FIRE PITS ON THE NEWMAN LAKE SHORELINE

Fire pits are sources of highly concentrated “bad” nutrients to the lake regardless of the lake level. Here is a simple explanation. We put plant flesh in our fire pits in the form of wood, cardboard, construction materials, and horribly, some plastics like water & soda bottles. What we see left over is black material. We always associate that black material with Carbon, a material many of us use to filter our drinking water. So, that has to be good, right?

Not right. There is Carbon in the fire pits, the Carbon that didn’t burn. But the entire purpose of a fire is to create heat and light and those things are both energy. Energy is released from combustion because of the reaction of the Carbon in the material to Carbon Dioxide – CO2. The CO2 removes the Carbon from the materials and puts it in the air. If there was complete combustion, there would be no Carbon left and therefore no black in the fire pit.

But plant flesh (firewood) is not just Carbon. Wood contains all the nutrients from the soil that it needs to survive such as fertilizers, Nitrogen, Phosphorus, and other organic compounds needed for flora to grow. I mention Nitrogen and Phosphorus because these are the primary ingredients contributing to algae growth in the water and what I referred to as “bad” in the first line above. Remember that algae growth is the primary reason for reduced clarity in the lake water.

During combustion, some of the Nitrogen is released as oxides into the air, but much of it remains in the ash. Little of the Phosphorus is liberated into the air during combustion. So, where does it go? It remains in the ash in the bottom of the fire pit. And since we don’t want our fire pits full of rainwater, we put big holes in the bottom to drain out the ash. When we shovel out the ash, it is mostly wet, heavy, gray matter, not black. What is this gray matter?

It is a highly concentrated muck of really bad stuff for the lake. We think nothing of it, not from the lack of desire to be good lake stewards, but from lack of understanding what is really going on here. So, we ignorantly leave the ash in the fire pit, whether it is in a metal container or a hole in the ground. Then it rains.

The rain water absorbs the soluble components of the ash and erodes the non-soluble silt particles through the drain holes, onto the ground or into the ground, and that contaminated water ends up in the lake water, usually within hours. To us, we don’t see it and don’t realize how bad it is. We just know once in a while we have to clean out our fire pit. What we don’t realize is that most of the bad nutrients leave the fire pit with the rain water and go straight into the lake. It is quite like pouring fertilizer directly into the lake, perhaps the worst thing we could do to the lake. Fertilizer is mostly Nitrogen and Phosphorus compounds and is rated as such. But we are oblivious to the damage we cause.

All fire pits should plug the drain holes in the bottom and should have waterproof lids to keep sprinkler and rain water from being able to get the ash wet. All ash should be removed from the fire pit regularly and removed from the drainage basin in the trash. Only then are we being good stewards of the lake and only then are we doing our part to enjoy beach fires without polluting our great resource. Fire pits are not a major lake pollutant source, but they are one of the most concentrated pollutant streams that enter the lake. Yet this is one of the simplest pollutant sources to eliminate without reducing the pleasure we get from beach fires.

Please feel free to print out this report and share it with all your neighbors.

Lee Tate
Newman Lake Resident