



SNS COLLEGE OF TECHNOLOGY



AN AUTONOMOUS INSTITUTION

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COIMBATORE

DEPARTMENT OF CIVIL ENGINEERING

19CET305-IRRIGATION AND WATER RESOURCE ENGINEERING

III YEAR / VI SEMESTER

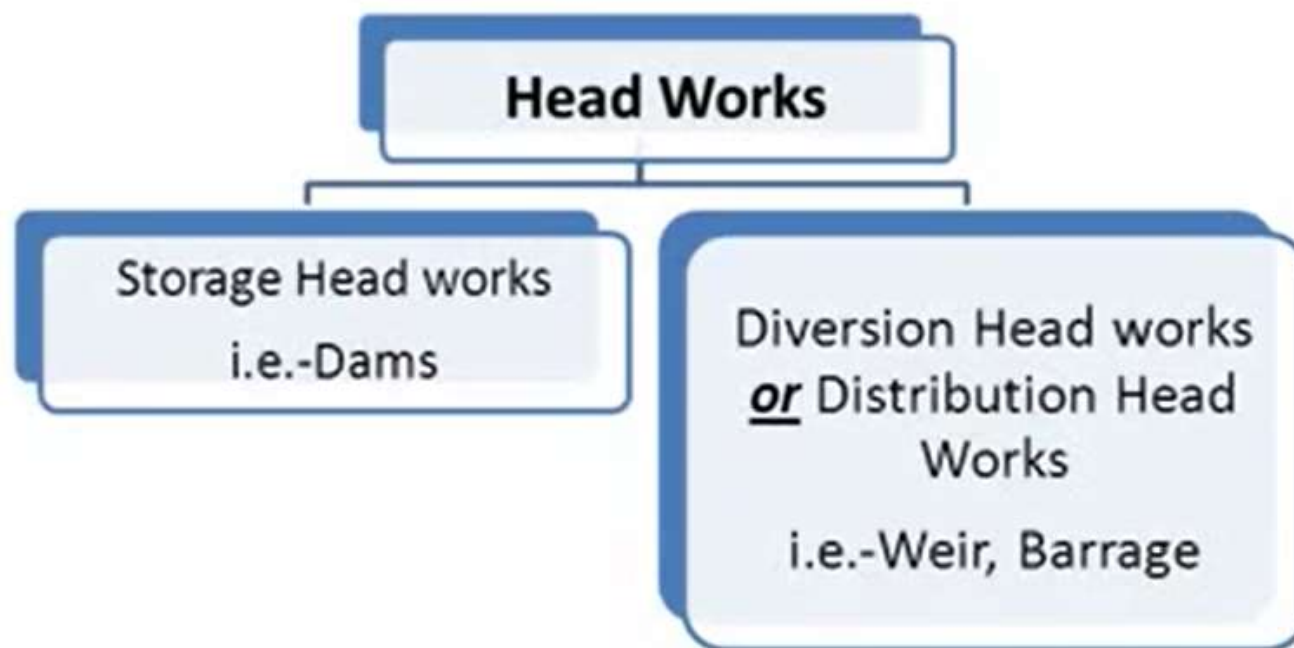
Unit 3 : DIVERSION STRUCTURES AND DAM

Diversion Head works



Head Works

- Any hydraulic structure which supplies water to the off-taking canal is called a headwork.





Diversion Head Works-Introduction

Any hydraulic structure which supplies water to the off-taking canal is called a headwork.

Headwork may be

- Storage headwork.
- Diversion headwork.

A Storage headwork comprises the construction of a dam on the river. It stores water during the period of excess supplies and releases it when demand overtakes available supplies.

A diversion headwork serves to divert the required supply to canal from the river





Diversion Head Works-Introduction



- Diversion head works is a structure constructed across a river for the purpose of raising the water level in the river so that it can be diverted into the off taking canals.
- Diversion head works are generally constructed on the perennial rivers which have adequate flow throughout the year and, therefore, there is no necessity of creating a storage reservoir.
- A diversion head works differs from a storage work or a dam. A dam is constructed on the river for the purpose of creating a large storage reservoir.
- The storage works are required for the storage of water on a non-perennial river or on a river with inadequate flow throughout the year. On the other hand, in a diversion head works, there is very little storage, if any.



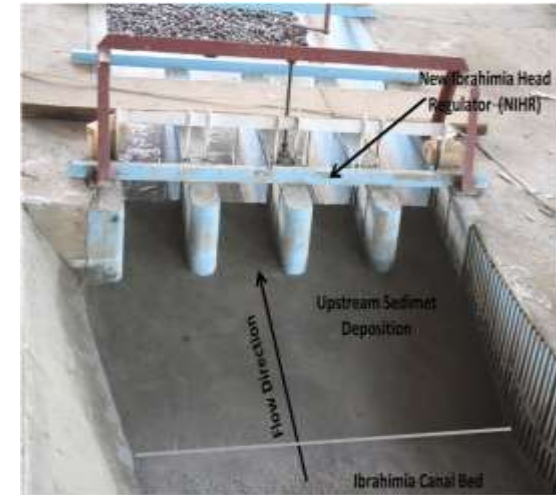
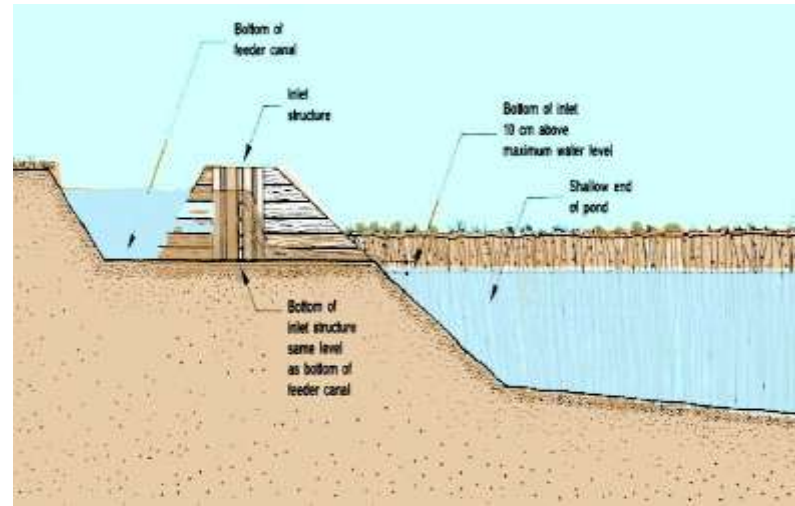
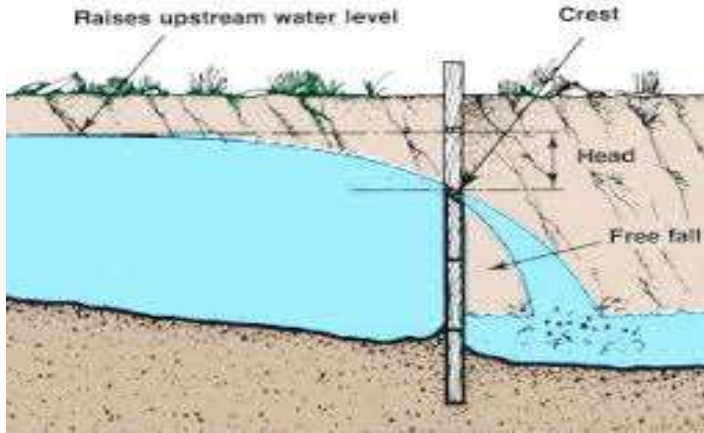
Diversion Head Works-Introduction



- If the storage on the upstream of a diversion head works is significant, it is called a storage weir.
- If a diversion head works is constructed on the downstream of a dam for the purpose of diverting water released from the u/s dam into the off taking canals, it is called a pickup weir.
- Generally, the dam is constructed in the rocky or the mountainous reach of the river where the conditions are suitable for a dam, and a pickup weir is constructed near the commanded area in the alluvial reach of the river.



Purposes of Diversion Head Works

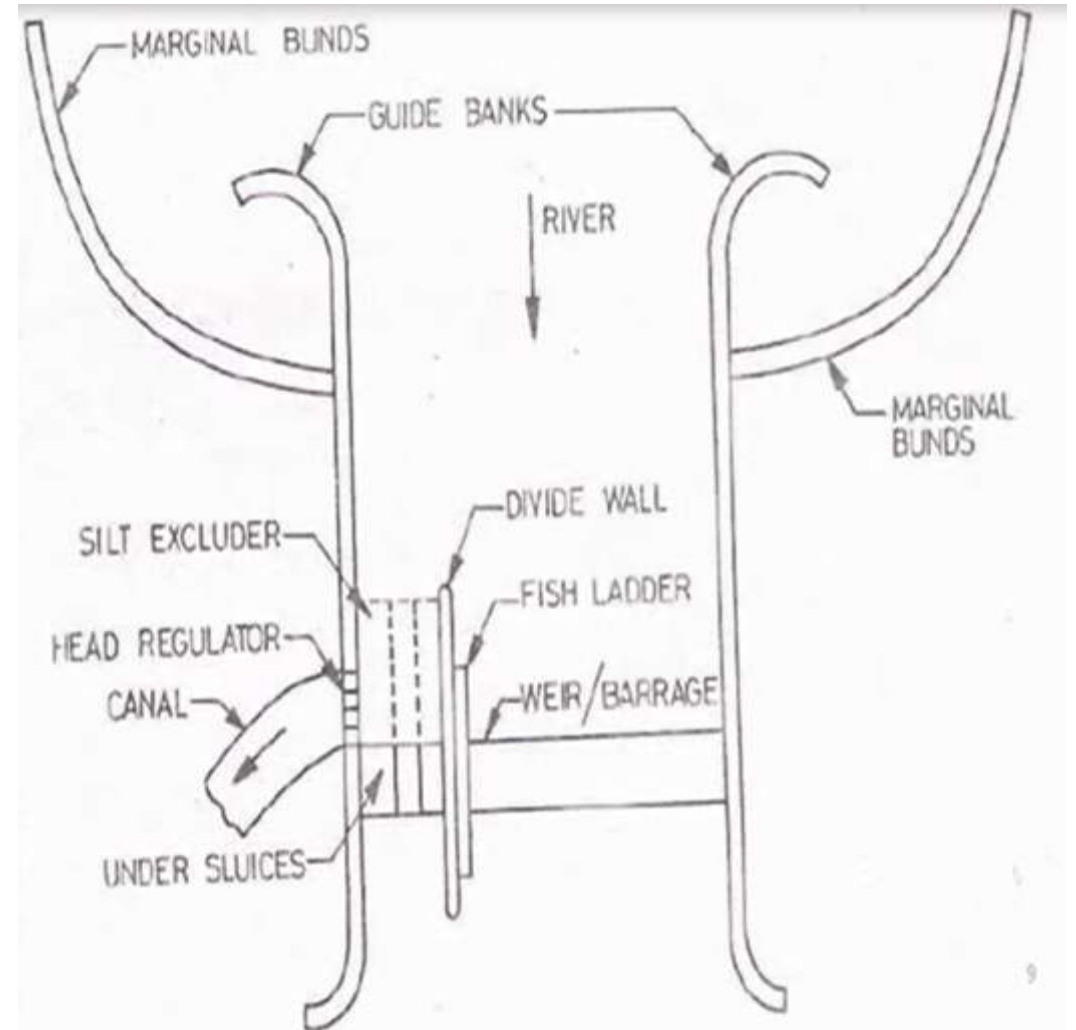


- It raises the water level on upstream side.
- Other uses of this is to regulates the supply of water into canals.
- It controls the entry of silt into canals.
- It provides some pondage creating small pond.
- It helps in controlling the vagaries of river.



Components of Diversion Head Works

- Weir (or barrage) proper
- Under sluice
- Divide wall
- Fish ladder
- Control head regulator
- Silt excluder, silt ejector
- River training works: guide banks, marginal bunds





THANK YOU