COLD WATER SUPPLY

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Main Sources of Water Supply

- In 2004 about 3.5 billion people worldwide (54% of the global population) had access to piped water supply through house connections. Another 1.3 billion (20%) had access to an improved water source through other means than house, including standpipes, "water kiosks", protected springs and protected wells.

- Finally, more than 1 billion people (16%) did not have access to an improved water source, meaning that they have to revert to unprotected wells or springs, canals, lakes or rivers to fetch water. It should be noted that access to an improved source of water does not necessarily imply that it is safe to drink from that source.
Clean Water Supply

Shipot, an underground water source in Ukraine
Water supply systems get water from a variety of locations, including groundwater (aquifers), surface water (lakes and rivers), conservation and the sea through desalination.

The water is then, in most cases, purified, disinfected through chlorination and sometimes fluoridated. Treated water then either flows by gravity or is pumped to reservoirs, which can be elevated such as water towers or on the ground (for indicators related to the efficiency of drinking water distribution see non-revenue water).

Once water is used, wastewater is typically discharged in a sewer system and treated in a wastewater treatment plant before being discharged into a river, lake or the sea or reused for landscaping, irrigation or industrial use (see also sanitation).
The Distribution System

- Gravity System
- Pump System
- Both
Gravity System

- Usually distribution areas is near from main source
- No need pump system and economic.
Pump System

Without Storage Tank

- Direct to main pipe with certain pressure
- Problem will occur when have power supply problem
- Pump must have to support all needed pressure
With Storage Tank
  - Combination between gravity and pump system
1. Pump station
2. Reservoir
3. Water User
That’s all, thank you

Q & A