3. Water pollution sources which can be both point and non-point sources of pollution. Metals enter our waterways in several ways. Some are carried by acid rain directly into the waterway, some are carried by potable drinking water being discharged through our storm drains when we use our hoses outside of the house. The largest sources of lead and copper in our waterways comes from potable water pipes and use of our potable water system. When water is treated for drinking purposes the water is softened and this has an effect on copper pipes which have lead solder on them and small amounts of these metals are gradually eroded away and taken into our drinking water. And as we use drinking water for cooking, drinking and washing our cars or whatever this goes into the wastewater treatment plant but still ends up being discharged through the effluent water into our water bodies. Metals, phenols and complicated chemicals substances which may be hazardous to human health and to aquatic life find their way into the water system through the use of the products that we have in our households and then discharge down our drains and through manufacturing and the wastewater that is left over after manufacturing which needs to be processed.

TOXICITY: A frequently used and misused term when people discuss chemical residues in water, air or any pollution is to refer to items as toxic substances. Nothing in and of itself is toxic. An element or chemical becomes toxic or has a toxic effect when there is too much of it in the air, in the water or on the land such that it destroys living organisms that are there. Toxicity is relevant. It is important to know how much of a substance has been discharged into water in order to know if that substance is having a toxic effect. An activity which highlights an understanding of this concept is Dissolved or Suspended.

NATURAL POLLUTION: It is important to note that violent storms often discharge large amounts of debris, leaves, dirt etc. and cause runoff from the land into the water and naturally pollute it; however, the stream has a natural process which was described under the Nature of Water #2 D in which the balance is re-established. It is important to note that nature itself can also pollute the waters. Over populations of ducks and aquatic life can also cause an imbalance in the streams. Man is the greatest user of water in large quantities and because of man's intelligence we have been able to pump so many gallons of water where we need it whenever we need it. Both animal life and man share that portion with the rest of nature, to use the water and return it in a less clean state.

THERMAL WATER POLLUTION: Surface water that is heated by the addition of warm or hot water is called thermal water pollution. Heat is sometimes considered point source pollution. Main contributors to thermal pollution are the companies that process our food and generate electricity. Electrical generating plants can create thermal water pollution when they use surface water to condense the steam that is used to turn the turbines.