

**SHORELAND HABITAT WORKSHEET PLANT DENSITY CALCULATIONS (rev 9-18)**

The purpose of a shoreland buffer is to control erosion, reduce the flow of effluents, sediments & nutrients from entering the waters, provide near shore aquatic and wildlife habitat and to promote a natural scenic shoreline. This worksheet will aide in determining the amount of plantings necessary to restore your shoreland buffer. Refer to the WI Biology Technical Note 1: Shoreland Habitat for additional information.

SHORELAND BUFFER AREA CALCULATIONS					
Owner: _____	Total Area of Shoreland Habitat (Sq ft) <sup>(5)</sup>	Total Area of Viewing/ Access Corridor	Total Area of Existing Layer to Preserve and/or Designated Natural Recovery Zones		Total Area to be Planted
Property Address: _____					
Tree Layer		-	-	=	
Shrub layer		-	-	=	
Herbaceous Cover (Plants or Grass/Forbs)		-	-	=	

The tables below describe planting standards for two major shoreland types: woodland, and barrens/dry prairie/wet prairie. The woodland has a nearly complete canopy of trees while the barrens/prairie and wetland are more open. Plant numbers are to be calculated based on the area in square feet to be reestablished and the appropriate density. The area to be reestablished shall be calculated for each layer. Determining which habitat is suitable for your property will be based on reviewing nearby natural undisturbed habitats. **Check the box for the appropriate habitat type and apply the range of densities in your shoreland buffer plan.**

WOODLAND HABITAT									
	Min. # of species <sup>(1)</sup>	Total Area to be Planted (Sq ft)		Density Factor		Seed or Plant Density Ranges from Table 1 <sup>(1)</sup>		Total Range of Trees, Plants or Seeds to Install	
								min	max
Tree Layer <sup>(2)</sup>	2		÷	100	X	0.5 -5 Trees	=		
Shrub layer (soil must be mulched)	3		÷	100	X	1-4 plants	=		
Herbaceous Layer <i>-choose between plants or seedings (3)</i>									
Plant Plugs	3		÷	100	X	25-75 plants per 100 sq ft	=		
Grass seeds	3		÷	1000	X	4-8 oz. per 1000 sq ft	=		
Forbs seeds	3		÷	1000	X	2-4 oz. per 1000 sq ft	=		

WETLAND OR DRY PRAIRIE/ WET PRAIRIE HABITAT									
	Min. # of species <sup>(1)</sup>	Total Area to be Planted (Sq ft)		Density Factor		Seed or Plant Density Ranges from Table 1 <sup>(1)</sup>		Total Range of Trees, Plants or Seeds to Install	
								min	max
Tree Layer <sup>(2)</sup>	0		÷	100	X	0-0.2 Trees	=		
Shrub layer (soil must be mulched)	2		÷	100	X	0.2-0.5 plants	=		
Herbaceous Layer <i>-choose between plants or seedings (3)</i>									
Plant Plugs	5		÷	100	X	50-100 plants per 100 sq ft	=		
Grass seeds	5		÷	1000	X	4-8 oz. per 1000 sq ft <sup>(4)</sup>	=		
Forbs seeds	5		÷	1000	X	2-4 oz. per 1000 sq ft <sup>(4)</sup>	=		

- Select species from established plant lists for shoreland habitat. Trees, shrubs, and groundcovers may be transplanted from adjacent woodland or open areas outside the restoration area.
- Trees must be at least 2 year old seedlings, 8 inches or taller.
- The herbaceous cover layer shall be comprised of a minimum of 30% grasses and/or sedges. Forbs are herbaceous flowering plants other than a grass.
- Consider the use of plants rather than seeds in wet areas.
- MOWING, TRIMMING OR RAKING IS NOT ALLOWED IN THE SHORELAND BUFFER.