

### Lead

- **Scratch test:** Soft and appears shiny when top layer is scratched away
- **Magnet:** Will not attract
- A “wiped joint” or bowed feature may be present (see picture on right)
- Pipe may be confused with galvanized steel and may be painted.



**Lead Pipe** (Green Bay Water Utility)



**Lead Service Line** (KBreker)

### Copper

- **Scratch test:** Color will typically be a shiny copper depending on piping age
- **Magnet:** Will not attract
- Oxidized pipes may appear green and may be painted.



**Copper Pipe** (Green Bay Water Utility)



**Oxidized copper pipe** (Tom W. Sulcer)



**Brass Fitting**

### Brass

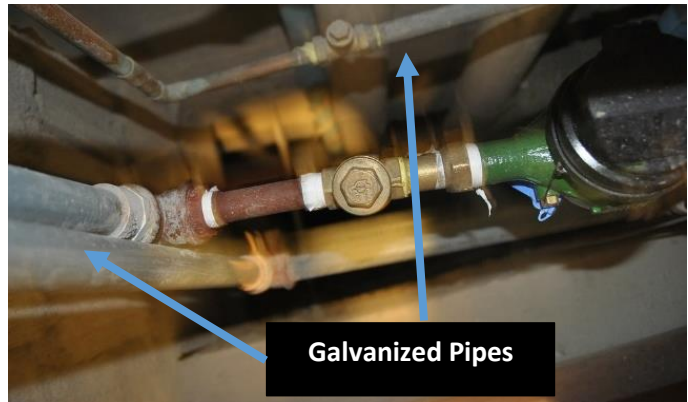
- **Scratch test:** Will reveal a shiny yellow color
- **Magnet:** Will not attract
- Pipe fittings are mostly threaded but lead solder may be present.

### Galvanized Steel

- **Scratch Test:** Typically a dull grey but may appear a shiny-silver color similar to lead
- **Magnet:** WILL attract
- Some galvanized steel contains lead
- Pipe may be painted.



**Galvanized steel pipe (Green Bay Water Utility)**



**Galvanized Pipes**

## Indiana Lead Sampling Program: Pipe Identification Guide

### Solder

- Most common with copper pipes. No scratch test for this and plumbing age may be the best indicator. "50/50" solder is the most common- 50% lead and 50% tin. Swabs are available for purchase but not provided to IGWS teams.



**Copper pipes with lead solder and a brass fitting**

### Faucets & Spigots

- Faucets & spigots may be brass, an alloy made mostly of copper and zinc. Until 2014, brass could contain up to 8 percent lead. The new standard is 0.25% for wetted surface drinking water faucets. You will be asked to note faucet materials during the sample plan site visit.



**Brass spigot**

### Summary Points

- Lead was historically used in piping (lead and brass) and leaded solder.
- Magnet and scratch tests can be used to identify pipes.
- Lead solder cannot be visually identified. Over-the-counter swab tests are available.
- Both the faucet/fixture and the underlying piping should be identified, if possible, as both may be a source of lead.