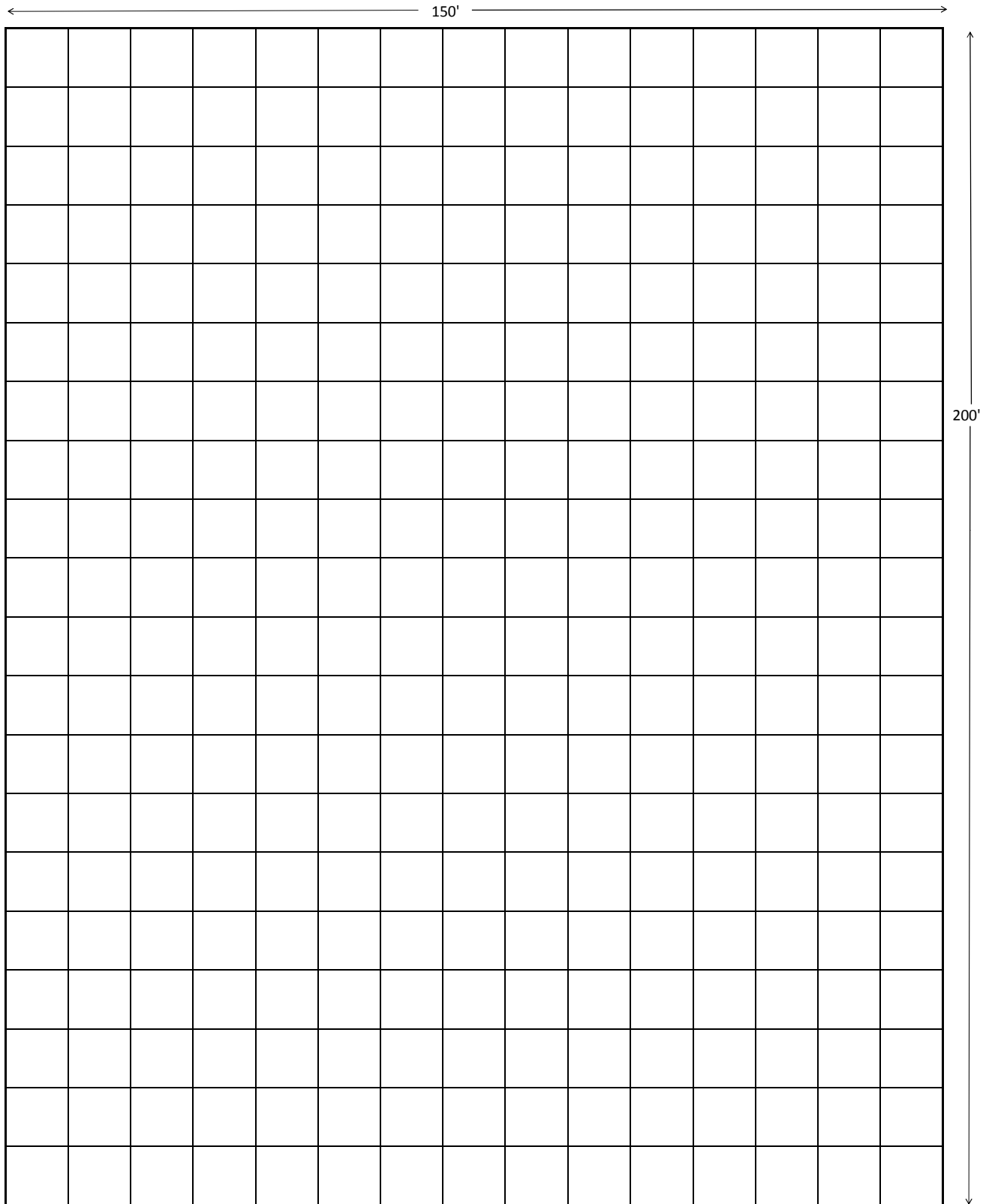
- 1) Develop a map of your lakeshore lot—perhaps your lot or, if you prefer, a hypothetical lot. The back of this page is a grid that you can use to fill out the dimensions. The figure also provides a checklist for your map. Don't feel it is necessary to make detailed measurements at this time (although you can if you want to), but just provide general sizes and distances.
- 2) Sketch the approximate area of buildings, sheds, walkways and driveways (within the first couple hundred feet from the lake). Show the location and type of access pathways (paver, gravel etc).
- 3) What's on the ground? Identify the different vegetation types in general terms—tall grass, lawn, shrubs, mulch etc. Show their approximate extent. Emphasize the vegetation or ground cover that is nearest to the soil surface. Try to estimate the slope (the change in vertical distance over the change in horizontal difference) in the first 100 feet from the lake. Make some notes if that varies substantially on the lot.
- 4) Do you have a raingarden or other area that confines water during storms and prevents it from moving towards the lake (if you are unsure, don't worry, we will discuss this at the Institute), how about an existing buffer? Show those areas on the map. Also show the location of any rain gutter downspouts.
- 5) Examine the soil on your lot and show different types on the map. Is it sandy or silty or clayey? Are there areas where the soil is compacted? Make some general observations about how thick the vegetation residue is on top of the soil? Don't worry if this sounds confusing, it will give us something to talk about.

# CHECKLIST AND GRID FOR PREPARING A GENERAL LOT PLAN

- BUILDINGS, PAVEMENT, PROPERTY LINES
- LOCATION OF LAKE SHORE
- PATHS, STEPS, LAKE ACCESS, DOCK
- EXISTING TREES, SHRUBS, GROUND COVER\*  
(\*show area at a height of 2'-3' from the ground)

- SOIL TYPE ( SANDY OR SILTY OR CLAYEY )
- ESTIMATED SLOPE (%):
- SCALE (each square):  10' x 10' (Dimensions shown assume 10' x 10')

NOTES:



**LAKE**