

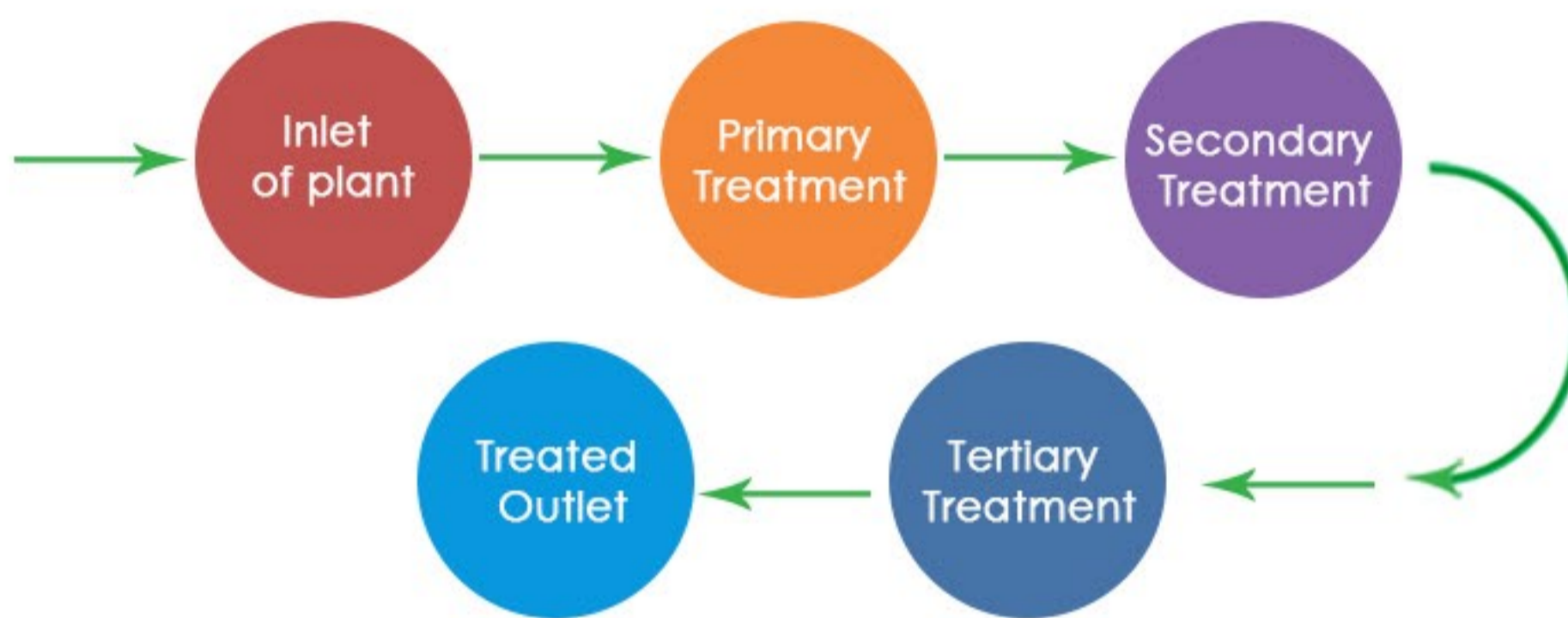


U. S. AQUATREAT CO.

## EFFLUENT TREATMENT PLANTS



### Process Flow Diagram:



### **Process Description :**

Wastewater treatment processes are designed to achieve improvements in the quality of the wastewater. The various treatment processes may reduce: Suspended solids, Biodegradable organics, Pathogenic bacteria, Nutrients

### **Primary (mechanical) treatment :**

It removes gross, suspended and floating solids from effluent. It includes screening to trap solid objects and sedimentation by gravity to remove suspended solids. chemicals are used to accelerate the sedimentation process. Primary treatment can reduce the BOD of the incoming wastewater by 20-30% and the total suspended solids by some 50-60%. Primary treatment is usually the first stage of wastewater treatment.

### **Secondary (biological) treatment :**

It removes the dissolved organic matter that escapes primary treatment. This is achieved by microbes consuming the organic matter as food, and converting it to carbon dioxide, water, and energy for their own growth and reproduction. The biological process is then followed by additional settling tanks to remove more of the suspended solids. About 85% of the suspended solids and BOD can be removed by a running plant with secondary treatment.

### **Tertiary treatment :**

This is simply additional treatment beyond secondary! Tertiary treatment can remove more than 99 percent of all the impurities from waste water, producing an effluent of almost good-water quality. Disinfection, typically with chlorine, is the final step before discharge of the effluent.

### **Application:**

- |                             |                             |                            |
|-----------------------------|-----------------------------|----------------------------|
| 1) Textile Industry         | 2) Food processing Industry | 3) Paper Industry          |
| 4) Chemical Industry        | 5) Solar cell Industry      | 6) Pharmaceutical Industry |
| 7) Automobile Industry      | 8) Rubber Industry          | 9) Sugar Industry          |
| 10) Steel Industry          | 11) Power Plant             | 12) Leather Industry       |
| 13) Hotel Industry          | 14) Fertilizers             | 15) Dairy product Industry |
| 16) Builders and Developers | 17) Agricultural Industry   | 18) Beverage Industry      |