Inlet

Equalization Tank

Equalize the flow rate, Equalize or balance the organic concentration, Dilute or dampen the impact from inhibitory compounds, Neutralize the pH, Even out temperature fluctuations, and Minimize chemical usage (e.g., downstream pH adjustment).

Aeration Tank

Aeration brings water and air in close contact in order to remove dissolved gases (such as carbon dioxide) and oxidizes dissolved metals such as iron, hydrogen sulfide, and volatile organic chemicals (VOCs).

MBR

The MBR process involves a suspended growth activated sludge system that utilizes microporous membranes for solid/liquid separation in lieu of secondary clarifiers. This very compact arrangement produces a MF/UF quality effluent suitable for reuse applications or as a high quality feed water source for Reverse Osmosis treatment.

DECANTER <

WAS

A means of collecting the solids to remove them from the process (waste activated sludge [WAS]).



وكالة الجامعة إدارة البيئة الجامعية والصحة المهنية

RAS

The combination of wastewater and biological mass is commonly known as *mixed liquor*. In all activated sludge plants, once the wastewater has received sufficient treatment, excess mixed liquor is discharged into settling tanks and the treated supernatant is run off to undergo further treatment before discharge. Part of the settled material, the sludge, is returned to the head of the aeration system to re-seed the new wastewater entering the tank. This fraction of the floc is called *return activated sludge* (R.A.S.).

Sludge Tank

a biological wastewater treatment process which speeds up waste decomposition. Activated sludge is added to wastewater, and the mixture is aerated and agitated. After a certain amount of time, the activated sludge is allowed to settle out by sedimentation and is disposed of (wasted) or reused (returned to the aeration tank)