

# The Basics of Polk County's Impervious Surface Regulations



Polk County Land Information Department  
Polk County Government Center  
100 Polk County Plaza, Suite 130  
Balsam Lake, WI 54810  
715-485-9111  
715-485-9246 Fax  
[www.co.polk.wi.us/landinfo/zoning](http://www.co.polk.wi.us/landinfo/zoning)

## Why do we have impervious surface limits?

- Impervious surfaces don't allow water to soak into the ground, thereby increasing runoff that carries fertilizers, pesticides, and other pollutants into the lakes and streams.
- Studies found that fish populations decline dramatically when more of the watershed is covered with hard surfaces such as rooftops, roads and driveways.
- Some studies have also shown impervious surfaces harm fisheries because:
  - Warm runoff from roads and other hard surfaces raises water temperatures and decreases oxygen levels, eliminating some fish species
  - Sediment carried in the runoff creates cloudy water
  - Sediment covers spawning areas and clogs the gills of some fish
- Economic Studies have showed a relationship between water quality and property evaluations. Typically, property values are higher on cleaner lakes with better water quality.
- Impervious surfaces are often countered with balancing mitigation measures that are designed, implemented, and function to restore natural functions and values that are otherwise lost through development and human activities.

## What is considered impervious surface?

- Roofs
- Driveways (gravel & paved)
- Sidewalks
- Patios

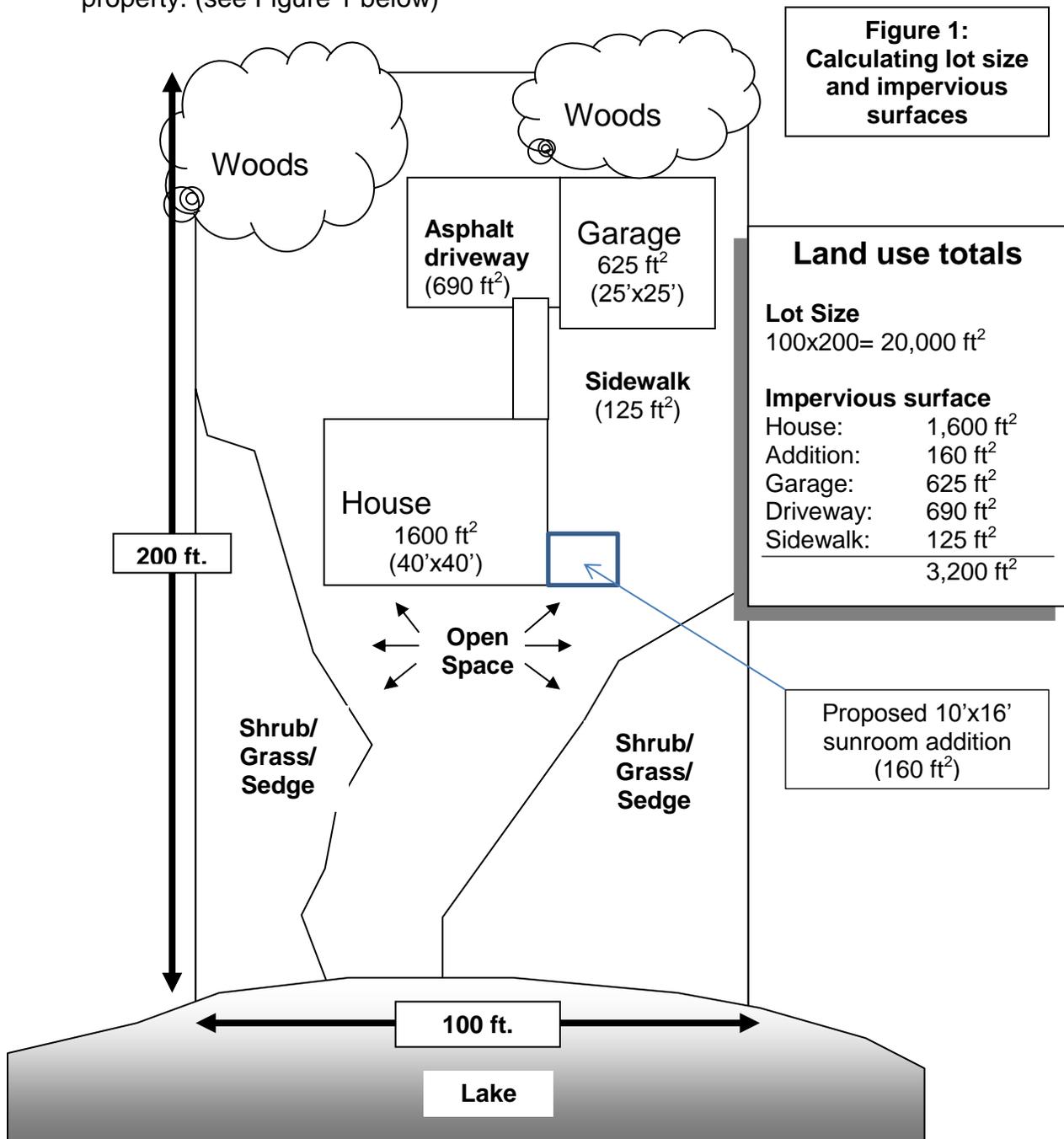
## How much impervious surface am I allowed on my property?

- The impervious surface standards are from Wisconsin Administrative Code NR. 115.
- Under NR. 115, all impervious surfaces within 300 feet of the ordinary high water mark are calculated.
- Every property is allowed up to 15% of impervious surface without any mitigation.
- However, you are allowed from 15-30% of impervious surface, as long as you complete mitigation to reduce the runoff to the 15% threshold.
- Properties with 30% or more of impervious surface are allowed to maintain and keep their impervious surfaces, but are prohibited from adding additional impervious surfaces.

## How do I calculate how much impervious surface I have?

- *Step 1:* Measure or calculate the total lot size within 300 feet of the ordinary high water mark. If your property has been surveyed, the dimensions are also on your survey map along with the total lot size.
  - If you are measuring a rectangular lot, use the following formula:

- Lot width X Lot Depth (within 300')= Lot Size ft<sup>2</sup> (see Figure 1 below)
- If your lot is irregular in shape, the Polk County GIS map may be the easiest way to calculate the lot size within 300 feet. Use the following link to get to the website: <http://polkcowi.wgxtreme.com/>
  - Once on the website, select the “Dept Maps” tab and zoom into your property.
  - Using the “Measure Area” tool in the “Dept Maps” toolbar, measure the size of your lot within 300’ of the water.
- *Step 2:* Calculate and add up all impervious surfaces within this area on your property. (see Figure 1 below)



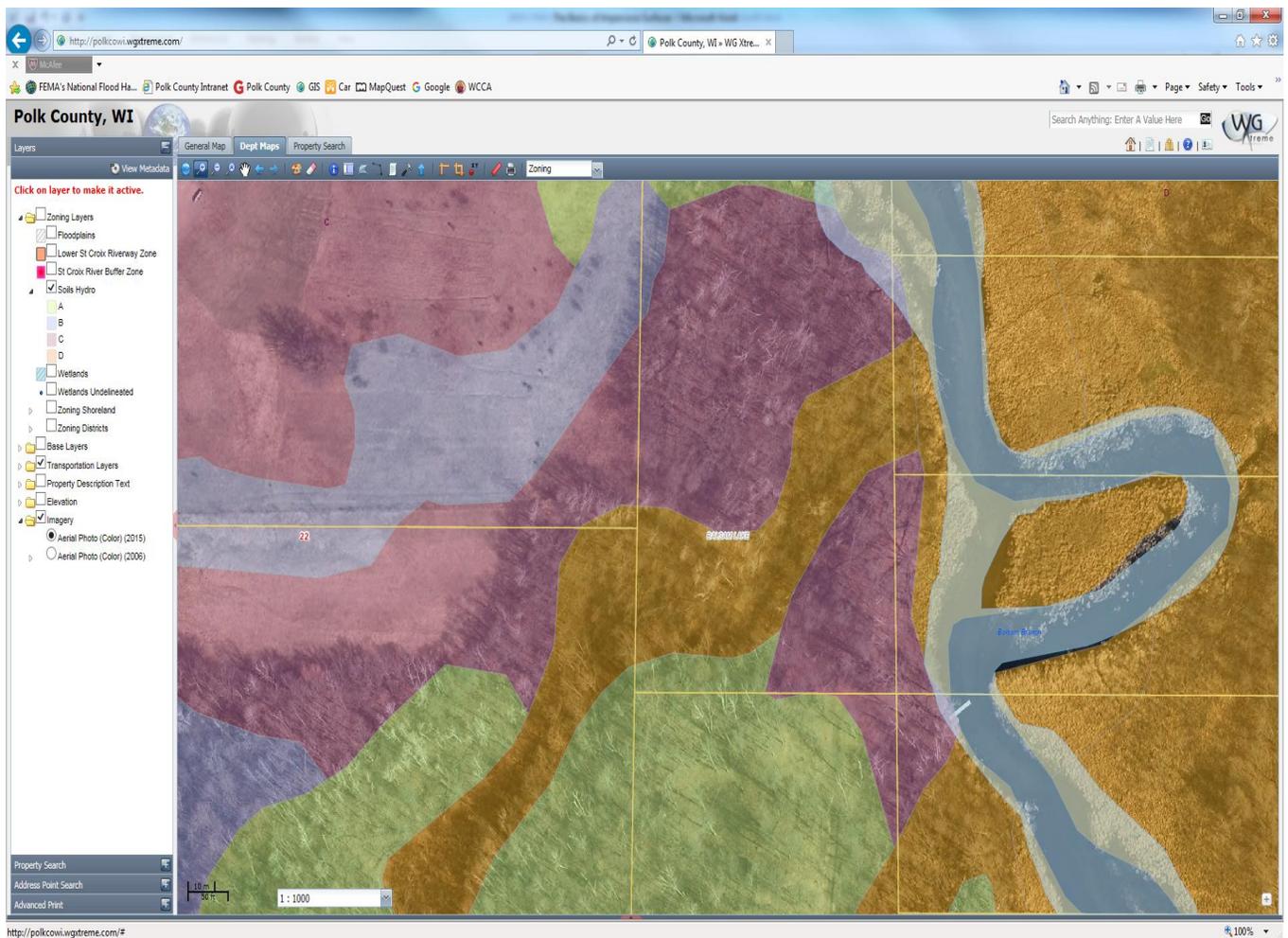
- **Step 3:** Convert the amount of impervious surface into percentage of impervious surface.
  - Using the example above, you would use the following formula:
    - $\text{Impervious surface (ft}^2\text{)} / \text{Lot size (ft}^2\text{)} \times 100 = \text{Percent of impervious}$
    - $3200/20,000 = .16 \times 100 = 16\%$  Impervious surface
  - So in order to add the proposed sunroom, mitigation is required because your property exceeds 15% impervious surface.
  - However, if you complete this process and find you under 15% of impervious surface, mitigation would not be required.

## What are my options for mitigation?

- Install and/or maintain a full shoreland buffer with allowed viewing corridor
- Removal or replacement of nonconforming structures and/or other impervious surfaces of equal or greater square footage
  - Non-conforming structures get an additional bonus of 1.25 square feet per 1 square foot removed.
    - Example: A property owner needs to remove 500 sq. ft. of impervious surface in order to add a 500 sq. ft. addition to their house. If the impervious surface that the property owner wanted to remove was a non-conforming structure, then they would only need 400 sq. ft. to qualify.
- Land Use Runoff Rating Calculation:
  - The property owner can utilize the Land Use Runoff Rating as a mitigation calculator to determine the amount of mitigation required.
  - The proposed development (after proposed improvements) runoff rating shall be based on the land cover, existing impervious surfaces, and soil types.
  - The proposed impervious surface runoff amount must be less than or equal to the amount of runoff generated from 15% of impervious surface on the lot.
  - Options to equalize these values may include, but are not limited to: Vegetative Plantings, Rain gardens, Impoundments, including but not limited to, infiltration pits and rainwater harvesting.

## How to calculate the Land Use Runoff Rating?

- A runoff rating number is determined for the entire lot within 300 feet of the ordinary high water mark. To calculate the runoff rating the landowner/agent must complete the following steps:
  - Measure each land use on the lot and draw them to dimension or scale. Calculate the total square footage of impervious surface and land surface type on the property.
  - Determine the Hydrologic Soil Type (HST) from the GIS map ([Polk County, WI » WG Xtreme](#)) or contact the Zoning Department.
    - To find the Hydrologic Soil Type, select the “Dept Maps” tab on the GIS map
    - Then select “Zoning” from the drop down list in the toolbar
    - Apply the “Soils Hydro” layer to your property and use the key to check the soil type. (Your screen should look similar to the one below)



- Using the runoff rating worksheet, enter the square footage for each land cover type in the respective columns based on the soil type.
- The “Total Area” must meet the total lot size within 300’ of the water.
- The proposed impervious surface columns will be automatically filled with the values entered from the 15% impervious surface columns for convenience. User input is required to change these quantities to their appropriate values.
- Point Credits:
  - A one point credit will be applied for the lots with public sewage and a 1.5 point credit for landowners who establish continuous vegetative cover starting from the OHWM and continuing landward 35 feet. (Allowed Viewing Corridor)
  - Other practices or measures that the county determines adequate to offset the impacts of impervious surface on water quality, near shore aquatic habitat, upland wildlife habitat and natural and scenic beauty. (i.e. practices found in Wisconsin Field Office Technical Guide or NRCS Technical Standards)
- To apply a point credit, subtract the number of points you qualify for from the “Proposed LURR.”
- The worksheet will calculate if mitigation is required, and how much mitigation is needed for each mitigation option.

- Any combination of the four mitigation options is allowed, but you only have to pick one option. If you are doing half raingardens and half native plantings, we would take the total area required for each option and multiply them by 50% to equal a total of 100%. (Prorated)

### **Additional mitigation requirements:**

- Mitigation plans, including existing mitigation options, must be recorded by an affidavit in the Register of Deeds.
- Mitigation plans will have two calendar years to be installed. If mitigation options are not installed and established within two years of issuance of a permit, then citations shall be issued and a new permit could be required.
- For each mitigation plan, dated photo documentation of the mitigation area during and/or after the mitigation installation, as appropriate to show compliance, must be submitted as part of the application. Mitigation must be maintained and is subject to periodic compliance checks.