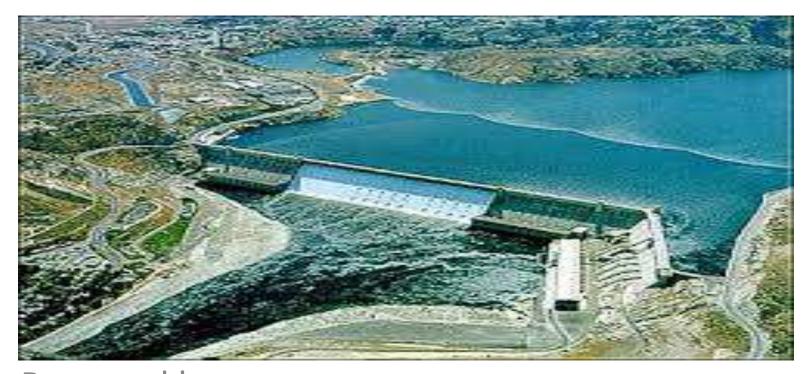
Water Resource Engineering



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Introduction

Definitions,

Water resources engineering is the quantitative study of the hydrologic cycle -- the distribution and circulation of water linking the earth's atmosphere, land and water bodies. ... Applications include the management of the urban water supply, the design of urban storm-sewer systems, and flood forecasting.

Functions And Advantages Of Irrigation

Definitions-Irrigation may be define as science of artificial application of water to the land with the crop requirement throughout the crop period.

Advantages Of Irrigation-

- ☐ To increase food production.
- ☐ It improves the yields of crops .
- ☐ It improves the groundwater storage as water lost due to seepage adds to groundwater storage.
- ☐ We use it to help the growth of crops during the period of inadequate rainfall.

DISADVANTAGES OF IRRIGATION

- Excessive seepage and leakage of water create marshes and ponds all along the channels. The marshes and the ponds in some time become breeding areas for mosquitoes.
- It lowers the temperature and makes the locality damp due to the presence of irrigation water.
- Excessive seepage into the ground raises the water, hence causing water logging of the area.

classification for irrigation

- 1. Surface irrigation flow, lift
- 2. Subsurface irrigation -

1 Surface irrigation

In surface irrigation, water moves over and across the land by simple gravity flow to wetland and infiltrate the soil.



2. Sprinkler irrigation

It is a popular method. Pipes carry some amount of water to the fields and then sprays it directly over the crops with high-pressure sprinklers.



3. Drip irrigation

With this type, the drip lines take water near the root zone of plants and release it drop by drop.



4. Center pivot irrigation

It involves a self-propelled system in which a single pipeline moves on wheeled towers in a circular pattern.



Indian crop seasons

The Kharif crops are rice, bajra, jowar, maize, cotton, tobacco, groundnut, e.tc.

Summer crops

Rabi crops are wheat, barley, gram, linseed, mustard, potatoes, etc

Winter crops

Zaid Crops pumpkin, cucumber, bitter groud.

Categories of Crops in India

- Food Crops (Wheat, Maize, Rice, Millets and Pulses etc.)
- Cash Crops-a crop which has to be encashed in the market for processing, etc. as it cannot be consumed directly by the cultivators.
 - (Sugarcane, Tobacco, Cotton, Jute and Oilseeds etc.)
- ➤ Plantation Crops (Coffee, Coconut, Tea, and Rubber etc.)

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Thank you