



The Lake CONNECTION

Shorelines fires: food for algae

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Lakes Winnebago, Poygan, Butte des Morts, and Winneconne are often called the “Winnebago system,” and represent Wisconsin’s most interesting shallow lakes. They are fertile and they can grow a lot of algae. The algae forms the food base for small animals called zooplankton. And the zooplankton in turn feeds the small fish, which feed the big fish, which feed the angler and their families.

As important as some algae is to the natural food chain, we’ve all seen how too much algae is bad. Excessive algae causes the formation of scum, foul odors, low oxygen in water, and offensive views. The kids don’t take kindly to it either; and having good vision, they typically avoid green waters that possibly remind them of spinach.

What does this have to do with shoreline fires? And how can my little fire hurt a big lake like Winnebago? The answer is simple: Ash feeds algae!

Any fire will create ash waste and wood ash contains nutrients required by plants for good growth. In fact, many gardeners tout the virtues of adding ash to the garden.



Photo: Frank Koshere

On average, the burning of wood results in about 8% ash. Ash contains 1 to 2 percent phosphorous, 5 to 10 percent potassium and trace amounts of micro-nutrients such as iron, manganese, boron, copper and zinc. Any gardener worth their salt, knows about adding nitrogen and phosphorus to the soil for it’s tomato growing power. Phosphorus is a powerful growth agent and it’s the phosphorus component in ashes that stimulates algae growth. Here are a few quick facts:

- One ton of wood will produce about 160 pounds of ash,
- 160 pounds of ash will produce about 2½ pounds of phosphorus,
- 2½ pounds of phosphorous can generate 1,250 pounds of wet algae.

One thousand two hundred and fifty pounds of algae! Whose shore will it wash up on?

When you build your brush pile high with leaves, tree limbs or clean scrap wood and throw in the match, don’t do it on

the shoreline. Help out your lake by burning away from the shore, where ash won't blow or wash into the lake. Thirty-five feet is a good distance. Shoreline burning also kills vegetation and changes the soil structure with the end result being more soil erosion into the lake. So, set that fire back from the water's edge. Use a fire pit. Don't unwittingly feed the algae beast!

And please don't burn unnecessarily. Everyone enjoys a campfire, but in many cases you have options like composting or land filling. Whatever you decide, never burn tires, shingles, plastics or other natural or man made materials that contain toxics. In some locales, burning is restricted by ordinance or subdivision rules, so check your local township or association rules.

Gardeners can use the ash in the garden, but don't use too much as it decreases soil acidity. Soil acidity is necessary for nutrient transfer to garden plants. Instead of applying ash directly to the soil, use wood ash as an amendment to the compost pile; the acidity of the decomposing materials in the compost pile will offset the alkaline ash. The high nitrogen content, and low phosphorous and potassium level in compost will form a balanced fertilizer product with the addition



Photo: Mark Sesing

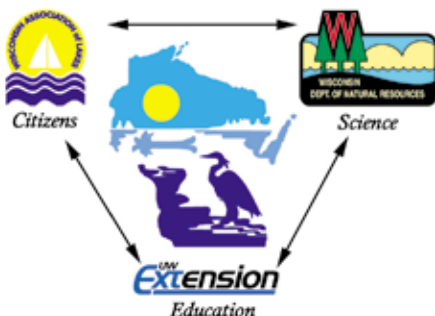
of ash. Compost can then be added to the soil to help improve the soil structure and provide a balanced fertilizer solution. You can store ash for later use or disposal as well. The storage area should be located away from wells, water, and animal watering areas; and covered to prevent nuisance conditions during dry or windy weather

It's a big job protecting and restoring the Lake Winnebago system. Recent successes with the walleye and sturgeon fishery demonstrate the power of community partnerships with citizens and agencies working toward a common goal. However, many existing forces continue to threaten the system's health like

replacing wildlife habitat along shorelines with walls, rock, and lawn up to the water's edge; wetland erosion due to artificially manipulated water levels; invasive species like the Zebra Mussel that threatens native species; fertilizer runoff, bacteria and sediment that continues to degraded water quality; and residential development that causes natural views to disappear.

Safeguarding our valuable lakes is a big challenge. But like the answer to the question, "How do you eat an elephant?" The answer is "One bite at a time." If we take our own small bites out of the problems facing the Winnebago lakes, we can ensure clear water, more wildlife, and a healthy fishery.

Wisconsin Lakes Partnership



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