

Sources of Sewage:

Domestic Sources

- ❖ Human waste from lavatories (feces, urine, flush water); known as black water
- ❖ Washing water (personal, clothes, floors, dishes, etc.), known as grey water or sullage
- ❖ Discharge from Septic tank
- ❖ Cooking oil, Pesticides, Lubricating oil, Paint, Cleaning liquids, etc.

Industrial Sources

- ❖ Industrial process waters (Dyeing industries, Tanneries etc)
- ❖ Industrial cooling waters (heat)
- ❖ Organic or biodegradable waste
- ❖ Organic or non bio-degradable/difficult-to-treat waste (pharmaceutical or pesticide manufacturing)
- ❖ Extreme pH waste (from acid/alkali manufacturing, metal plating)
- ❖ Toxic waste (metal plating, cyanide production, pesticide manufacturing, etc.)
- ❖ Solids and emulsions (paper manufacturing, foodstuffs, lubricating and hydraulic oil manufacturing, etc.)
- ❖ Waste water from oil & natural gas production

Rainfall collected on roofs, yards, roads, car parks, pavements etc; known as storm runoff

Workshops and garages (gasoline/petrol/diesel or rubber residues, soap scum, metals from vehicle exhausts, etc.)

Discharge from Sewage Treatment Plant (STP)

Groundwater infiltration into sewers

- ❖ Seawater ingress (salt and microbes)
- ❖ Agricultural drainage

Sanitary sewage is produced from the following sources:

When the water is supplied by water works authorities or provided from private sources, it is used for various purposes like bathing, utensil cleaning, for flushing water closets and urinals or washing clothes or any other domestic use. The spent water for all the above needs forms the sewage.

1. Industries use the water for manufacturing various products and thus develop the sewage.
2. Water supplied to schools, cinemas, hotels, railway stations, etc., when gets used develops sewage.
3. Ground water infiltration into sewers through loose joints.
4. Unauthorized entrance of rain water in sewer lines.

Nature of Sewage:

Sewage is a dilute mixture of the various types of wastes from the residential, public and industrial places. The characteristics and composition i.e. the nature of sewage mainly depends on this source. Sewage contains organic and inorganic matters which may be dissolved, suspension and colloidal state. Sewage also contains various types of bacteria, Virus, protozoa, etc. sewage may also contain toxic or other similar materials which might have got entry from industrial discharges. Before the design of any sewage treatment plant the knowledge of the nature of sewage is essential.

