Delhi government will be taking the help of National Environmental Engineering Research Institute (NEERI) to tap floodwater and rainwater during monsoon, recharge aquifers and store water in reservoirs along the Yamuna to plug the demand and supply gap of potable water in the national capital.

Senior government functionaries confirmed that NEERI director Rakesh Kumar met the flood and irrigation department minister Satyendar Jain in his office in Delhi secretariat. They discussed the possibility of tapping millions of gallons of floodwater released in Yamuna from Hathnikund barrage every monsoon.

Sources said NEERI will assess how much water can be stored and submit a report to Delhi government in the next few weeks. The agency will also extend technical knowhow to execute the plan, officials said.

The water released from Hathnikund every monsoon, if stored, is adequate to meet the ever-increasing requirement of the city, government officials said. Against the current demand of about 1,130 million gallons per day (MGD), Delhi Jal Board manages to supply 913 MGD through various sources, including 80-90 MGD from ranney and tubewells, 375 MGD from the Yamuna, 240 MGD Ganga water and 218 MGD from Bhakra storage. There is a shortfall of over 200 MGD.

"Studies done by the Indian Institute of Technology Delhi, Central Ground Water Board and other agencies mention that the depth of sand in the Yamuna flood-plain is about 40 metres and has a buffer capacity to store substantial water," said a senior government official.

The official added, "The huge tract on the left of the 28km Yamuna stretch between Palla at Delhi-Haryana border and Wazirabad can be used to create banks and reservoirs and channelise additional water to percolate in aquifers. This will not only help increase the groundwater level, but improve the base-flow of the Yamuna."

The groundwater can then be extracted by installing more ranney wells. "There will be sufficient water available to easily meet the supply shortage of 200-300MGD. Channelising water for storage will not have any adverse impact on the ecological flow of the river," the official added.

Officials, however, said that a large part of the land along the Yamuna is owned by individuals and the government will have to work out a strategy to be able to use it during monsoon. The government will need 600-800 acres to set up the storage facility.

"An agreement will have to be made with the farmers for using their land during monsoon. They can be either paid rent or given a portion of the stored water for agricultural purposes," the official added.