

INTAKES FOR COLLECTING SURFACE WATER:

The main function of the intakes works is to collect water from the surface source and then discharge water so collected, by means of pumps or directly to the treatment water. Intakes are structures which essentially consist of opening, grating or strainer through which the raw water from river, canal or reservoir enters and carried to the sump well by means of conducts water from the sump well is pumped through the rising mains to the treatment plant.

The following points should be kept in mind while selecting a site for intake works.

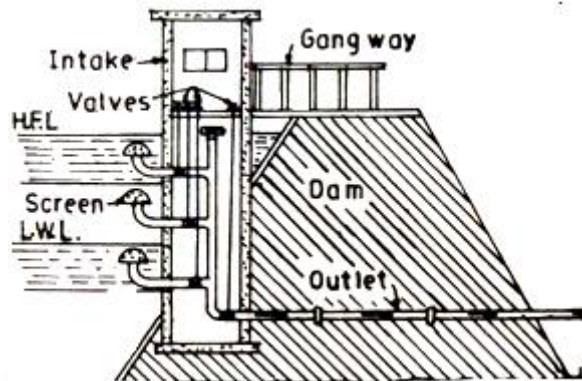
1. Where the best quality of water available so that water is purified economically in less time.
2. At site there should not be heavy current of water, which may damage the intake structure.
3. The intake can draw sufficient quantity of water even in the worst condition, when the discharge of the source is minimum.
4. The site of the work should be easily approachable without any obstruction
5. The site should not be located in navigation channels
6. As per as possible the intake should be near the treatment plant so that conveyance cost is reduced from source to the water works
7. As per as possible the intake should not be located in the vicinity of the point of sewage disposal for avoiding the pollution of water.
8. At the site sufficient quantity should be available for the future expansion of the water-works.

Types of Intake structures:

Depending upon the source of water the intake works are classified as following

1. Lake Intake
2. Reservoir Intake
3. River Intake
4. Canal Intake

ensures supply of water from a level lower than the surface level of water. When the valve of an intake pipe is opened the water is drawn off from the reservoir to the outlet pipe through the common vertical pipe. To reach upto the bottom of intake from the floor of valve room, the steps should be provided in Zigzag manner.



4. CANAL INTAKE:

An intake chamber is constructed in the canal section. This results in the reduction of water way which increases the velocity of flow. It therefore becomes necessary to provide pitching on the downstream and upstream portion of canal intake. The entry of water in the intake chamber takes through coarse screen and the top of outlet pipe is provided with fine screen. The inlet to outlet pipe is of bell-mouth shape with perforations of the fine screen on its surface. The outlet valve is operated from the top and it controls the entry of water into the outlet pipe from where it is taken to the treatment plant.

