

Endnotes for Protecting Your Waterfront Investment – 2021 update

¹ Guignet, Dennis et al. 2019. *Property Values and Water Quality: A Nationwide Meta-analysis and the Implications for Benefit Transfer*. NCEE Working Paper Series 201905, National Center for Environmental Economics, U.S. Environmental Protection Agency.

² Horsch, Eric J. et al. 2009. “The Effects of Aquatic Invasive Species on Property Values: Evidence from a Quasi-Experiment.” *Land Economics*, 85(3): 391–409. <https://doi.org/10.3368/le.85.3.391>

³ Markham, Lynn and Ross Dudzik. 2013. *Impervious Surfaces: How They Impact Fish, Wildlife and Waterfront Property Values*. GWQ061 I-10-2013. www.uwsp.edu/cnr-ap/clue/Documents/Water/ImperviousSurfaces2013.pdf ; Wang, Lizhu, John Lyons, Paul Kanehl, Roger Bannerman, and Edward Emmons. 2000. “Watershed Urbanization and Changes in Fish Communities in Southeastern Wisconsin Streams.” *Journal of the American Water Resources Association* 36(5): 1173–1187; Wang, Lizhu, John Lyons, and Paul Kanehl. 2001. “Impacts of Urbanization on Stream Habitat across Multiple Spatial Scales.” *Environmental Management* 28(2): 255–266; Suedel, Burton C. et al. 2017. “Effects of Suspended Sediment on Early Life Stages of Smallmouth Bass (*Micropterus dolomieu*).” *Archives of Environmental Contamination and Toxicology* 72: 119–131; Kerr, S. J. et al. 1997. *Walleye habitat: A Synthesis of Current Knowledge with Guidelines for Conservation*. Percid Community Synthesis Walleye Habitat Working Group.

⁴ This approach reduces erosion and soil compaction, and it can reduce the amount of phosphorus delivered to a lake by five-fold and the amount of sediment to a lake by 18-fold. Wisconsin Department of Natural Resources memo from John Panuska, November 16, 1994 .

⁵ Bennett, E.M. 2003. “Soil Phosphorus Concentrations in Dane County, Wisconsin, USA: An Evaluation of the Urban-Rural Gradient Paradigm.” *Environmental Management*, 32(4): 476–487; and Bennett, E.M., personal communication to author, April 13, 2005 .

⁶ Calculated by Kate Demorest, UW-Stevens Point.

⁷ Henderson, Carrol L. et al. 1998. *Lakescaping for Wildlife and Water Quality*. Minnesota Department of Natural Resources, 27.

⁸ Section 94.643 Wisconsin Statutes.

⁹ Based on the most recent data available in 2021. U.S. Environmental Protection Agency. *Pesticides Industry Sales and Usage: 2008–2012 Market Estimates*, by Donald Atwood and Claire Paisley-Jones. www.epa.gov/sites/production/files/2017-01/documents/pesticides-industry-sales-usage-2016_0.pdf; U.S. Environmental Protection Agency. *Chemicals Evaluated for Carcinogenic Potential Annual Cancer Report 2020*. 2020. npic.orst.edu/chemicals_evaluated.pdf .

Most common lawn and garden pesticides (EPA 2020, 15) and their carcinogenic potential:

1. 2,4-D: Not Classifiable As To Human Carcinogenicity
2. Glyphosate: Not Likely To Be Carcinogenic To Humans; International Agency for Research on Cancer classified glyphosate as “probably carcinogenic to humans” www.iarc.who.int/featured-news/media-centre-iarc-news-glyphosate/

3. MCPP = Mecoprop-P: Suggestive Evidence Of Carcinogenicity, But Not Sufficient To Assess Human Carcinogenic Potential
4. Pendimethalin: Possible Human Carcinogen
5. Carbaryl: Likely To Be Carcinogenic To Humans

¹⁰ Masarik, Kevin. 2016. *Nitrate in Wisconsin's Groundwater*. Center for Watershed Science and Education. www.uwsp.edu/cnr-ap/watershed/Documents/wednal_masarik.pdf

¹¹ Ginsberg, Howard S. et al. 2017. "Management of Arthropod Pathogen Vectors in North America: Minimizing Adverse Effects on Pollinators." *Journal of Medical Entomology* 54(6):1463–1475; Oberhauser, K.S. et al. 2005. "Growth and Survival of Monarch Butterflies (Lepidoptera: Danaidae) after Exposure to Permethrin Barrier Treatments." *Environmental Entomology* 35(6):1626–1634; Lee, Ki-Yeol et al. 2008. "Toxicity of Firefly, *Luciola lateralis* (Coleoptera: Lampyridae) to Commercially Registered Insecticides and Fertilizers." *Korean Journal of Applied Entomology* 47(3): 265–272.

¹² Graczyk, David J. et al. 2003. *Hydrology, Nutrient Concentrations, and Nutrient Yields in Nearshore Areas of Four Lakes in Northern Wisconsin, 1999–2001*, 41, USGS Water Resources Investigation Report 03-4144. pubs.usgs.gov/wri/wrir-03-4144/

¹³ Bozek, Michael et al. 2016. *A Second Life for Trees in Lakes: As Useful in Water as They Were on Land*. Wisconsin Department of Natural Resources and the University of Wisconsin–Madison, Division of Extension. uwsp.edu/cnr-ap/clue/Documents/Water/Second-Life-For-Trees_Final.pdf

¹⁴ Bruner, Kate et al. 2016. *Rain Gardens: A Guide for Homeowners and Landscapers*. Wisconsin Standards Oversight Council and the Wisconsin Department of Natural Resources. dnr.wi.gov/topic/Stormwater/documents/RainGardenManualPrint.pdf