

What is water pollution?

- Water pollution is the addition of harmful chemicals to natural water.



What are some sources of water pollution?

- Sources of water pollution in the US include
 - industrial waste
 - run-off from fields treated with chemical fertilizers
 - run-off from areas that have been mined



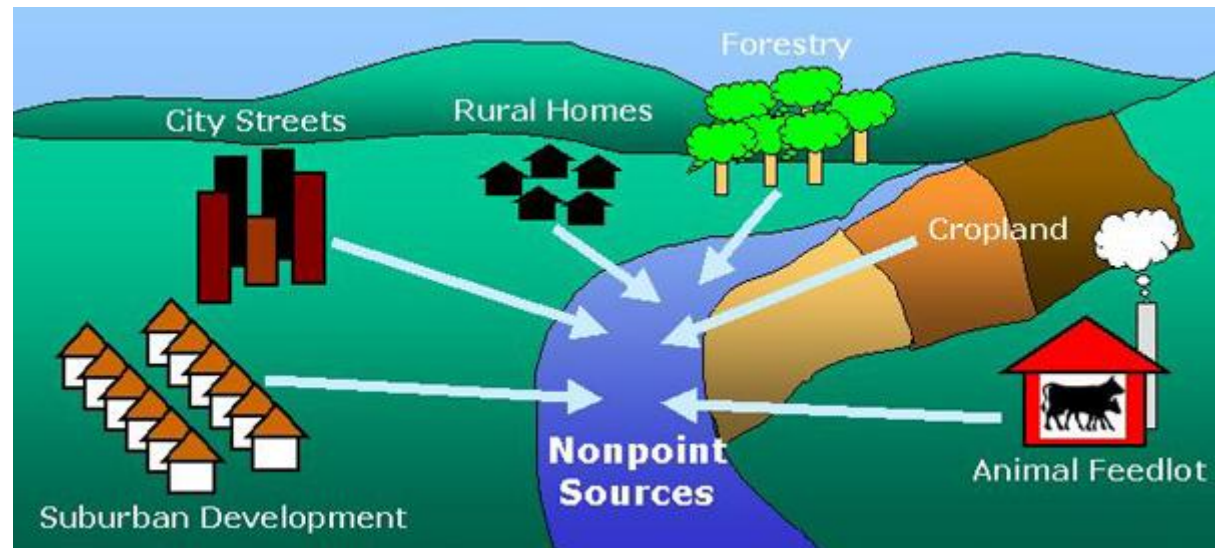
What is point source pollution?

- Point Source Pollution - contamination that enters the environment through a specific **traceable** means
- Ex. Sewage plant pipe, **Coal ash ponds**



What is non-point source pollution?

- Non-Point Source Pollution - does not have a specific point of origin.
- Results from land runoff, precipitation, atmospheric deposition, drainage or seepage.



Non-point source examples

- Stormwater runoff
- Arsenic from mining
- Sediment from land runoff



Runoff – any water that does not infiltrate into the ground

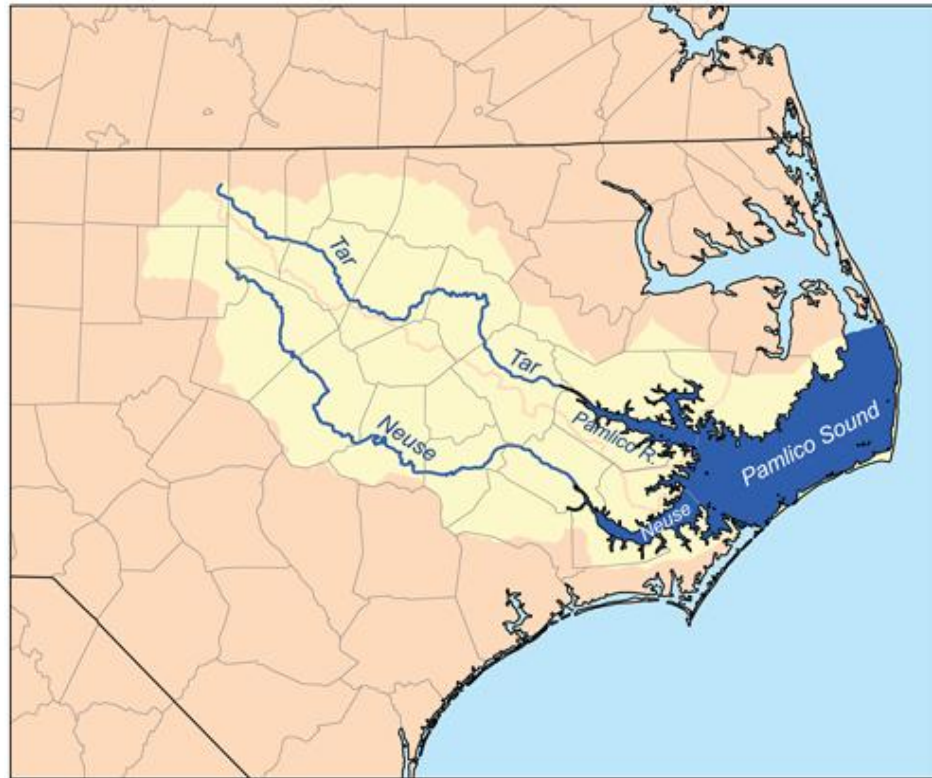


How to reduce Point and Non Point Pollution

- Use fertilizer and pesticide according to package directions
- Have septic systems inspected every 2-3 years.
- Conserve sprinkler water
- Never dump anything down a storm drain.
- Pick up after your pets. Pet waste left on the ground can spread E. coli, roundworms and Salmonella.

How do pollutants move through the water supply?

- Pollutants move through a water supply along with the water!
- As water moves towards the ocean, pollutants build up and can become more concentrated.



Population Effects on Water Quantity

- Communities across the country are starting to face challenges in maintaining healthy and affordable water supplies
- **An increase in population size means there is less water per person**
- Methods of Conservation:
 1. Water barrels
 2. Turning off the faucet
 3. Shorter showers
 4. Water rations
 5. Watering plants at night or early morning

Population Effects on Water Quality

- As populations grow rapidly, health standards find it difficult to keep up.
- **This leads to an increase in water borne illnesses as pollutants build up.**



Wastewater Treatment Systems

- The major aim of wastewater treatment is to remove suspended solids before the remaining water is discharged back to the environment.
- **Treatment facilities are unable to filter out all contaminants.**



Drinking Water Treatment System

1. Remove small and large sediments from water
2. Water forced through filters to remove smallest particles
3. Removal of biological contaminants

