



Alice Thompson

GLOSSARY

Acidic—Solutions (including soil moisture and water vapor) that have a pH value less than 7.

Acre—A land unit containing 43,560 square feet.

Aerial photo—A black and white photo of land taken from an airplane.

Alkaline (basic)—Solutions (including soil moisture and water vapor) that have a pH value greater than 7.

Annual—A plant that completes its life cycle in one growing season and then dies.

Artificial drainage—Use of ditches, drain tiles, pumps, and/or channelization to lower the water table and drain land.

Berm—A mound or wall of earth that acts like a dike or levee to impound water

Biological control—The use of a living organism as a predator or competitor of an undesirable organism.

Biodiversity/biological diversity—The abundance and mix of different plant and animal species in an area.

Bog—A wetland with peat soil, which is isolated from ground or surface water (only significant water inputs are from rain) and dominated by mosses (*Sphagnum* spp.), sedges, shrubs, and evergreen trees such as black spruce and tamarack.

Buffer zone—An area of vegetation maintained around the shoreline or edge of a stream or wetland. The buffer zone reduces impacts to water, vegetation, and wildlife from adjacent upland activities.

Calcareous—Containing calcium carbonate, calcium or lime, which typically causes an alkaline condition.

Channelization—The straightening and widening or deepening of a stream to speed drainage.

Cool season plants—Plants that actively grow in cool weather: spring and fall (includes many Eurasian grasses).

Cold stratified—Seeds are stored in a cool place over winter to encourage germination.

Community—See “plant community.”

Controlled burn—Using fire as a management tool.

Disturbance—Any physical force, such as fire, wind, flood, or extreme cold and disease epidemics. Some natural disturbances were historical forces acting on an ecosystem. Human disturbances were more recent.

Ditching—Excavating a channel in a wetland to drain water.

Ditch plug—A particular amount of fill in a ditch at its lowest point.

Diversion—See “channelization.”

Diversity—Variety, see “biological diversity.”

Drainage—See “artificial drainage.”

Drain tile—Perforated plastic, clay, or concrete pipes that are buried under the surface of the ground to facilitate drainage.

Drawdown—A seasonally cyclic natural or artificial removal of water from a wetland system.

Driftless area—A portion of south-central Wisconsin that was spared from the last advance of glaciers

Ecological—Involving a relationship between living organisms and their environment.

Ecosystem—A community of plants and animals and the physical environment they inhabit, e.g. wetlands, rivers, uplands. The ecosystem reflects the interaction among soil, climate, vegetation, and animal life.

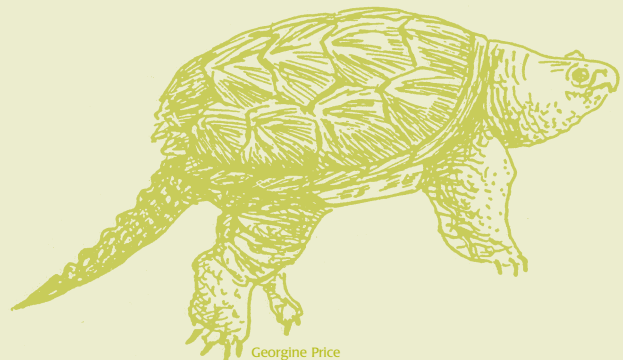
Emergent—A plant that is rooted in the ground and rises out of water such as cattails or rushes.

Erosion—The movement of soil by wind and/or water.

Eutrophication—An aging process by which a water body becomes highly productive either due to natural causes or excessive inputs of pollution rich in dissolved nutrients (e.g., fertilizers).

Evaporation—Conversion of liquid water to vapor.

Exotic species—A plant or animal that evolved in another region or on another continent and is therefore not native to the area in question. Also called “non-native species.”



Farmed wetlands—An NRCS term for land that is partially altered but because of wetness, can't be farmed every year.

Fen—A type of wetland that receives mineral-rich inputs of groundwater and is dominated by sedges and other grass-like vegetation.

Fill—Soil, rocks, concrete, cement, gravel, etc. deposited over wetlands.

Forb—A non-woody plant that is not a grass. This includes annual, biennial, and perennial flowers.

Groundwater—Water that seeps below the surface of the ground and fills interconnected pores in soil and cracks in rocks. Generally lower in nutrients than surface water.

Habitat—The environment in which the requirements of a specific plant or animal are met, including food, water, cover, and space.

Herbicide—A chemical used to kill plants.

Hummocks—Tussocks or raised knobs of organic soil with a clump of sedges on the top. Hummocks are created by some species of sedges, e.g., *Carex stricta*. The tussock height can be from a few inches to a few feet tall. Tussocks are arranged in a regular pattern.

Hybrid—An offspring resulting from a cross between genetically different parents (different breeds, varieties, species, or genera).

Hydric soil—A soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic (no oxygen) conditions in the root zone.

Hydrology—The study of water sources and flows. The term used to describe particular water conditions in a wetland: where water comes from, how much water exists, and how long it stays on site.

Hydrophyte or **hydrophytic vegetation**—Literally, water-loving vegetation. Any plant that grows in water, or on a base surface that is at least periodically deficient in oxygen as a result of excessive water content; plants typically found in wetlands and other aquatic habitats.

Impoundment—A body of water that is collected or confined, as behind a dam or dike.

Invasive species—A species that can aggressively spread and may not be native.

Marsh—A wetland characterized by grass-like plants (sedges, reeds, grasses, cattails) and wildflowers.

Mineral soil—Any soil consisting primarily of mineral (sand, silt, and clay) material, rather than organic matter.

Monoculture/monotypic—Characterized by a large area occupied by a single species.

Muck—Dark-colored, finely textured, well-decomposed organic soil material where most plant fibers are not recognizable.

Native plant—A plant species that originally occurred in an area.

Navigable waterway—A ditch or stream that has a defined bed and bank, a direction of flow, and at some point in a normal year, you can float a canoe on it.

Non-hydric soil—An area that has sufficiently dry conditions that hydrophytic vegetation, hydric soils, and/or wetland hydrology are lacking (synonymous with upland).

Non-native species—A plant or animal that evolved in another region or on another continent and that is therefore not native to the area in question. Also called "exotic species."

Nutrient—Any mineral, compound, or element that promotes biological growth or development.

Organic soils—Soils composed of partially decomposed plant parts, e.g., mucks and peats. Typically very black in color.

Oxbows—A curving channel of a river.

pH—A chemical measure of the degree of acidity or alkalinity on a scale of 0 to 14. A typical Wisconsin bog has pH values of 4-5 (acidic), while fens and shallow marshes may be 6-8 (neutral or slightly alkaline).

Peat—A low-density, slightly decomposed fibrous organic soil composed largely of plant material that can still be identified.

Permeability—The quality of the soil that enables water to move downward through the profile, measured as the number of inches per hour that water moves downward through the saturated soil.

Pesticide—A chemical used to control pests such as insects.

Phenology—The study of the seasonal changes in plant or animal life and the relationship of these changes to weather and climate.

Plant community—The various plant species that share a single habitat.

Prescribed burn—See "controlled burn."

Pre-settlement—Before European and Euro-American settlement.

Prior-converted—An NRCS term for a former wetland that has been drained to the point that it can be farmed most of the time.

Restoration—See "wetland restoration."

Rhizome—Underground, swollen, horizontal stems from which new plants can develop.

- Riparian**—The area along the banks of a water course or lake.
- Rootstock**—An underground stem with erect stems or leaves at intervals.
- Saturated**—A condition in which virtually all pores between soil particles are temporarily or permanently filled with water.
- Scrape**—A slight excavation in a wetland that allows for open water ponding.
- Sedges**—A group of plants that typically have triangular solid stems and occur in wetlands.
- Sedimentation**—The settling of soil particles and pollutants on the soil surface.
- Seed bank**—A reservoir of ungerminated seeds within the soil.
- Seed drill**—A device, usually pulled behind a tractor, used to plant crops or native seeds.
- Senescence**—Dying off of plant material.
- Shoreland zone**—The area immediately adjacent a lake or waterway, generally excluded from certain types of development by local or state laws.
- Shrub**—Woody vegetation usually greater than 3 feet but less than 20 feet tall, including multi-stemmed, bushy shrubs and small trees and saplings.
- Siltation**—See “sedimentation.”
- Soil compaction**—Alteration in soil structure as it is pressed and the soil loses pore spaces.
- Spillway**—An overflow area constructed on a berm or dike to allow water to flow out at a set elevation.
- Spoils**—The soil that has been excavated and deposited in a pile adjacent the evacuation.
- Steward/stewardship**—To care for and manage natural land in a way that maintains its ecological integrity for the benefit of present and future generations.
- Stratify/stratification**—See “cold stratified.”
- Submergent**—Plant that is rooted in the ground and is either below the water surface or has floating leaves, e.g., water lily.
- Subsidence**—Soil that is compressed and loses structure, or organic soil that decomposes and is lower in elevation than originally.
- Substrate**—The base, usually soil, upon which a plant grows.
- Sustainable site**—Implies that the site will be self-maintaining over a long period of time.
- Surface water**—Water that runs off the ground.
- Swamp**—A forested wetland.
- Tension zone**—A zone of climatic change that roughly divides the state of Wisconsin into two regions running in a band from the southeast to northwest.
- Topography/topographic map**—The configuration of the surface, including its relief and the position of its natural and human-made features. When this information is depicted, it creates topographic maps.
- Transpiration**—The process in plants by which water is released into the atmosphere through the leaves.
- Tree**—A woody plant 5 inches or greater in diameter at breast height and 20 feet or taller.
- Upland**—Any area that does not qualify as a wetland because the associated hydrologic regime is not sufficiently wet to elicit development of vegetation, soil, and/or hydrologic characteristics associated with wetlands.
- Warm season**—Plants (including prairie grasses) that are most actively growing in the warmth of the summer.
- Water quality**—A wetland function referring to a wetland’s capacity to retain and process dissolved or particulate materials to the benefit of downstream water quality.
- Watershed**—The surrounding land area that drains into a lake, river, river system, or wetland.
- Water table**—The point at which the ground becomes completely saturated with water.
- Wetland**—An area that is inundated or saturated to the surface for a sufficient time to foster the growth of hydrophytic plants and/or the development of hydric soils.
- Wetland creation**—The establishment of a wetland in an area where a wetland never existed historically.
- Wetland enhancement**—Maintenance or management of existing wetlands for a particular function or value, sometimes at the expense of other functions or values.
- Wetland hydrology**—See “hydrology.”
- Wetland indicators**—Plants that are adapted to wetland conditions. Their presence indicates the area may be a wetland.
- Wetland management**—Activities that do not involve changes in soils or hydrology, but may affect wildlife habitat and vegetation.
- Wetland restoration**—The reestablishment of a wetland of the same type in the landscape where a wetland existed historically.





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APPENDIX A.

Useful Literature and World Wide Web Resources

WETLAND GUIDES



- Benyus, J.M. 1989. *Northwoods Wildlife, A Watcher's Guide to Habitats*. NorthWord Press, Inc., Minocqua, WI. 365 pp.
- Curtis, J.T. 1959. *The Vegetation of Wisconsin*. University of Wisconsin Press, Madison, WI. 657 pp.
- Eastman, J. 1995 *The Book of Swamp and Bog*. Stackpole Books, Mechanicsburg, PA. 237 pp.
- Eggers, S.D., and D.M. Reed. 1997. *Wetland Plants and Plant Communities of Minnesota and Wisconsin*. 2nd edition. U.S. Army Corps of Engineers, St. Paul, MN. 263 pp.
- Judd, M.K., and M. E. Vollbrecht. 1990. *Wetlands, Wonderlands*. Wisconsin Department of Natural Resources, Madison, WI. 16 pp.
- Martin, A.C., H.S. Zim, and A.L. Nelson. 1961. *American Wildlife and Plants. A Guide to Wildlife Food Habits*. Dover Publications, Inc., New York, NY. 500 pp.
- Mitsch, W.J., and J.G. Gosselink. 1986. *Wetlands*. Van Nostrand Reinhold Company, New York, NY. 539 pp.
- National Audubon Society. 1996. *Oases for Wildlife: Small and Farmed Wetlands*. Printing Service Associates, Inc., Wheaton, MD. 28 pp.
- Niering, W. 1985. *The Audubon Society's Nature Guides: Wetlands*. Alfred A. Knopf, New York, NY. 640 pp.
- Tiner, R.W. 1998. *In Search of Swampland: A Wetland Sourcebook and Field Guide*. Rutgers Press, Rutgers, NY. 264 pp.
- Weller, M.W. 1994. *Freshwater Marshes—Ecology and Wildlife Management*. 3rd edition. University of Minnesota Press, Minneapolis, MN. 192 pp.
- Welsch, D.J., D.L. Smart, J.N. Boyer, P. Minkin, H.C. Smith, and T.L. McCandless. 1995. *Forested Wetlands. Functions, Benefits, and the Use of Best Management Practices*. USDA Forest Service Publication, Radnor, PA. 62 pp.
- Wisconsin Coastal Management Program. 1995. *Basic Guide to Wisconsin's Wetlands and their Boundaries*. Wisconsin Department of Administration, Madison, WI. 88 pp.

- Wisconsin Department of Natural Resources. 1994. *Just add Water! Restoring Shallow Wetlands for Wildlife*. Bureau of Wildlife Management, Madison, WI. 11 pp. [PUBL-WM-229]

PLANT IDENTIFICATION MANUALS AND FIELD GUIDES



- Borman, S., R. Korth, J. Temte. 1997. *Through the Looking Glass: A Field Guide to Aquatic Plants*. Wisconsin Department of Natural Resources, Madison, WI. 248 pp. [PUBL-FH-207-97]
- Brown, L. 1979. *Grasses: An Identification Guide*. Houghton Mifflin, New York, NY. 256 pp.
- Chadde, S.W. 1998. *A Great Lakes Wetland Flora*. PocketFlora Press, Calumet, MI. 569 pp.
- Cochrane T.S., and H.H. Iltis. 2000. *Atlas of the Wisconsin Prairie and Savanna Flora*. Wisconsin Department of Natural Resources Technical Bulletin 191. Madison, WI. 226 pp. [PUBL-SS-191 2000]
- Courtenay, B., and J. H. Zimmerman. 1978. *Wildflowers and Weeds*. Simon and Schuster, Inc., New York, NY. 144 pp.
- Eggers, S.D., and D.M. Reed. 1997. *Wetland Plants and Plant Communities of Minnesota and Wisconsin*. 2nd edition. U.S. Army Corps of Engineers, St. Paul, MN. 263 pp.
- Fassett, N.C. 1957. *A Manual of Aquatic Plants*. 2nd edition. University of Wisconsin Press, Madison, WI. 405 pp.
- Harrington, H.D., and L.W. Durrell. 1957. *How to Identify Plants*. Ohio University Press, Athens, OH. 203 pp.
- Hotchkiss, Neil. 1972. *Common Marsh, Underwater and Floating-leaved Plants of the United States and Canada*. Dover Publications, Inc., New York, NY. 124 pp.
- Knobel, E. 1980. *Field Guide to the Grasses, Sedges and Rushes of the United States*. Dover Publications, Inc., New York, NY. 83 pp.
- Ladd, D., and F. Oberle. 1995. *Tall Grass Prairie Wildflowers*. Falcon Press, Helena, MT. 252 pp.



Newcomb, L. 1977. *Newcomb's Wildflower Guide*. Little, Brown and Company, Boston, MA. 490 pp.

Newmaster, S.G., A.G. Harris, and L.J. Kershaw. 1997. *Wetland Plants of Ontario*. Lone Pine Publishing, Edmonton, AB. 240 pp.

Peterson, R.T., and M. McKenny. 1975. *A Field Guide to Wildflowers of Northeastern and North-Central North America*. Houghton Mifflin Company, Boston, MA. 420 pp.

Petrides, G. 1972. *A Field Guide to Trees and Shrubs: Northeastern and North-Central United States and Southeastern and South-Central Canada*. The Peterson Field Guide Series. Houghton Mifflin Company, Boston, MA. 427 pp.

Symonds, G.W.D. 1963. *The Shrub Identification Book*. William Morrow and Company, New York, NY. 379 pp.

Wetter M.A., T.S. Cochran, M.R. Black, H.H. Iltis, and P.E. Berry. 2001. *Checklist of the Vascular Plants of Wisconsin*. Wisconsin Department of Natural Resources Technical Bulletin 192. Madison, WI. 258 pp. [PUBL-SS-192 2001]

WETLAND FAUNA REFERENCES

Fishes

Auer, N.A. 1982. *Identification of Larval Fishes of the Great Lakes Basin with an Emphasis on the Lake Michigan Drainage*. Great Lakes Fisheries Commission Special Publication 82-3. 744 pp.

Becker, G.C. 1983. *Fishes of Wisconsin*. University of Wisconsin Press, Madison, WI. 1052 pp.

Eddy, S., and C. Underhill. 1974. *Northern Fishes with Special Reference to the Upper Mississippi Valley*. University of Minnesota Press, Minneapolis, MN. 414 pp.

Holland-Bartels, L.E., S.K. Littlejohn, and M.L. Huston. 1990. *A Guide to Larval Fishes of the Upper Mississippi River*. University of Minnesota Extension and U.S. Fish and Wildlife Service, LaCrosse, WI. 107 pp.

Lyons, J., P.A. Cochran, and D. Fago. 2000. *Wisconsin Fishes 2000: Status and Distribution*. University of Wisconsin Sea Grant Institution, Madison, WI. 87 pp.

Page, L.M., and B.M. Burr. 1991. *A Field Guide to Freshwater Fishes: North America North of Mexico*. Peterson Field Guide Series. Houghton Mifflin Company, Boston, MA. 432 pp.

Amphibians and Reptiles

Behler, J.L., and E.W. King. 1979. *The Audubon Society Field Guide to North American Reptiles and Amphibians*. Alfred A. Knopf, New York, NY. 743 pp.

Casper, G.S. 1996. *Geographic Distributions of the Amphibians and Reptiles of Wisconsin*. Milwaukee Public Museum, Milwaukee, WI. 87 pp.

Casper, G.S., and D.J. Watermolen. *Wisconsin Online Herptile Bibliography* <www.mpm.edu/collect/vertzo/herp/atlas/Bibframe.html>

Christoffel, R., R. Hay, and M. Monroe. 2002. *Turtles and Lizards of Wisconsin*. Wisconsin Department of Natural Resources Bureau of Endangered Resources, Madison, WI. 48 pp. [PUBL-ER-104]

Christoffel, R., R. Hay, and L. Ramirez. 2000. *Snakes of Wisconsin*. Wisconsin Department of Natural Resources Bureau of Endangered Resources, Madison, WI. 33 pp. [PUBL-ER-100]

Christoffel, R., R. Hay, and M. Wolfgram. 2001. *Amphibians of Wisconsin*. Wisconsin Department of Natural Resources Bureau of Endangered Resources, Madison, WI. 44 pp. [PUBL-ER-105]

Conant, R., and J.T. Collins. 1991. *A Field Guide to Reptiles and Amphibians: Eastern and Central North America*. 3rd edition. Peterson Field Guide Series. Houghton Mifflin Company, Boston, MA. 450 pp.

Ernst, C.H., and E.M. Ernst. 2003. *Snakes of the United States and Canada*. Smithsonian Books, Washington, DC. 668 pp.

Ernst, C.H., J.E. Lovich, and R.W. Barbour. 1994. *Turtles of the United States and Canada*. Smithsonian Institution Press, Washington, DC. 578 pp.

Petranka, J.W. 1998. *Salamanders of the United States and Canada*. Smithsonian Institution Press, Washington, DC. 587 pp.

Smith, H.M. 1978. *Amphibians of North America: A Guide to Field Identification*. Golden Guide Series. Golden Press, New York, NY. 160 pp.

Tyning, T.F. 1990. *A Guide to Amphibians and Reptiles*. Stokes Nature Guides Series. Little, Brown and Company, Boston, MA. 400 pp.

Vogt, R.C. 1981. *Natural History of Amphibians and Reptiles of Wisconsin*. Milwaukee Public Museum, Milwaukee, WI. 205 pp.

Watermolen, D.J. 1995. *A Key to the Eggs of Wisconsin's Amphibians*. Wisconsin Department of Natural Resources Research Report 165. Madison, WI. 12 pp. [PUBL-RS-565 95]

Zim, H.S., and H.M. Smith. 1956. *Reptiles and Amphibians: A Guide to Familiar American Species*. Golden Guide Series. Golden Press, New York, NY. 160 pp.

Birds

Baicich, P.J., and C.J.O. Harrison. 1997. *A Guide to the Nests, Eggs, and Nestlings of North American Birds*. 2nd edition. Academic Press, San Diego, CA. 347 pp.

Bent, A.C. (various years). *Life Histories of North American... (Diving Birds, Gulls and Terns, Wild Fowl, Marsh Birds, Shore Birds, etc.)*. Published as *Bulletins of the U.S. National Museum* (later reprinted by Dover Publications, New York, NY).

Ehrlich, P.R., D.S. Dobkin, and D. Wheye. 1988. *The Birder's Handbook: A Field Guide to the Natural History of North American Birds*. Simon and Schuster, New York, NY. 785 pp.

Farrand, J., Jr. (ed.) 1983. *The Audubon Society Master Guide to Birding, Vols. 1-3*. Alfred A. Knopf, New York, NY.

Peterson, R.T. 1980. *A Field Guide to the Birds: A Completely New Guide to All the Birds of Eastern and Central North America*. Peterson Field Guide Series. Houghton Mifflin Company, Boston, MA. 384 pp.

Robbins, S.D. 1991. *Wisconsin Birdlife: Populations and Distribution, Past and Present*. University of Wisconsin Press, Madison, WI. 702 pp.

Sibley, D.A. 2003. *The Sibley Field Guide to Birds of Eastern North America*. Alfred A. Knopf, New York, NY. 431 pp.

Stokes, D., and L. Stokes. 1989. *A Guide to Bird Behavior, Vols. 1-3*. Little, Brown and Company, Boston, MA

Temple, S.A., J.R. Cary, and R. Rolley. 1997. *Wisconsin Birds: A Seasonal and Geographical Guide*. 2nd edition. University of Wisconsin Press, Madison, WI. 320 pp.

Mammals

Alden, P.C. 1998. *Peterson First Guide to Mammals of North America*. 2nd edition. Peterson Field Guide Series. Houghton Mifflin Company, Boston, MA. 128 pp.

Burt, W.H. 1972. *Mammals of the Great Lakes Region*. University of Michigan Press, Ann Arbor, MI. 246 pp.

Burt, W. H., and R.P. Grossenheider. 1976. *A field guide to the mammals of North America*. Peterson Field Guide Series. Houghton Mifflin Company, Boston, MA. 367 pp.

Jones, J.K., Jr., and E.C. Birney. 1988. *Handbook of the Mammals of the North-Central States*. University of Minnesota Press, Minneapolis, MN. 346 pp.

Chapman, J.A., and G.A. Feldhamer. 1982. *Wild Mammals of North America: Biology, Management and Economics*. Johns Hopkins University, Baltimore, MD. 1147 pp.

Glass, B.P. 1981. *Key to the Skulls of North American Mammals*. 2nd edition. Oklahoma State University, Stillwater, OK. 59 pp.

Hall, E.R. 1981. *The Mammals of North America*, 2nd edition. John Wiley and Sons, New York, NY. 1181 pp.

Jackson, H.H.T. 1961. *Mammals of Wisconsin*. University of Wisconsin Press. Madison, WI. 504 pp.

Kurta, A. 1995. *Mammals of the Great Lakes Region*. University of Michigan Press, Ann Arbor, MI. 376 pp.

Murie, O. 1954. *A Field Guide to Animal Tracks*. Peterson Field Guide Series. Houghton Mifflin Company, Boston, MA. 374 pp.



Whitaker, J.O., Jr. 1996. *National Audubon Society Field Guide to North American Mammals*, 2nd edition. Alfred A. Knopf, New York, NY. 937 pp.

Whitaker, J.O., Jr., and W.J. Hamilton, Jr. 1998. *Mammals of the Eastern United States*. 3rd edition. Cornell University Press, Ithaca, NY. 583 pp.

Wilson, D.E., and S. Ruff. 1999. *The Smithsonian Book of North American Mammals*. Smithsonian Institution Press, Washington, DC. 750 pp.

Invertebrates



Hilsenhoff, W.L. 1995. *Aquatic Insects of Wisconsin: Keys to Wisconsin Genera and Notes on Biology, Habitat, Distribution and Species*. Natural History Museums Council, University of Wisconsin, Madison, WI. 79 pp.

Hobbs, H.H., III, and J.P. Jass. 1988. *The Crayfishes and Shrimp of Wisconsin*. Milwaukee Public Museum, Milwaukee, WI. 177 pp.

Pennak, R.W. 1989. *Freshwater Invertebrates of the United States: Protozoa to Mollusca*, 3rd edition. John Wiley and Sons, New York, NY. 628 pp.

Thorp, J.H., and A.P. Covich. 2001. *Ecology and Classification of North American Freshwater Invertebrates*, 2nd edition. Academic Press, San Diego, CA. 1056 pp.

WETLAND RESTORATION



Admiral, A.N., M.J. Morris, T.C. Brooks, J.W. Olson, and M.V. Miller. 1997. *Illinois Wetland Restoration and Creation Guide*. Illinois Natural History Survey Special Publication 19. Champaign, IL. 188 pp.

Cole, C.A., T.L. Serfass, M.C. Brittingham, and R.P. Brooks. 1996. *Managing your restored wetland*. College of Agricultural Sciences, Coop. Ext., Pennsylvania State University, University Park, PA. 44pp.

Eggers, S.D. 1992. *Compensatory Mitigation: Some Problems and Suggestions for Corrective Measures*. U.S. Army Corps of Engineers-St. Paul District. St. Paul, MN. 53 pp.

Hammer, D.A. 1997. *Creating Freshwater Wetlands*. 2nd edition. CRC Press/Lewis Publishing, Boca Raton, FL. 448 pp.

Henderson, C.L., C. J. Dindorf, and F. J. Rozumalski. 1999. *Lakescaping for Wildlife and Water Quality*. Minnesota Department of Natural Resources, St. Paul, MN. 175 pp.

Hoffman, R., and K. Kearns. 1997. *Wisconsin Manual of Control Recommendations for Ecologically Invasive Plants*. Wisconsin Department of Natural Resources, Madison, WI. 102 pp.

Pauly, W.R. 1988. *How To Manage Small Prairie Fires*. Dane County Parks Commission, Madison, WI. 30 pp.

Riley, A. L. 1998. *Restoring Streams in Cities: A Guide for Planners, Policy Makers, and Citizens*. Island Press, Washington, DC. 445 pp.

Wisconsin Department of Natural Resources. Updated yearly. *Native Plant Nursery and Consultant List*. Bureau of Endangered Resources, Madison, WI.

OTHER



Cwikiel, W. 1998. *Living with Michigan's Wetlands: A Landowner's Guide*. Tip of the Mitt Watershed Council, Conway, MI. 147 pp.

Isaak Walton League. *Wetland Stewardship: A Call to Action*. A video produced by the Isaak Walton League of America, Gaithersburg, MD. Length: 28 minutes running time.

Johnson, A.L., M.G. Clarke, and S.N. Kuter. 1982. *A Handbook for the Landowner: The Use and Protection of Privately Held Natural Lands*. The Natural Land Trust, Inc., Philadelphia, PA. 32 pp.

Leopold, A. 1949. *A Sand County Almanac, and Sketches Here and There*. Oxford University Press, New York, NY. 228 pp.

TECHNICAL JOURNALS

- *Wetlands*. Journal of the Society of Wetland Scientists. www.sws.org/wetlands/
- *Restoration Ecology*. Journal of the Society for Ecological Restoration. www.ser.org or www.blackwellpublishing.com/journals/REC/
- *Natural Areas Journal*. Natural Areas Association. www.naturalarea.org

WORLD WIDE WEB RESOURCES

The following are a few of the many wetland web sites available on-line.

Wisconsin Web Sites

- Wisconsin Coastal Management Program, a voluntary program to award annual grants to support coastal conservation and management programs:
www.doa.state.wi.us/pagesubtext_detail.asp?linksubcatid=249&linkcatid=108&linkid=
- Wisconsin Department of Natural Resources: www.dnr.wi.gov
Waterway and Wetland Permits: www.dnr.wi.gov/org/water/fhp/waterway/
Wetlands Strategy: www.dnr.wi.gov/org/water/fhp/wetlands/index.htm
Invasive Plants: www.dnr.wi.gov/org/land/er/invasive/
- U.S. Army Corps of Engineers: St. Paul District covers the state of Wisconsin, waterway permits and information, and order form for Eggers and Reed's wetland book: www.mvp.usace.army.mil
- Wisconsin Waterfowl Association: www.wisducks.org
- Wisconsin Wetlands Association: www.wiscwetlands.org
- Invasive Plant Association of Wisconsin (IPAW): www.uwex.edu/ces/ipaw/
- Great Lakes Indian Fish and Wildlife Commission (GLIFWC): www.glifwc.org/epicenter/

Non-Wisconsin Web Sites

- Association of State Wetland Managers (Berne, NY): www.aswm.org
- Bird Conservation Partners: www.partnersinflight.org
- Biodiversity Project: www.biodiversityproject.org
- Ducks Unlimited: www.ducks.org
- Environmental Protection Agency, Wetland Home Page. Includes wetland information hotline, restoration information, etc.: www.epa.gov/owow/wetlands/
- Green Acres: Green Landscaping with Native Plants, native plant site, handbook, frequently asked questions and other resources: www.epa.gov/greenacres/
- Isaak Walton League of America: www.iwla.org

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- League of Woman Voters Wetland Web Walk contains information to encourage activism and community problem solving: www.lww.org/where/protecting/webwalk/
- National Audubon Society: www.audubon.org
- National Wetland Inventory, U.S. Fish and Wildlife Service, characteristics, extent and status of Nation's wetlands. Maps can be downloaded, ask "Dr. Wetland" questions on wetland issues: www.nwi.fws.gov
- Natural Resources Conservation Service (NRCS): www.nrcs.usda.gov
- Northern Prairie Wildlife Research Center: www.npwrc.usgs.gov
- Prairie Enthusiasts: www.theprairieenthusiasts.org
- Society of Wetland Scientists web site includes "Discussion Forum" with information exchanged with wetland professionals: www.sws.org
- Society for Ecological Restoration, Northwest Chapter; Reed Canary Grass workgroup: www.sernw.org
- The Nature Conservancy: nature.org
 Invasives: nature.org/initiatives/invasivespecies/about/index.html
- University of Minnesota's Horticultural Science Department has an excellent collection of articles on restoration and reclamation, some pertain to shoreland and wetland restoration: www.hort.agri.umn.edu/h5015/rrr.htm
- U.S. Fish and Wildlife Service: www.fws.gov
- U.S. Geological Survey: www.usgs.gov
- Wetland Reserve Program: www.wl.fb-net.org



APPENDIX B.
Contacts for Wisconsin Wetland Information

County	County Zoning	DNR	Corps of Engineers	NRCS	USFWS
Adams	Zoning Administrator Adams Co. Courthouse P.O. Box 187 Friendship, WI 53934 (608) 339-4222	DNR 473 Griffith Ave. Wisconsin Rapids, WI 54494 (715) 421-7815	USACOE 1314 Contractor's Blvd. Plover, WI 54467 (715) 345-7911 ext. 4	District Conservationist Agricultural Service Center 220 La Crosse St. Mauston, WI 53948-2101 (608) 847-7221	Necedah National Wildlife Refuge W7996 20th Street West Necedah, WI 54646-7531 (608) 565-2551
Ashland	Zoning Administrator Ashland Co. Courthouse 201 W. Main St., Rm. 109 Ashland, WI 54806-1652 (715) 682-7014	DNR 2501 Golf Course Rd. Ashland, WI 54806 (715) 685-2923	USACOE 1568 Highway 2, Rm. 107/112 Two Harbors, MN 55616 (218) 834-6630	District Conservationist 315 Sanborn Ave., Suite 100 P.O. Box 267 Ashland, WI 54806-1032 (715) 682-9117	Fisheries Assistance Office 2800 Lake Shore Drive East Ashland, WI 54806 (715) 682-6185
Barron	Zoning Administrator Agricultural Building 330 E. La Salle Ave. Barron, WI 54812 (715) 537-6375	DNR 1341 2nd Ave. P.O. Box 397 Cumberland, WI 54829 (715) 822-5421 ext. 108	USACOE- St. Paul District Attention: CO-R 190 Fifth Street East St. Paul, MN 55101-1638 651) 290-5357	District Conservationist Agricultural Service Center 330 E. La Salle Ave. Barron, WI 54812-1540 (715) 537-5645	St. Croix Wetland Mgt. District 1764 95th St. New Richmond, WI 54017 (715) 246-7784
Bayfield	Zoning Administrator 117 E. 6th St. P.O. Box 58 Washburn, WI 54891 (715) 373-6138	DNR 2501 Golf Course Rd. Ashland, WI 54806 (715) 685-2923	USACOE 1568 Highway 2, Rm. 107/112 Two Harbors, MN 55616 (218) 834-6630	District Conservationist 315 Sanborn Ave., Suite 100 P.O. Box 267 Ashland, WI 54806-1032 (715) 682-9117	Fisheries Assistance Office 2800 Lake Shore Drive East Ashland, WI 54806 (715) 682-6185
Brown	Zoning Administrator 305 E. Walnut St., Rm. 320 P.O. Box 23600 Green Bay, WI 54305-3600 (920) 448-4490	DNR 801 E. Walnut St. Green Bay, WI 54301 (920) 448-5166	USACOE Suite 211, Old Fort Square 211 North Broadway Green Bay, WI 54303 (920) 448-2824	District Conservationist Agricultural Service Center 3071 C Voyager Dr. Green Bay, WI 54311 (920) 884-3910	Ecological Services Office 2661 Scott Tower Dr. New Franken, WI 54229 (920) 866-1717
Buffalo	Zoning Administrator 407 2nd St. P.O. Box 492 Alma, WI 54610-0492 (608) 685-6218	DNR 910 Highway 54 East Black River Falls, WI 54615 (715) 284-1424	USACOE Attention: CO-R 1114 South Oak St. La Crescent, MN 55947-1338 (507) 895-8059	District Conservationist Buffalo County Courthouse 407 S. 2nd St., P.O. Box 88 Alma, WI 54610-0088 (608) 685-4454	Trempealeau National Wildlife Refuge W28488 Refuge Rd. Trempealeau, WI 54661 (608) 539-2311



County	County Zoning	DNR	Corps of Engineers	NRCS	USFWS
Buffalo-Mississippi R.	Zoning Administrator 407 2nd St. P.O. Box 492 Alma, WI 54610-0492 (608) 685-6218	DNR 3550 Mormon Coulee Rd. Room 104 La Crosse, WI 54601 (608) 785- 9010	USACOE Attention: CO-R 1114 South Oak St. La Crescent, MN 55947-1338 (507) 895-8059	District Conservationist Buffalo County Courthouse 407 2nd St., P.O. Box 88 Alma, WI 54610-0088 (608) 685-4454	Trempealeau National Wildlife Refuge W28488 Refuge Rd. Trempealeau, WI 54661 (608) 539-2311
Burnett	Zoning Administrator County Government Center 7410 CTH K, #102 Siren, WI 54872 (715) 349-2138	DNR 810 W. Maple St. Spooner, WI 54801 (715) 635-4097	USACOE 1568 Highway 2, Rm.107/112 Two Harbors, MN 55616 (218) 834-6630	District Conservationist Siren Service Center 7410 County Road K, #109 Siren, WI 54872-9043 (715) 349-2185	St. Croix Wetland Mgt. Office 1764 95th St. New Richmond, WI 54017 (715) 246-7784
Calumet	Zoning Administrator Calumet Co. Courthouse 206 Court St. Chilton, WI 53014-1198 (920) 849-1442/2361	DNR 2220 East CTH V Mishicot, WI 54228 (920) 755-4942	USACOE Suite 211, Old Fort Square 211 North Broadway Green Bay, WI 54303 (920) 448-2824	District Conservationist Courthouse 206 Court St. Chilton, WI 53014-1127 (920) 849-1444	Ecological Services Office 2661 Scott Tower Dr. New Franken, WI 54229 (920) 866-1717
Calumet-Lake Winnebago & tributaries	Zoning Administrator Calumet Co. Courthouse 206 Court St. Chilton, WI 53014-1198 (920) 849-1442/2361	DNR 625 E. County Road Y Suite 700 Oshkosh, WI 54901-9731 (920) 424-7885	USACOE Suite 211, Old Fort Square 211 North Broadway Green Bay, WI 54303 (920) 448-2824	District Conservationist Courthouse 206 Court St. Chilton, WI 53014-1127 (920) 849-1444	Ecological Services Office 2661 Scott Tower Dr. New Franken, WI 54229 (920) 866-1717
Chippewa	Zoning Administrator Chippewa Co. Courthouse 711 N. Bridge St. Chippewa Falls, WI 54729-1876 (715) 726-7940	DNR 1300 W. Clairmont Ave. P.O. Box 4001 Eau Claire, WI 54702-4001 (715) 839-3769	USACOE - St. Paul District Attention: CO- R 190 Fifth Street East St. Paul, MN 55101-1638 (651) 290-5263	District Conservationist USDA Service Center 1160 Weatheridge Chippewa Falls, WI 54729 (715) 720-9083	Necedah National Wildlife Refuge W7996 20 th Street West Necedah, WI 54646-7531 (608) 565-2551
Clark	Zoning Administrator Clark Co. Courthouse 517 Court St., Rm. 204A Neillsville, WI 54456 (715) 743-5130/5131	DNR 910 Highway 54 East Black River Falls, WI 54615 (715) 284-1424	USACOE - St. Paul District Attention: CO-R 190 Fifth Street East St. Paul, MN 55101-1638 (651) 290-5263	District Conservationist Agricultural Service Center 517 Court St. Neillsville, WI 54456-1971 (715) 743-3164	Necedah National Wildlife Refuge W7996 20 th Street West Necedah, WI 54646-7531 (608) 565-2551
Columbia	Zoning Administrator 400 De Witt St. PO Box 177 Portage, WI 53901 (608) 742-9660	DNR 3911 Fish Hatchery Rd. Fitchburg, WI 53711 (608) 275-3228	USACOE First Federal Savings Bank Bld. 1617 E. Racine Ave., Rm. 101 Waukesha, WI 53186 (262) 547-1876	District Conservationist USDA Service Center 2912 Red Fox Run Rd. Portage, WI 53901-3400 (608) 742-5361	Leopold Wetland Mgt. Office. W10040 Cascade Mountain Rd. Portage, WI 53901 (608) 742-7100 ext. 14 or 15

County	County Zoning	DNR	Corps of Engineers	NRCS	USFWS
Crawford	Zoning Administrator 111 W. Dunn St. Prairie du Chien, WI 53821 (608) 326-0294	DNR 3550 Mormon Coulee Rd. La Crosse, WI 54601 (608) 785-9010	USACOE, Attention CO-R 1114 South Oak St. La Crescent MN 55947-1338 (507) 895-8059	District Conservationist USDA Service Center 37500 U.S Hwy. 18 Prairie du Chien, WI 53821 (608) 326-7179	Upper Mississippi River Refuge District P. O. Box 460 McGregor, IA 52157 (563) 873-3423
Dane	Zoning Administrator City County Building, Rm. 116 210 M. L. King Jr. Blvd Madison, WI 53709 (608) 266-9083/4266	DNR 3911 Fish Hatchery Rd. Fitchburg, WI 53711 (608) 275-3208	USACOE First Federal Savings Bank Bld. 1617 E. Racine Ave., Rm. 101 Waukesha, WI 53186 (262) 547-1876	District Conservationist Madison Service Center 1 Fen Oak Court, Room 208 Madison, WI 53718-8812 (608) 224-3750	Wisconsin Private Lands Office 4511 Helgesen Dr. Madison, WI 53718-6747 (608) 221-1206 ext. 14
Dodge	Zoning Administrator County Admin. Building 127 E. Oak St. Juneau, WI 53039 (920) 386-3700	DNR N7725 State Highway 28 Horicon, WI 53032 (920) 387-7878	USACOE First Federal Savings Bank Bld. 1617 E. Racine Ave., Rm. 101 Waukesha, WI 53186 (262) 547-4071	District Conservationist USDA Service Center 451 West North St. Juneau, WI 53039-1120 (920) 386-9999	Leopold Wetland Mgt. Office W10040 Cascade Mountain Rd. Portage, WI 53901 (608) 742-7100 ext. 14 or 15
Door	Zoning Administrator Door County Courthouse 421 Nebraska St. Sturgeon Bay, WI 54235-0670 (920) 746-2323	DNR 110 S. Neenah Ave. Sturgeon Bay, WI 54235-2718 (920) 746-2873	USACOE Suite 211, Old Fort Square 211 North Broadway Green Bay, WI 54303 (920) 448-2824	District Conservationist USDA Service Center 926 Marquette Dr. Kewaunee, WI 54216-1772 (920) 388-2792	Ecological Services Office 2661 Scott Tower Dr. New Franken, WI 54229 (920) 866-1717
Douglas	Zoning Administrator Douglas Co. Courthouse 1313 Belknap St., Rm. 206 Superior, WI 54880 (715) 395-1380	DNR 1401 Tower Ave. Superior, WI 54880 (715) 392-0803	USACOE 1568 Highway 2, Rm. 107/112 Two Harbors, MN 55616 (218) 834-6630	District Conservationist 315 Sanborn Ave., Suite 100 PO Box 267 Ashland, WI 54806-1032 (715) 682-9117	Fisheries Assistance Office 2800 Lake Shore Drive East Ashland, WI 54806 (715) 682-6185
Dunn	Zoning Administrator 800 Wilson Ave. Menomonie, WI 54751 (715) 232-1401	DNR 1300 W. Clairmont Ave. P.O. Box 4001 Eau Claire, WI 54702-4001 (715) 839-3769	USACOE - St. Paul District Attention: CO-R 190 Fifth Street East St. Paul, MN 55101-1638 (651) 290-5263	District Conservationist Agricultural Service Center 390 Red Cedar St., Suite. C Menomonie, WI 54751-2265 (715) 232-2614	St. Croix Wetland Mgt. District 1764 95 th St. New Richmond, WI 54017 (715) 246-7784
Eau Claire	Zoning Administrator Eau Claire Co. Courthouse 721 Oxford Ave., Rm. 1510 Eau Claire, WI 54703 (715) 839-2979/4743	DNR 1300 W. Clairmont Ave. P.O. Box 4001 Eau Claire, WI 54702-4001 (715) 839-3769	USACOE - St. Paul District Attention: CO-R 190 Fifth Street East St. Paul, MN 55101-1638 (651) 290-5263	District Conservationist Altoona Service Center 227 First Street West Altoona, WI 54720-1601 (715) 839-4786	Necedah National Wildlife Refuge W7996 20 th Street West Necedah, WI 54646-7531 (608) 565-2551



County	County Zoning	DNR	Corps of Engineers	NRCS	USFWS
Florence	Zoning Administrator Florence Co. Courthouse 501 Lake Ave., P.O. Box 627 Florence, WI 54121 (715) 528-3206	DNR 8770 Highway J Woodruff, WI 54568 715-358-9214	USACOE 1314 Contractor's Blvd. Plover, WI 54467 715-345-7911 ext. 2	District Conservationist Agricultural Service Center 639 West Kemp St. Rhinelander, WI 54501-3879 (715) 362-5941	Ecological Services Office 2661 Scott Tower Dr. New Franken, WI 54229 (920) 866-1717
Fond du Lac	Zoning Administrator City-County Govt. Center 160 S. Macy St. Fond du Lac, WI 54935 (920) 929-3139	DNR 625 E. County Road Y Suite 700 Oshkosh, WI 54901-9731 (920) 424-7885	USACOE First Federal Savings Bank Bld. 1617 E. Racine Ave., Rm. 101 Waukesha, WI 53186 (262) 547-4171	District Conservationist Agricultural Service Center W6529 Forest Ave. Fond du Lac, WI 54937 (920) 923-3033	Leopold Wetland Mgt. Office W10040 Cascade Mountain Rd. Portage, WI 53901 (608) 742-7100 ext. 14 or 15
Forest	Zoning Administrator 200 E. Madison St. Crandon, WI 54520 (715) 478-3893	DNR 107 Suttiff Ave. Rhinelander, WI 54501 (715) 365-8991	USACOE 1314 Contractor's Blvd. Plover, WI 54467 (715) 345-7911 ext. 2	District Conservationist Agricultural Service Center 639 West Kemp St. Rhinelander, WI 54501-3879 (715) 362-5941	Ecological Services Office 2661 Scott Tower Dr. New Franken, WI 54229 (920) 866-1717
Grant	Zoning Administrator 111 South Jefferson St. Lancaster, WI 53813 (608) 723-2848/4394	DNR 1500 N. Johns St. Dodgeville, WI 53533-2116 (608) 935-1920	USACOE Attention: CO-R 1114 South Oak St. La Crescent, MN 55947-1338 (507) 895-8059	District Conservationist Lancaster Service Center 150 W. Alona Lane Lancaster, WI 53813-2197 (608) 723-6377	Upper Mississippi River Refuge McGregor District P. O. Box 460 McGregor, IA 52157 (563) 873-3423
Green	Zoning Administrator Pleasant View Complex N3150 Hwy. 81, P.O. Box 358 Monroe, WI 53566 (608) 328-9423	DNR 1500 N. Johns St. Dodgeville, WI 53533-2116 (608) 935-1920	USACOE First Federal Savings Bank Bld. 1617 E. Racine Ave., Rm. 101 Waukesha, WI 53186 (262) 547-1876	District Conservationist Agriculture Building 2841 6 th Street, Box 497 Monroe, WI 53566-1902 (608) 325-4195	Wisconsin Private Lands Office 4511 Helgesen Dr. Madison, WI 53718-6467 (608) 221-1206 ext. 14
Green Lake	Zoning Administrator Green Lake Co. Courthouse 492 Hill St. Green Lake, WI 54941 (920) 294-4026/4027	DNR 427 E. Tower Drive, Suite 100 Wautoma, WI 54982-6927 (920) 787-4686 ext. 3016	USACOE 1314 Contractor's Blvd. Plover, WI 54467 (715) 345-7911 ext. 4	District Conservationist USDA Service Center 630 East South St. Green Lake, WI 54941-9496 (920) 294-6140	Leopold Wetland Mgt. Office W10040 Cascade Mountain Rd. Portage, WI 53901 (608) 742-7100 ext. 14 or 15
Iowa	Zoning Administrator Iowa Co. Courthouse 222 N. Iowa St. Dodgeville, WI 53533 (608) 935-0398	DNR 1500 N. Johns St. Dodgeville, WI 53533-2116 (608) 935-1920	USACOE First Federal Savings Bank Bld. 1617 E. Racine Ave., Rm. 101 Waukesha, WI 53186 (262) 547-1876	District Conservationist Dodgeville Service Center 138 S. Iowa St., Suite 3 Dodgeville, WI 53533-1543 (608) 935-2791	Wisconsin Private Lands Office 4511 Helgesen Dr. Madison, WI 53718-6747 (608) 221-1206 ext. 14

County	County Zoning	DNR	Corps of Engineers	NRCS	USFWS
Iron	Zoning Administrator Iron Co. Courthouse 300 Taconite St. Hurley, WI 54534 (715) 561-5414	DNR 875 S. 4 th Avenue P.O. Box 220 Park Falls, WI 54552 (715) 762-4684 ext. 102	USACOE 1568 Highway 2, Rm. 107/112 Two Harbors, MN 55616 (218) 834-6630	District Conservationist 315 Sanborn Ave., Suite 100 P.O. Box 267 Ashland, WI 54806-1032 (715) 682-9117	Fisheries Assistance Office 2800 Lake Shore Drive East Ashland, WI 54806 (715) 682-6185
Jackson	Zoning Administrator Jackson Co. Courthouse 307 Main St. Black River Falls, WI 54615 (715) 284-0220/0206	DNR 910 Highway 54 East Black River Falls, WI 54615 (715) 284-1424	USACOE, Attention: CO-R 1114 South Oak St. La Crescent, MN 55947-1338 (507) 895-8059	District Conservationist Black River Falls Service Center 311 County Road A Black River Falls, WI 54615 (715) 284-4515	Necedah National Wildlife Refuge W7996 20 th Street West Necedah, WI 54646-7531 (608) 565-2551
Jefferson North of I-94	Zoning Administrator Jefferson Co. Courthouse 320 S. Main St., Rm. 201 Jefferson, WI 53549 (920) 674-7130	DNR N7725 State Highway 28 Horicon, WI 53032 (920) 387-7878	USACOE First Federal Savings Bank Bld. 1617 E. Racine Ave., Rm. 101 Waukesha, WI 53186 (262) 547-1876	District Conservationist USDA Service Center 134 W. Rockwell, Rm. 120 Jefferson, WI 53549-2089 (920) 674-2020	Wisconsin Private Lands Office 4511 Helgesen Dr. Madison, WI 53718-6747 (608) 221-1206 ext. 14
Jefferson South of I-94	Zoning Administrator Jefferson Co. Courthouse 320 S. Main St., Rm. 201 Jefferson, WI 53549 (920) 674-7130	DNR 2514 Morse St. Janesville, WI 53545-0249 (608) 743-4820	USACOE First Federal Savings Bank Bld. 1617 E. Racine Ave., Rm. 101 Waukesha, WI 53186 (262) 547-1876	District Conservationist USDA Service Center 134 W. Rockwell, Rm. 120 Jefferson, WI 53549-2089 (920) 674-2020	Wisconsin Private Lands Office 4511 Helgesen Dr. Madison, WI 53718-6747 (608) 221-1206 ext. 14
Juneau	Zoning Administrator 650 Prairie St. Mauston, WI 53948 (608) 847-9391	DNR 473 Griffith Ave. Wisconsin Rapids, WI 54494 (715) 421-7815	USACOE 1314 Contractor's Blvd. Plover, WI 54467 (715) 345-7911 ext. 3	District Conservationist Agricultural Service Center 220 LaCrosse St. Mauston, WI 53948-2101 (608) 847-7221	Necedah National Wildlife Refuge W7996 20 th Street West Necedah, WI 54646-7531 (608) 565-2551
Kenosha	Zoning Administrator Kenosha County Center 19600 75 th St., P.O. Box 520 Bristol, WI 53104-0520 (262) 857-1895	DNR 9531 Rayne Road, Suite 4 Sturtevant, WI 53177 (262) 884-2355	USACOE First Federal Savings Bank Bld. 1617 E. Racine Ave., Rm. 101 Waukesha, WI 53186 (262) 547-0868	District Conservationist Union Grove Service Center 826 Main St. Union Grove, WI 53182 (262) 878-1243	Wisconsin Private Lands Office 4511 Helgesen Dr. Madison, WI 53718-6747 (608) 221-1206 ext. 14
Kewaunee	Zoning Administrator Kewaunee Co. Courthouse 613 Dodge St. Kewaunee, WI 54216 (920) 388-7192	DNR 2220 East CTH V Mishicot, WI 54228 (920) 755-4942	USACOE Suite 211, Old Fort Square 211 North Broadway Green Bay, WI 54303 (920) 448-2824	District Conservationist USDA Service Center 925 Marquette Dr. Kewaunee, WI 54216-1772 (920) 388-2792	Ecological Services Office 2661 Scott Tower Dr. New Franken, WI 54229 (920) 866-1717



County	County Zoning	DNR	Corps of Engineers	NRCS	USFWS
La Crosse	Zoning Administrator La Crosse Co. Courthouse 400 4 th Street N., Rm. 105 La Crosse, WI 54601-3200 (608) 785-9722	DNR 3550 Mormon Coulee Road Rm. 104 La Crosse, WI 54601 (608) 785- 9010	USACOE Attention: CO-R 1114 South Oak St. La Crescent, MN 55947-1338 (507) 895-8059	District Conservationist USDA Service Center 1107 Riders Club Rd. Onalaska, WI 54650-2079 (608) 782-0180	Upper Mississippi River Refuge La Crosse District 555 Lester Ave. Onalaska, WI 54650 (608) 783-8405
Lafayette	Zoning Administrator Agricultural Center 627 Washington St. Darlington, WI 53530 (608) 776-4830	DNR 1500 N. Johns St. Dodgeville, WI 53533-2116 (608) 935-1920	USACOE First Federal Savings Bank Bld. 1617 E. Racine Ave., Rm. 101 Waukesha, WI 53186 (262) 547-1876	District Conservationist USDA Service Center 1845 Center Dr. Darlington, WI 53530-9210 (608) 776-4028	Wisconsin Private Lands Office 4511 Helgesen Dr. Madison, WI 53718-6747 (608) 221-1206 ext. 14
Langlade	Zoning Administrator Resource Center 837 Clermont St. P.O. Box 505 Antigo, WI 54409-0505 (715) 627-6206	DNR 223 E. Steinfest Rd. Antigo, WI 54409 (715) 623-4190 ext. 3111	USACOE 1314 Contractor's Blvd. Plover, WI 54467 (715) 345-7911 ext. 2	District Conservationist N1545 County Road W Merrill, WI 54452-1100 (715) 536-6003	Ecological Services Office 2661 Scott Tower Dr. New Franken, WI 54229 (920) 866-1717
Lincoln	Zoning Administrator Lincoln Co. Courthouse 1106 East Eighth St. Merrill, WI 54452-2554 (715) 536-0333	DNR 223 E. Steinfest Rd. Antigo, WI 54409 (715) 623-4190 ext. 3111	USACOE 1314 Contractor's Blvd. Plover, WI 54467 (715) 345-7911 ext. 2	District Conservationist N1545 County Road W Merrill, WI 54452-1113 (715) 536-6003	Ecological Services Office 2661 Scott Tower Dr. New Franken, WI 54229 (920) 866-1717
Manitowoc	Zoning Administrator 4319 Expo Dr., P.O. Box 610 Manitowoc, WI 54221-0610 (920) 683-4185/4187	DNR 2220 East CTH V Mishicot, WI 54228 (920) 755-4942	USACOE Suite 211, Old Fort Square 211 North Broadway Green Bay, WI 54303 (920) 448-2824	District Conservationist Manitowoc Service Center 4319 Expo Dr., P.O. Box 758 Manitowoc, WI 54221-0758 (920) 683-5119	Ecological Services Office 2661 Scott Tower Dr. New Franken, WI 54229 (920) 866-1717
Marathon	Zoning Administrator 210 River Dr. Wausau, WI 54403-5449 (715) 261-6020/6021	DNR 5301 Rib Mountain Dr. Wausau, WI 54401-7599 (715) 241-7502	USACOE 1314 Contractor's Blvd. Plover, WI 54467 (715) 345-7911 ext. 3	District Conservationist Wausau Service Center 326 River Dr. Wausau, WI 54403-5451 (715) 848-2330	Ecological Services Office 2661 Scott Tower Dr. New Franken, WI 54229 (920) 866-1717
Marinette	Zoning Administrator Marinette Co. Courthouse 1926 Hall Ave. Marinette, WI 54143-1717 (715) 732-7535	DNR 101 N. Ogden Rd. P.O. Box 208 Peshtigo, WI 54157 (715) 582-5041	USACOE Suite 211, Old Fort Square 211 North Broadway Green Bay, WI 54303 (920) 448-2824	District Conservationist USDA Service Center 700 Owena St. Marinette, WI 54143-1938 (715) 735-5680	Ecological Services Office 2661 Scott Tower Dr. New Franken, WI 54229 (920) 866-1717

County	County Zoning	DNR	Corps of Engineers	NRCS	USFWS
Marquette	Zoning Administrator Marquette Co. Courthouse P.O. Box 21 Montello, WI 53949 (608) 297-9136 ext. 259	DNR 427 E. Tower Drive, Suite 100 Wautoma, WI 54982-6927 (920) 787-4686 ext. 3016	USACOE 1314 Contractor's Blvd. Plover, WI 54467 (715) 345-7911 ext. 4	USDA, NRCS 480 Underwood Ave. P.O. Box 217 Montello, WI 53949-9248 (608) 297-9165	Leopold Wetland Mgt. Office W10040 Cascade Mountain Rd. Portage, WI 53901 (608) 742-7100 ext. 14 or 15
Menominee	Zoning Administrator Menominee Co. Courthouse P.O. Box 279 Keshena, WI 54135 (715) 799-3001	DNR 647 Lakeland Rd. Shawano, WI 54166-3843 (715) 526-4232	USACOE Suite 211, Old Fort Square 211 North Broadway Green Bay, WI 54303 (920) 448-2824	Tribal Liaison MTE Forestry Division P.O. Box 670, Hwy. 47 North Keshena, WI 54135 (715) 799-3896	Ecological Services Office 2661 Scott Tower Dr. New Franken, WI 54229 (920) 866-1717
Milwaukee	Not Available	DNR 2300 N. M. L. King Jr. Dr. Milwaukee, WI 53212 (414) 263-8522	USACOE First Federal Savings Bank Bld. 1617 E. Racine Ave., Rm. 101 Waukesha, WI 53186 (262) 547-4171	District Conservationist Waukesha Service Center 1320 Pewaukee Rd. Waukesha, WI 53188-3878 (262) 547-3754	Wisconsin Private Lands Office 4511 Helgesen Dr. Madison, WI 53718-6747 (608) 221-1206 ext. 14
Monroe	Zoning Administrator Community Service Center 14307 County Hwy. B (C-21A) Sparta, WI 54656-4509 (608) 269-8737/8738	DNR 3550 Mormon Coulee Road Rm. 104 La Crosse, WI 54601 (608) 785-9013	USACOE Attention: CO-R 1114 South Oak St. La Crescent, MN 55947-1338 (507) 895-8059	District Conservationist USDA Service Center 820 Industrial Drive, Suite 3 Sparta, WI 54656-4215 (608) 269-8136	Necedah National Wildlife Refuge W7996 20 th Street West Necedah, WI 54646-7531 (608) 565-2551
Oconto	Zoning Administrator Oconto Co. Courthouse 301 Washington St. Oconto, WI 54153-1621 (920) 834-6827	DNR 101 N. Ogden Rd. P.O. Box 208 Peshtigo, WI 54157 (715) 582-5041	USACOE Suite 211, Old Fort Square 211 North Broadway Green Bay, WI 54303 (920) 448-2824	District Conservationist Oconto Service Center 111 Arbutus Ave., P.O. Box 15 Oconto, WI 54153-1626 (920) 834-5688	Ecological Services Office 2661 Scott Tower Dr. New Franken, WI 54229 (920) 866-1717
Oneida	Zoning Administrator Oneida Co. Courthouse 1 Courthouse Square Rhinelander, WI 54501-0400 (715) 369-6130	DNR 107 Suttiff Ave. Rhinelander, WI 54501 (715) 365-8991	USACOE 1314 Contractor's Blvd. Plover, WI 54467 (715) 345-7911 ext. 2	District Conservationist Rhinelander Service Center 639 West Kemp Street Rhinelander, WI 54501-3879 (715) 362-5941	Fisheries Assistance Office 2800 Lake Shore Drive East Ashland, WI 54806 (715) 682-6185
Outagamie	Zoning Administrator 410 South Walnut Street Appleton, WI 54911 (920) 832-5255	DNR 801 E. Walnut Avenue Green Bay, WI 54301 (920) 448-5166	USACOE Suite 211, Old Fort Square 211 North Broadway Green Bay, WI 54303 (920) 448-2824	District Conservationist Appleton Service Center 3369 West Brewster St. Appleton, WI 54914-1602 (920) 733-1575	Ecological Services Office 2661 Scott Tower Drive New Franken, WI 54229 (920) 866-1717



County	County Zoning	DNR	Corps of Engineers	NRCS	USFWS
Ozaukee-N of Cedar Sauk Rd	Zoning Administrator Ozaukee Co. Admin. Center 121 W. Main, P.O. Box 994 Port Washington, WI 53074 (262) 284-8313	DNR 5750 Woodchuck Lane P.O. Box 408 Plymouth, WI 53073-0408 (920) 892-8756 ext. 3031	USACOE First Federal Savings Bank Bld. 1617 E. Racine Ave., Rm. 101 Waukesha, WI 53186 (262) 547-4171	District Conservationist Administration Building 121 W. Main, P.O. Box 994 Port Washington, WI 53074 (262) 284-8273	Leopold Wetland Mgt. Office W10040 Cascade Mountain Rd. Portage, WI 53901 (608) 742-7100 ext. 14 or 15
Ozaukee-S of Cedar Sauk Rd	Zoning Administrator Ozaukee Co. Admin. Center 121 W. Main, P.O. Box 994 Port Washington, WI 53074 (262) 284-8313	DNR 2300 N. M. L. King Jr. Dr. Milwaukee, WI 53212 (414) 263-8601	USACOE First Federal Savings Bank Bld. 1617 E. Racine Ave., Rm. 101 Waukesha, WI 53186 (262) 547-4171	District Conservationist Administration Building 121 W. Main, P.O. Box 994 Port Washington, WI 53074 (262) 284-8273	Leopold Wetland Mgt. Office W10040 Cascade Mountain Rd. Portage, WI 53901 (608) 742-7100 ext. 14 or 15
Pepin	Zoning Administrator Pepin Co. Courthouse 740 7 th Ave. W., P.O. Box 39 Durand, WI 54736 (715) 672-8897	DNR 1300 W. Clairmont Ave. P.O. Box 4001 Eau Claire, WI 54702-4001 (715) 839-3769	USACOE - St. Paul District Attention: CO-R 190 Fifth Street East St. Paul, MN 55101-1638 (651) 290-5263	District Conservationist Pepin Co. Govt. Center 740 7 th Ave. W., P.O. Box 39 Durand, WI 54736-1628 (715) 672-8663	St. Croix Wetland Mgt. District 1764 95 th St. New Richmond, WI 54017 (715) 246-7784
Pierce	Zoning Administrator 414 W. Main St., P.O. Box 647 Ellsworth, WI 54011 (715) 273-6747/6746	DNR 990 Hillcrest Street, Suite 104 Baldwin, WI 54002-9263 (715) 684-2914	USACOE - St. Paul District Attention: CO-R 190 Fifth Street East St. Paul, MN 55101-1638 (651) 290-5263	District Conservationist Ellsworth Service Center 412 W. Kinne St., P.O. Box 67 Ellsworth, WI 54011-0067 (715) 273-6763	St. Croix Wetland Mgt. District 1764 95 th St. New Richmond, WI 54017 (715) 246-7784
Polk	Zoning Administrator 100 Polk County Plaza Suite 130 Balsam Lake, WI 54810 (715) 485-9248/9279	DNR 1341 2 nd Ave P.O. Box 397 Cumberland, WI 54829 (715) 822-5421 ext. 108	USACOE - St. Paul District Attention: CO-R 190 Fifth Street East St. Paul, MN 55101-1638 (651) 290-5357	District Conservationist Balsam Lake Service Center 941 Mallard Lane, Rm. 103 Balsam Lake, WI 54810 (715) 485-3138	St. Croix Wetland Mgt. District 1764 95 th St. New Richmond, WI 54017 (715) 246-7784
Portage-Northern	Zoning Administrator County-City Building 1462 Strongs Ave. Stevens Point, WI 54481 (715) 346-1334	DNR 5301 Rib Mountain Dr. Wausau, WI 54401-7599 (715) 241-7502	USACOE 1314 Contractor's Blvd. Plover, WI 54467 (715) 345-7911 ext. 3	District Conservationist Stevens Point Service Center 1462 Strongs Ave. Stevens Point, WI 54481 (715) 346-1325	Ecological Services Office 2661 Scott Tower Dr. New Franken, WI 54229 (920) 866-1717
Portage	Zoning Administrator County-City Building 1462 Strongs Ave. Stevens Point, WI 54481 (715) 346-1334	DNR 473 Griffith Ave. Wisconsin Rapids, WI 54494 (715) 421-7815	USACOE 1314 Contractor's Blvd. Plover, WI 54467 (715) 345-7911 ext. 3	District Conservationist Stevens Point Service Center 1462 Strongs Ave. Stevens Point, WI 54481 (715) 346-1325	Ecological Services Office 2661 Scott Tower Dr. New Franken, WI 54229 (920) 866-1717

County	County Zoning	DNR	Corps of Engineers	NRCS	USFWS
Price	Zoning Administrator Normal Building, Rm. 205 104 S. Eyder Ave. Philips, WI 54555-1342 (715) 339-3272	DNR 875 S. 4 th Ave. P.O. Box 220 Park Falls, WI 54552 (715) 762-4684 ext. 102	USACOE - St. Paul District Attention: CO-R 190 Fifth Street East St. Paul, MN 55101-1638 (651) 290-5357	District Conservationist USDA Service Center 920 Donald St., Rm. 102 Medford, WI 54451-2096 (715) 748-4121	Fisheries Assistance Office 2800 Lake Shore Drive East Ashland, WI 54806 (715) 682-6185
Racine	Zoning Administrator 14200 Washington Ave. Sturtevant, WI 53177 (262) 886-8475	DNR 9531 Rayne Rd., Suite 4 Sturtevant, WI 53177 (262) 884-2356	USACOE First Federal Savings Bank Bld. 1617 E. Racine Ave., Rm. 101 Waukesha, WI 53186 (262) 547-0868	District Conservationist Union Grove Service Center 826 Main St. Union Grove, WI 53182 (262) 878-1243	Wisconsin Private Lands Office 4511 Helgesen Dr. Madison, WI 53718-6747 (608) 221-1206 ext. 14
Richland	Zoning Administrator 181 W. Seminary St., Rm. 204 Richland Center, WI 53581 (608) 647-2447	DNR 1500 Johns St. Dodgeville, WI 53533-2116 (608) 935-1926	USACOE Attention: CO-R 1114 South Oak St. La Crescent, MN 55947-1338 (507) 895-8059	District Conservationist Richland Center Service Center 1850 Bohman Drive, Suite F Richland Center, WI 53581 (608) 647-8874	Wisconsin Private Lands Office 4511 Helgesen Dr. Madison, WI 53718-6747 (608) 221-1206 ext. 14
Rock	Zoning Administrator Rock Co. Courthouse 51 South Main St. Janesville, WI 53545 (608) 757-5587	DNR 2514 Morse St. Janesville, WI 53545-0249 (608) 743-4820	USACOE First Federal Savings Bank Bld. 1617 E. Racine Ave., Rm. 101 Waukesha, WI 53186 (262) 547-1876	District Conservationist Janesville Service Center 440 North Highway 14 Janesville, WI 53546-9708 (608) 754-6617	Wisconsin Private Lands Office 4511 Helgesen Dr. Madison, WI 53718-6747 (608) 221-1206 ext. 14
Rusk	Zoning Administrator Rusk Co. Courthouse 311 Miner Ave. East Ste. N110 Ladysmith, WI 54848 (715) 532-2156	DNR N4103 State Highway 27 Ladysmith, WI 54848 (715) 532-4367	USACOE - St. Paul District Attention: CO-R 190 Fifth Street East St. Paul, MN 55101-1638 (651) 290-5357	District Conservationist USDA Service Center 1120 W. Lake Ave., P.O. Box 222 Ladysmith, WI 54848 (715) 532-7629	Necedah National Wildlife Refuge W7996 20 th Street West Necedah, WI 54646-7531 (608) 565-2551
St. Croix	Zoning Administrator St. Croix Co. Govt. Center 1101 Carmichael Rd. Hudson, WI 54016-7710 (715) 386-4680	DNR 990 Hillcrest St., Suite 104 Baldwin, WI 54002-9263 (715) 684-2914	USACOE - St. Paul District Attention: CO-R 190 Fifth Street East St. Paul, MN 55101-1638 (651) 290-5263	District Conservationist Baldwin Service Center 1960 8 th Ave., Suite 141 Baldwin, WI 54002-5159 (715) 684-2874	St. Croix Wetland Mgt. District 1764 95 th St. New Richmond, WI 54017 (715) 246-7784
Sauk-E of Hwys 22-23	Zoning Administrator Sauk Co. West Square Bldg. 505 Broadway Baraboo, WI 53913 (608) 355-3285	DNR 3911 Fish Hatchery Rd. Fitchburg, WI 53711 (608) 275-3228	USACOE Attention: CO-R 1114 South Oak St. La Crescent, MN 55947-1338 (507) 895-8059	District Conservationist Baraboo Service Center 505 Broadway, Suite 232 Baraboo, WI 53913-2183 (608) 355-4420	Wisconsin Private Lands Office 4511 Helgesen Dr. Madison, WI 53718-6747 (608) 221-1206 ext. 14



County	County Zoning	DNR	Corps of Engineers	NRCS	USFWS
Sauk-W of Hwy's 22-23	Zoning Administrator Sauk Co. West Square Bldg. 505 Broadway Baraboo, WI 53913 (608) 355-3285	DNR 1500 Johns St. Dodgeville, WI 53533-2116 (608) 935-1926	USACOE, Attention: CO-R 1114 South Oak St. La Crescent, MN 55947-1338 (507) 895-8059	District Conservationist Baraboo Service Center 505 Broadway, Suite 232 Baraboo, WI 53913-2183 (608) 355-4420	Wisconsin Private Lands Office 4511 Helgesen Dr. Madison, WI 53718-6747 (608) 221-1206 ext. 14
Sawyer	Zoning Administrator 10610 Main St. Hayward, WI 54843-0668 (715) 634-8288	DNR 10220 N. State Hwy. 27 S Hayward, WI 54843 (715) 634-9658	USACOE 1568 Highway 2, Rm. 107/112 Two Harbors, MN 55616 (218) 834-8630	District Conservationist USDA Service Center 1120 W. Lake Ave., P.O. Box 222 Ladysmith, WI 54848 (715) 532-7629	Fisheries Assistance Center 2800 Lake Shore Drive East Ashland, WI 54806 (715) 682-6185
Shawano	Zoning Administrator Shawano Co. Courthouse 311 N. Main St. Shawano, WI 54166 (715) 526-6766	DNR 647 Lakeland Rd. Shawano, WI 54166-3843 (715) 526-4232	USACOE Suite 211, Old Fort Square 211 North Broadway Green Bay, WI 54303 (920) 448-2824	District Conservationist USDA Service Center 603C Lakeland Rd. Shawano, WI 54166-3843 (715) 524-8520	Ecological Services Office 2661 Scott Tower Dr. New Franken, WI 54229 (920) 866-1717
Sheboygan	Zoning Administrator Sheboygan Co. Courthouse 508 New York Ave. Sheboygan, WI 53081 (920) 459-3060	DNR 5750 Woodchuck Lane P. O. Box 408 Plymouth, WI 53073-0408 (920) 892-8756 ext. 3031	USACOE First Federal Savings Bank Bld. 1617 E. Racine Ave., Rm. 101 Waukesha, WI 53186 (262) 547-4171	District Conservationist USDA Service Center 650 Forest Ave. Sheboygan Falls, WI 53085 (920) 467-9917	Leopold Wetland Mgt. Office W10040 Cascade Mountain Rd. Portage, WI 53901 (608) 742-7100 ext. 14 or 15
Taylor	Zoning Administrator 224 South Second St. Medford, WI 54451 (715) 748-1485	DNR N4103 State Highway 27 Ladysmith, WI 54848 (715) 532-4367	USACOE - St. Paul District Attention: CO-R 190 Fifth Street East St. Paul, MN 55101-1638 (651) 290-5263	District Conservationist USDA Service Center 925 Donald Street, Rm. 102 Medford, WI 54451-2099 (715) 748-4121	Necedah National Wildlife Refuge W7996 20 th Street West Necedah, WI 54646-7531 (608) 565-2551
Trempealeau	Zoning Administrator Trempealeau Co. Courthouse 1720 Main St., P.O. Box 67 Whitehall, WI 54773 (715) 538-2311 ext. 222/223	DNR 910 Highway 54 East Black River Falls, WI 54615 (715) 284-1424	USACOE Attention: CO-R 1114 South Oak St. La Crescent, MN 55947-1338 (507) 895-8059	District Conservationist USDA Service Center 19225 Dewey St., P.O. Box 645 Whitehall, WI 54773-7604 (715) 538-4396	Trempealeau National Wildlife Refuge W28488 Refuge Rd. Trempealeau, WI 54661 (608) 539-2311
Vernon	Zoning Administrator P.O. Box 306 Viroqua, WI 54665 (608) 637-5271	DNR 3550 Mormon Coulee Rd. Rm. 104 La Crosse, WI 54601 (608) 785-9010	USACOE Attention: CO-R 1114 South Oak St. La Crescent, MN 55947-1338 (507) 895-8059	District Conservationist Agricultural Service Center 220 Airport Rd. Viroqua, WI 54665-1157 (608) 637-8321	Upper Mississippi River Refuge La Crosse District 555 Lester Ave. Onalaska, WI 54650 (608) 783-8405

County	County Zoning	DNR	Corps of Engineers	NRCS	USFWS
Vilas	Zoning Administrator Vilas Co. Courthouse 330 Court St. Eagle River, WI 54521 (715) 479-3620	DNR 8770 Highway J Woodruff, WI 54568 (715) 358-9214	USACOE 1314 Contractor's Blvd. Plover, WI 54467 (715) 345-7911 ext. 2	District Conservationist Rhinelander Service Center 639 West Kemp St. Rhinelander, WI 54501-3879 (715) 362-5941	Fisheries Assistance Office 2800 Lake Shore Drive East Ashland, WI 54806 (715) 682-6185
Walworth	Zoning Administrator Courthouse Annex W3929 County NN Elkhorn, WI 53121-4362 (262) 741-3394	DNR Waukesha Service Center 141 NW Barstow St., Rm. 180 Waukesha, WI 53188 (262) 574-2136	USACOE First Federal Savings Bank Bld. 1617 E. Racine Ave., Rm. 101 Waukesha, WI 53186 (262) 547-1876	District Conservationist USDA Service Center 225 O'Connor Dr. Elkhorn, WI 53121-4269 (262) 723-3216	Wisconsin Private Lands Office 4511 Helgesen Dr. Madison, WI 53718-6747 (608) 221-1206 ext. 14
Washburn	Zoning Administrator Washburn Co. Courthouse 110 W. 4 th Ave., P.O. Box 506 Shell Lake, WI 54871-0506 (715) 468-4690	DNR 10220 N. State Hwy. 27 S Hayward, WI 54843 (715) 634-9658	USACOE 1568 Highway 2, Rm. 107/112 Two Harbors, MN 55616 (218) 834-6630	District Conservationist USDA Service Center 206 Vine St. Spooner, WI 54801-1456 (715) 635-8228	St. Croix Wetland Mgt. District 1764 95 th St. New Richmond, WI 54017 (715) 246-7784
Washington	Zoning Administrator Public Agency Center 333 E. Washington St., Suite 2300 West Bend, WI 53095-2585 (262) 335-4445	DNR 2300 N. M. L. King Jr. Dr. P.O. Box 12436 Milwaukee, WI 53212 (414) 263-8498	USACOE First Federal Savings Bank Bld. 1617 E. Racine Ave., Rm. 101 Waukesha, WI 53186 (262) 547-4171	District Conservationist West Bend Service Center 333 E. Washington St., Suite 3200 West Bend, WI 53095-2003 (262) 335-4801	Leopold Wetland Mgt. Office W10040 Cascade Mountain Rd. Portage, WI 53901 (608) 742-7100 ext. 14 or 15
Waukesha N of Hwy. 18	Zoning Administrator 1320 Pewaukee Rd. Waukesha, WI 53188-3868 (262) 548-7790	DNR Waukesha Service Center 141 NW Barstow St., Rm. 180 Waukesha, WI 53188 (262) 574-2137	USACOE First Federal Savings Bank Bld. 1617 E. Racine Ave., Rm. 101 Waukesha, WI 53186 (262) 547-0868	District Conservationist Waukesha Service Center 1320 Pewaukee Rd. Waukesha, WI 53188-3878 (262) 547-3754	Wisconsin Private Lands Office 4511 Helgesen Dr. Madison, WI 53718-6747 (608) 221-1206 ext. 14
Waukesha S of Hwy. 18	Zoning Administrator 1320 Pewaukee Rd. Waukesha, WI 53188-3868 (262) 548-7790	DNR Waukesha Service Center 141 NW Barstow St., Rm. 180 Waukesha, WI 53188 (262) 574-2136	USACOE First Federal Savings Bank Bld. 1617 E. Racine Ave., Rm. 101 Waukesha, WI 53186 (262) 547-0868	District Conservationist Waukesha Service Center 1320 Pewaukee Rd. Waukesha, WI 53188-3878 (262) 547-3754	Wisconsin Private Lands Office 4511 Helgesen Dr. Madison, WI 53718-6747 (608) 221-1206 ext. 14
Waupaca	Zoning Administrator Waupaca Co. Courthouse 811 Harding St. Waupaca, WI 54981 (715) 258-6255	DNR 647 Lakeland Rd. Shawano, WI 54166-3843 (715) 526-4232	USACOE 1314 Contractor's Blvd. Plover, WI 54467 (715) 345-7911 ext. 4	District Conservationist Waupaca Service Center 1337C Royalton St. Waupaca, WI 54981-1608 (715) 258-8380	Ecological Services Office 2661 Scott Tower Dr. New Franken, WI 54229 (920) 866-1717



County	County Zoning	DNR	Corps of Engineers	NRCS	USFWS
Waushara	Zoning Administrator Waushara Co. Courthouse 209 South St. Wautoma, WI 54982-0149 (920) 787-0453	DNR 427 E. Tower Dr., Suite 100 Wautoma, WI 54982-6927 (920) 787-4686 ext. 3016	USACOE 1314 Contractor's Blvd. Plover, WI 54467 (715) 345-7911 ext. 4	District Conservationist USDA Service Center 201 S. 16 th Ct., P.O. Box 649 Wautoma, WI 54982-0649 (920) 787-2116	Leopold Wetland Mgt. Office W10040 Cascade Mountain Rd. Portage, WI 53901 (608) 742-7100 ext. 14 or 15
Winnebago	Zoning Administrator 448 Algoma Blvd., P.O. Box 2808 Oshkosh, WI 54903-2808 (920) 236-4840/4841	DNR 625 E. County Road Y Suite 700 Oshkosh, WI 54901-9731 (920) 424-7885	USACOE Suite 211, Old Fort Square 211 North Broadway Green Bay, WI 54303 (920) 448-2824	District Conservationist Oshkosh Service Center 625 E. County Rd. Y, Ste. 403 Oshkosh, WI 54901-9731 (920) 424-0329	Leopold Wetland Mgt. Office W10040 Cascade Mountain Rd. Portage, WI 53901 (608) 742-7100 ext. 14 or 15
Wood	Zoning Administrator Wood Co. Courthouse 400 Market St., P.O. Box 8095 Wisconsin Rapids, WI 54495 (715) 421-8466	DNR 473 Griffith Ave. Wisconsin Rapids, WI 54494 (715) 421-7815	USACOE 1314 Contractor's Blvd. Plover, WI 54467 (715) 345-7911 ext. 3	District Conservationist USDA Service Center 360 First Street North Wisconsin Rapids, WI 54494 (715) 423-3610	Necedah National Wildlife Refuge W7996 20 th Street West Necedah, WI 54646-7531 (608) 565-2551

NOTES



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About the Authors

Alice Thompson is a wetland ecologist and owner of Thompson and Associates Wetland Services based in South Milwaukee. She holds a masters degree from the University of Wisconsin-Milwaukee, where she conducted research on reed canary grass. Alice is a Professional Wetland Scientist certified by the Society of Wetland Scientists. She serves as a board member (currently the Board Chair) for the Wisconsin Wetlands Association. Alice is active in wetland delineation, restoration, mitigation, and invasive species control, and consults on wetland-related issues and projects throughout the state. She also teaches field ecology and wetland restoration workshops for the Wisconsin Wetlands Association and the Morton Arboretum in Lisle, Illinois. Alice dedicates this book to the memory of her father, Daniel Q. Thompson, who taught her to love wetlands and the wild.

“The part about restoration that haunts me the most are the buried seeds waiting patiently in the soil for us. I think these buried seed banks are a treasure for our generation that will be lost if we do not respond quickly. Unlike the birds or mammals, they are motionless, trapped, invisible, soundless, out of mind, waiting for us to do the right thing.”

Charlie Luthin is a conservation biologist who has worked on wetland conservation programs and issues for more than 20 years. He has been affiliated with several state, national, and international nonprofit conservation organizations and has worked extensively in Asia, Mexico, Central America, and North America. Charlie has designed and undertaken programs in wildlife research, endangered species management, protected areas planning, restoration ecology, conservation education, and citizen activism. He has coordinated or co-coordinated five international conferences on wetlands and wildlife conservation and has helped found two local grassroots organizations. Charlie served as the first executive director of the Aldo Leopold Foundation in 1995 (Baraboo, Wisconsin) and was the executive director of the Wisconsin Wetlands Association from 1998 to 2003. He serves currently as executive director of the Natural Resources Foundation of Wisconsin, a statewide organization that raises funds to support conservation of rare plants, animals, and ecosystems. Charlie holds a bachelors degree in biology from the University of Wisconsin-Stevens Point and a masters degree in zoology from the University of Wisconsin-Madison.

About Wisconsin Wetlands Association

Wisconsin Wetlands Association (WWA) is a statewide, nonprofit, science-based educational and advocacy organization dedicated to the protection, restoration, and enjoyment of Wisconsin's wetlands. WWA focuses attention on key wetland/aquatic issues that face the state. The organization trains citizens in wetland protection, and has developed a “Wetland Watch Network” comprised of a growing number of citizen activists throughout Wisconsin. Each year WWA hosts a statewide Wetland Scientists Forum.

Members are invited to participate in field trips and programs and receive a quarterly newsletter. Activists can receive periodic email updates and alerts about current wetland issues, legislation, and projects.

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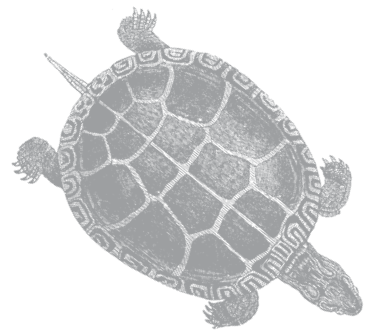
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