The Problem of Using Wood Ashes in the Garden

pH
The pH of ashes is high. The pH is a measurement of level of acidity on a scale of 0 to 14, with 7 being neutral, 0 is very acidic and 14 extremely alkaline. The pH range of fireplace ashes has an average value of 11.6, right up there with household bleach. Added to soil, it removes acid, driving the pH value up and out of the range of acidity that most plants prefer.

Most vegetables and lawn grass perform best in slightly acidic soil of an average pH range of 5.8 to 6.5. Many shrubs need even lower pH values. Azaleas, blueberries and gardenias need an acidic pH of 5 to 5.5. Other acid-loving shrubs include most conifers, camellias and hollies. When the soil is out of the pH range needed by a particular plant, it cannot absorb nutrients, such as iron. This is the reason for yellow leaves on many azaleas growing in soil that has become too alkaline, producing yellow leaves that have a distinctive pattern called iron chlorosis.

Salt
Another downside to using fireplace ashes is the amount of salt. Excess salt in soil will predictably kill plant roots. An example of this is seen with the use of salt on roadways in winter with subsequent death of roadside plants the following spring. Once the salt is in the soil, it may take a long time for correction to occur.

Potassium
The last concern about fireplace ashes is the amount of potassium. There is about 6% potassium in ashes and they will add this nutrient to soils. It it is deficient in the soil, this could be helpful. However, the results of soil tests of Tulsa-area gardens by OSU show that in previously fertilized soils, the majority have adequate or excessive potassium.

A general recommendation is that, if ash is used, one should use no more than 10 gallons per 1,000 square feet in sandy soils and 20 gallons for the same area in other soil types.

The key take-home fact from this document is that, if you apply ashes to your soil as outlined above, you should do so no more often than once every 10 years.