

Introduction to Infrastructure Planning

Program: Bachelor of Architecture Students
Level: Semester VIII, IX and X

The main course objective is to introduce basic concepts of essential structure to students at the city level. The focus will be more on water supply, storm water drain, sewerage & sanitation and solid waste management. Other services will be introduced.

The Assignment aimed at understanding Observing and exploring the different aspects of infrastructure planning of a city including management of services like storm water drainage system, water supply system, wastewater drainage system, solid waste management and other services.

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Urban Resilience and Adaptation for India and Mongolia: curricula, capacity, ICT and stakeholder collaboration to support green & blue infrastructure and nature-based solutions 610608-EPPI-1-0202-1-DE-EPPKA1-C-BHE-1P

SHIMLA

SOURCE	CAPACITY (IN MLD)
Dhali Catchment	1.80 MLD
Churat Nallah	4.8 MLD
Chair Nallah	2.5 MLD
Near Khad	15.75 MLD
Ashwari Khad	10.8 MLD
Giri Khad	20 MLD
Gumma	3.65 MLD

Shimla has more than century old lift water supply systems and one of its kinds in India. The water is lifted at an average head of 1470 meters from the various sources and transported by the high pressure water conveyer system to the reservoir situated at the outskirts of Shimla city.

- The Shimla water supply scheme started in 1875 with the capacity of 4.54 MLD, catering to a population of 16,000.

CHANDIGARH

Upto Year 1983 - Underground Water (Tube wells)

After 1983 to 1. Underground Water (200 nos. Tube wells) 20MGD. 2. Canal Water - 67MGD.

From Bhakra Main Canal Flowing at a distance of 27.4 Km from Chandigarh.

92 Km canal already completed

LEGENDS: Water Works

PATNA

The Ganga flows by Patna. The city is embanked on all sides by a four-feet high wall (with gaps in between to act as passageways) to prevent it from being inundated by floods in the river. Even with such a generous source of surface water, the PWB does not rely on the Ganga for supplying water to the city.

This can be attributed to the fact that Patna is located in a high-yielding groundwater zone, which has remained the primary source of water supply here.

According to the State Ground Water Board of Bihar, the area has quaternary alluvium soil, which is highly favourable for the development of water-rich aquifers. The average depth of the groundwater table in this region is 5.58 m in the pre-monsoon season and 3.12 m post-monsoon.

Bachelors of Architecture
NIRMA UNIVERSITY
Faculty: Dr. Shashi Kulkarni
Credits: 3 ECTS
Semester: VIII
Type of Course: Elective
Year: 2018

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Cloaca Maxima- Rome

At the beginning of the sewer's life it consisted of open-air channels lined up with bricks centered around a main pipe. At this stage it might have had no roof. However, wooden holes spread throughout the sewer indicate that wooden bridges may have been built over it, which possibly functioned as a roof.

Water Wheels- Ancient Egypt

The water wheels worked the shadoofs. A shadoof was simply a counterweight system, a long pole with a bucket on one end and a weight on the other. Buckets were dropped into the Nile, filled with water, and raised with water wheels.

Drains- Harappa

Effluent Disposal

Khadin/ Dhora

An ingenious construction designed to harvest surface runoff water for agriculture. Its main feature is a very long (100-300 m) earthen embankment built across the lower hills slopes lying below gravelly uplands.

Archimedes Screw

The Archimedes screw is one of the earliest hydraulic machines. A positive-displacement pump traps fluid from a source and then forces the fluid to move to a discharge location.

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Departments for Urban Development

Ministry of Housing and Urban Affairs, Government of India
Ministry of Urban Development, Government of India
Ministry of Housing and Urban Affairs, Government of India
Ministry of Human Resource Development, Government of India

Departments for Transportation

GOVERNMENT OF ASSAM
TRANSPORT
ASSAM STATE TRANSPORT CORPORATION

GOVERNMENT OF ASSAM
TRANSPORT
COMMISSIONERATE OF TRANSPORT

GOVERNMENT OF ASSAM
TRANSPORT
INLAND WATER TRANSPORT

NITI Aayog
National CPWD Academy
hudco
Urban Development Authorities

National Schemes

Atal Mission for Rejuvenation and Urban Transformation
Smart City
NICDC
pppinindia.gov.in
Public Private Partnerships in India
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