GG109-14
402.4

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Revise as follows:

402.4 Wetland protection. Building and building site improvements shall not be located within a wetland or within a ~~buffer~~ *buffer* ~~as established by the jurisdiction~~ around the wetland. The width of the *buffer* shall be not less than the minimum *buffer* width shown in Table 402.4 or otherwise established by the jurisdiction.

Exception: Buildings and associated site improvements specifically related to the use of the wetland including, but not limited to, piers, docks, fish hatcheries, and habitat restoration facilities, shall be permitted where the impacts of the construction and location adjacent to or over the wetland on the habitat are mitigated.

TABLE 402.4(1)
WETLAND BUFFER WIDTHS*

Wetland area (Acres)	Minimum buffer width (Feet)
< 5	50
5 to 30	75
> 30	100

*For wetlands with surrounding slopes equal or greater to 10 percent but less than 15 percent, an additional 10 feet of *buffer* shall be added. For surface waters with surrounding slopes equal or greater than 15 percent but less than 20 percent, an additional 15 feet shall be added. For areas with surrounding slopes equal to or greater than 20 percent, an additional 30 feet shall be added.

Reason: Buffer" is defined in Chapter 2, but is not italicized in Chapter 4, so we recommend that this editorial correction be made. Section 402.4 requires that buildings and site improvements stay outside of a buffer area. The width (distance) of the buffer is left to be determined by the jurisdiction, which many jurisdictions could find burdensome. The default for the buffer distance is therefore effectively zero, which would be at odds with the intent of the section. This proposal presents a set of buffer distances that would serve as the default set of distances should the jurisdiction not be prepared to set the distances, or serve as guidance for a jurisdiction in its decision-making.

The distances provided in this table are based on scientific studies of the contributions of various-sized buffers to the protection of wetlands, as well as on studies of the approaches to setting buffer distances adopted in ordinances.

The proposed table calls for increased distances for wetlands located next to slopes of 10% or greater, as slopes are prone to increased erosion and runoff, both of which can damage water quality through increased loading of sediment and various pollutants. This reduces the ability of the water body to effectively filter pollutants and hurts its ecological productivity.

Bibliography:

DeLuca, W. V., C. E. Studds, and P. P. Marra. 2004. "The Influence of Land Use on the Integrity of Marsh Bird Communities of the Chesapeake Bay." *Wetlands* 24: 837-847.

Dillaha, T.A., R.B. Reneau, S. Mostaghimi, and D. Lee. 1989. "Vegetative Filter Strips for Agricultural Nonpoint Source Pollution Control." *Transactions of the ASAE* 32:513-519.

Dillaha, T. A., J. H. Sherrard, D. Lee, S. Mostaghimi, and V.O. Shanholtz. 1988. Evaluation of Vegetative Filter Strips as a Best Management Practice for Feed Lots." *Journal of the Water Pollution Control Federation* 60(7):1231-1238.

Environmental Law Institute. 2003. *Conservation Thresholds for Land Use Planners*.

Washington DC. Federal Interagency Floodplain Management Task Force (FIFMTF). 1996.

Protecting Floodplain Resources: A Guidebook for Communities. Federal Emergency Management Agency (FEMA 2268/June 1996).

Fischer, R. A. 2000. "Width of riparian zones for birds." *Ecosystem Management and Restoration Research Program Technical Notes Collection*, U.S. Army Engineer Research and Development Center, Vicksburg, Mississippi. www.wes.army.mil/el/emrrp.

Houlahan, J.E. and C.S. Findlay. 2003. "The Effects of Adjacent Land Use on Wetland Amphibian Species Richness and Community Composition. " *Canadian Journal of Fisheries and Aquatic Sciences* 60:1078-1094.

Kuusemets, V. and U. Mander 1999. "Ecotechnological Measures to Control Nutrient Losses from Catchments." *Water Science and Technology* 40(10): 195-202.

Lowrance, R. and J.M. Sheridan. 2005. "Surface Runoff Water Quality in a Managed Three Zone Riparian Buffer. " *Journal of Environmental Quality* 34:1851-1859.

Mayer, P.M., S.K. Reynolds Jr., and T.J. Canfield. 2005. *Riparian Buffer Width, Vegetative Cover, and Nitrogen Removal Effectiveness: A Review of Current Science and Regulations.* EPA/600/R-05/118. Cincinnati, OH, U.S. Environmental Protection Agency.

McElfish, James M. Jr., Rebecca L. Kihslinger, and Sandra S. Nichols. *Planner's Guide to Wetland Buffers for Local Governments.* Environmental Law Institute, Washington, D.C. 2008.

Parkyn, S. 2004. "Review of Riparian Buffer Zone Effectiveness. MAF Technical Paper No. 2004/05". New Zealand Ministry of Agriculture and Forestry. Wellington, New Zealand. http://nzfsa.net/mafnet/rural-nz/sustainable-resource-use/resource-management/reviewriparian-buf fer-zone-effectiveness/techpaper-04-05-riparianeffectiveness.Pdf

Rubbo, M.J. and J.M. Kiesecker. 2005. "Amphibian Breeding Distribution in an Urbanized Landscape." *Conservation Biology* 19:504-511.

Semlitsch R.D. and J.R. Bodie. 2003. "Biological Criteria for Buffer Zones around Wetlands and Riparian Habitats for Amphibians and Reptiles. "*Conservation Biology* 17(5): 1219-1228.

Sheldon, D., T. Hruby, P. Johnson, K. Harper, A. McMillan, S. Stanley, and E. Stockdale. 2005. *Freshwater Wetlands in Washington State - Vol. 1: A Synthesis of the Science.* Washington Department of Ecology, Olympia.

Syversen, N. 2005. "Effect and Design of Buffer Zones in the Nordic Climate: The Influence of Width, Amount of Surface Runoff, Seasonal Variation and Vegetation Type on Retention Efficiency for Nutrient and Particle Runoff." *Ecological Engineering* 24:483-490.

Wenger, S. 1999. *A Review of the Scientific Literature on Riparian Buffer Width, Extent, and Vegetation.* Available *at* www.rivercenter.uga.edu/service/tools/buffers/buffer_lit_review.pdf.

Cost Impact: Will not increase the cost of construction

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