Water Resourse

total water supply of about 332.5 million cubic miles of water, over 96 percent is saline. And, of the total freshwater, over 68 percent is locked up in ice and glaciers. Another 30 percent of freshwater is in the ground. Fresh surface-water sources, such as rivers and lakes, only constitute about 22,300 cubic miles (93,100 cubic kilometers), which is about 1/150th of one percent of total water. Yet, rivers and lakes are the sources of most of the water people use everyday



Where is Earth's Water?

Source: Igor Shiklomanov's chapter "World fresh water resources" in Peter H. Gleick (editor), 1993, Water in Crisis: A Guide to the World's Fresh Water Resources. (Numbers are rounded).

Water Pollution

Organic water pollutants include:

- Detergents
- Disinfection by-products found in chemically disinfected drinking water, such as chloroform

- Food processing waste, which can include oxygen-demanding substances, fats and grease
- Petroleum hydrocarbons, including fuels (gasoline, diesel fuel, jet fuels, and fuel oil) and lubricants (motor oil), and fuel combustionbyproducts, from storm water runoff^[26]
- Various chemical compounds found in personal hygiene and cosmetic products
- Drug pollution involving pharmaceutical drugs

inorganic water pollutants include:

- Acidity caused by industrial discharges (especially sulfur dioxide from power plants)
- Ammonia from food processing waste
- Chemical waste as industrial by-products
- Fertilizers containing nutrients--nitrates and phosphates—which are found in storm water runoff from agriculture, as well as commercial and residential use (see nutrient pollution)
- Heavy metals from motor vehicles (via urban storm water runoff) and acid mine drainage

In addition to the organic and inorganic contaminants also pathogens

Wastewater is a complex matrix containing significant concentrations of solids (total solids 350–1200mg/l), dissolved and particulate matter (chemical oxygen demand 250–1000mg/l), microorganisms (up to 109 number/ml), nutrients, heavy metals and micro-pollutants

Waste Water treatment stages

- 1-preliminary treatment
- 2-primary treatment
- 3-secondary treatment

4-advanced treatment

5-distinfaction

6-storage of treated water

