

## SEWAGE DISPOSAL METHODS:

### SEWAGE DISPOSAL ON LAND:

Disposal of Sewage Effluents on land for irrigation in this method the sewage effluent (treated or diluted) is generally disposed of by applying it on land.

The percolating water may either soon reach the water table or is collected below by a system of under drains. This method can then be used for irrigating crops.

This method in addition to disposing of the sewage may help in increasing crop yields (by 33% or so) as the sewage generally contains a lot of fertilizing minerals and other elements.

However the sewage effluent before being used as irrigation water must be made safe. In order to lay down the limiting standards for sewage effluents, and the degree of treatment required, it is necessary to study as to what happens when sewage is applied on to the land as irrigation water.

The pretreatment process may be adopted by larger cities which can afford to conduct treatment of sewage when sewage is diluted with water or disposal for irrigation too large volumes of dilution water are generally not needed, so as not to require too large areas for disposal.

### DISPOSAL BY DILUTION:

Disposal by dilution is the process whereby the treated sewage or the effluent from the sewage treatment plant is discharged into a river stream, or a large body of water, such as a lake or sea. The discharged sewage in due course of time, is purified by what is known as self purification process of natural waters. The degree and amount of treatment given to raw sewage before disposing it off into the river stream in question, will definitely depend not only upon the quality of raw sewage but also upon the self purification capacity of the river stream and the intended use of its water.

**Dilution Factor:**

The ratio of the quantity of the diluting water to that of the sewage is known as the Dilution Factor.

**Conditions favouring Disposal by dilution:**

The dilution methods for disposing of the sewage can favourably be adopted under the following conditions.

- When sewage is comparatively fresh (4 to 5 hr old) and free from floating and settleable solids. (or are easily removed by primary treatment)

- When the diluting water (is the source of disposal) has a high dissolved oxygen (O<sub>2</sub>) content.
- Where diluting waters are not used for the purpose of navigation or water supply for at least some reasonable distance on the downstream from the point of sewage disposal.
- Where the flow currents of the diluting waters are favourable, causing no deposition, nuisance or destruction of aquatic life.

When the out fall sewer of the city or the treatment plant is situated near some natural water having large volumes.

