

drydaze

Over the next four weeks, HT looks at Delhi's water supply, and helps to find ways manage the precious resource in a more sustainable manner.

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FIRST OF A SERIES



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Delhi needs watertight plan to save resource

IN SHORT SUPPLY As demand increases every year and natural water sources dry up, the national capital needs an action plan to meet the widening shortfall before it is too late



■ The Yamuna, Delhi's primary source of water, at its entry point in Wazirabad. Demand is increasing every year and all this water is not enough to quench Delhi's thirst. SONU MEHTA / HT PHOTO

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NEW DELHI: Lajpat Nagar resident Rajinder Singh was a happy man when the Aam Aadmi Party (AAP) government announced 20,000 litres of free water for each household every month.

But for Prakash Kumar, who lives in a crammed one-bedroom house in South Delhi's Sangam Vihar — Delhi's biggest urban slum sprawl — it sounded like a discount offer on rocket fuel.

Lajpat Nagar is one of the privileged localities that fall under the Delhi Jal Board (DJB) water network but piped water is yet to reach the homes of thousands of people like Kumar who live in colonies such as Sangam Vihar, Mahipalpur and Bawana in outer Delhi.

Though the state government has taken up projects to bring such areas in the DJB network, people who ration even mugs of water are apprehensive. "Free water sounds good but what about people with no water?," Kumar, a carpenter, said.

Free water was delivered even under the Congress regime as the DJB did not charge for consumption up to 6,000 litres per family per month. But many just didn't get any or enough water.

Nothing has changed today. Nearly 81% of the population is served by the water supply system. (see box) Delhi's water demand, according to the DJB, is 4,903 million litres daily (MLD) but the total supply is 3,995 MLD. Of this, according to the Centre for Science and Environment, 52% is lost to leakage.

This projected total demand in 2017 is expected to rise to 5,130 MLD. Delhi needs additional 80 million gallons water per day (MGD) from Haryana. The Renuka dam in Himachal promises to bring in another 275 MGD in the next decade. Recent reports say Haryana has been not releasing enough water into the Yamuna to maintain production in Delhi, causing officials to panic.

So why such scarcity of water in a city that has flourished for hundreds of years? For centuries, Delhi's primary source of water used to be its water bodies — wells and ponds. As the population increased, the demand rose, putting pressure on the earlier "ample" water supply. The city had to look for other sources — the Yamuna basin and groundwater.

Now the main source remains surface water from the Yamuna basin from where it gets 735 MGD. With only a slim chance of getting additional river water, groundwater is the only hope. But that too is under threat. Surface water accounts for 88% of the city's water supply.

The groundwater level has been going down. This means one would have to dig deeper to find water. An analysis of the last 10 years shows the overall groundwater level is going down by .02 to 1.44 metres per year because of increased extraction and reduced natural recharge.

Controversial dams may help meet Capital's future water demand

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NEW DELHI: Three dams — all controversial — may help to quench Delhi's increasing thirst in the coming years.

The Renuka, Kishau and Lakhwar-Vyasi dams, if built, are expected to give Delhi an additional 3,553 million litres of water daily.

With the city's population expected to touch two crore in the next five years, water demand will also go up drastically, especially with DDA's land pooling policy expected to add 25 lakh more houses to the available stock.

The three dams are embroiled in controversies, as environmentalists have called them dangerous and unnecessary.

"Delhi does not need more water neither should it get any more. The average consumption in the city is 220 LPCD. We

1 bucket of water is wasted for every bucket we get

are not harvesting rainwater, not recycling as much as we need to. The dams that are being planned pose a real threat to the people living in those areas and will destroy the rivers," said Himanshu Thakkar, coordinator, South Asia Network on Dams, Rivers and People. The sentiment is echoed by the current Delhi Jal Board (DJB) vice-chairperson, Kapil Mishra who has been part of the struggle for a clean Yamuna for over a decade. He doesn't believe in big dams, but says that if these are built, Delhi will fight to get its share of water.

Experts also say the policy of building big dams in the hills needs to be seriously looked at, especially after the Uttarakhand deluge of 2013, which many call a man-made disaster.

The three dams:

In Himachal's Sirmaur district, residents have formed a collective against

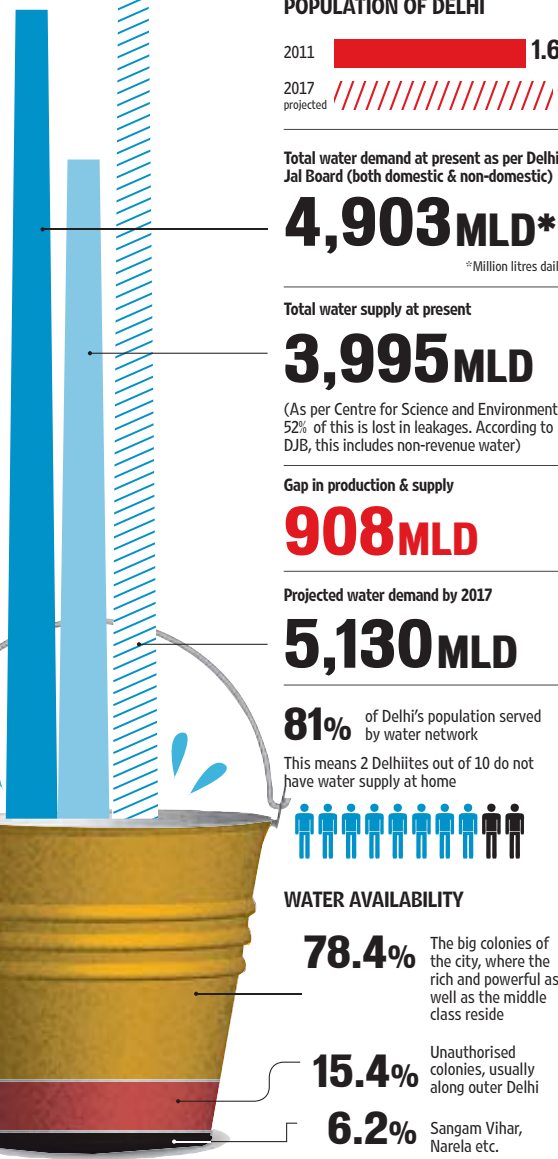
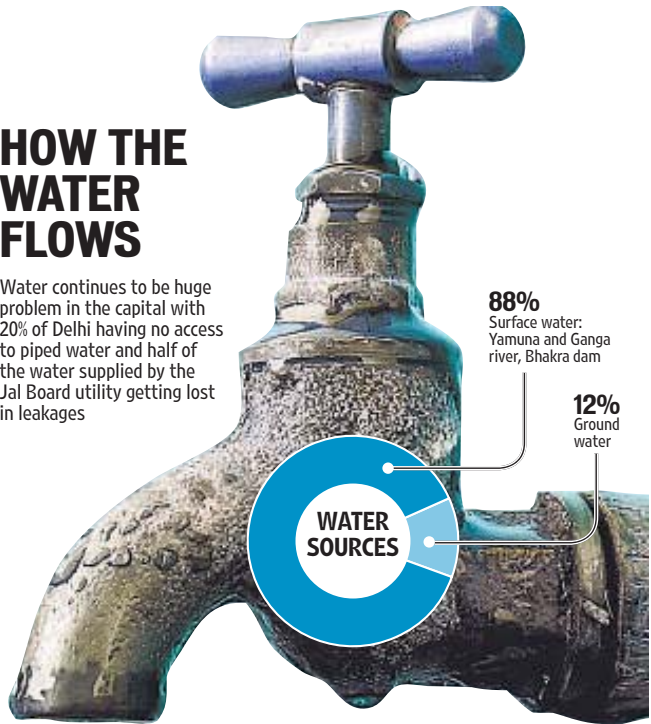
building the Renuka Dam which will be built on Giri — a tributary of the Yamuna. Forest clearance for the project has still not been obtained and the National Green Tribunal has stayed its construction as of now.

The Lakhwar-Vyasi Dam — the clearances for the project finally came through in February but environmentalists said the project would have disastrous consequences, which involves a possible flood in Delhi. The project entails the submergence of 1385.2 hectares of land and cutting hundreds of trees.

The proposed Kishau dam will be built on the river Tons, also a tributary of the Yamuna, on the Himachal Pradesh-Uttar Pradesh border. The project is expected to provide 660 mega watts of energy. Environmentalists, however, punch holes in this claim. They say the power that will be generated is not enough to justify the environmental cost of construction and displacement.

HOW THE WATER FLOWS

Water continues to be huge problem in the capital with 20% of Delhi having no access to piped water and half of the water supplied by the Jal Board utility getting lost in leakages



Residents help themselves in parched Mahipalpur

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NEW DELHI: Water shortage in southwest Delhi's Mahipalpur brought together residents to find a lasting solution to the problem. Eleven families in K-block repaired an old, abandoned government borewell to meet their water needs.

"There is no government water supply in this area. People rely on water tankers but the Delhi Jal Board tankers are a rare sight here. Private tankers charge a huge amount. We wanted to find a long-lasting solution to this problem. We got together and fixed the abandoned borewell," said Om Pal Singh.

Though most neighbourhoods in Mahipalpur face tremendous water shortage, K-block is the worst hit. The repaired borewell has 11 pipelines connected to a valve, each one for each family. In the evening, when the motor connected to the borewell is switched on, every family gets half-an-hour to fill their water cans. Off the stipulated time, the valves cut off water supply to the family and divert it to the next family's pipeline.

The name of each family is written on their respective pipelines. "There are times when the pressure of water is barely enough to fill a drum but when we look at the condition of the rest of the families in the area, our condition seems better," said Kartar Singh,



■ Residents line up for water at K Block in Mahipalpur. S.BURMAULA/HT

owner of a borewell pipeline.

When consumption increases during summers, everybody is forced to buy drinking water in bubble cans. On days, residents are forced to use drinking water to wash clothes and utensils.

Residents say the borewell project sanctioned by the Congress government had been stalled for almost eight years and that the new government is ignoring the proposal to revive work.

On the other side of the street, in Sonia Vihar village, there is continuous supply of water. Both localities have even fought over water.

"The government only needs to fix a 500-metre pipe to join our water connection with theirs to ensure equal distribution of water but residents are not allowing it," said Rakesh Babu, a resident.

facetoface

KAPIL MISHRA, DJB VICE-CHAIRPERSON

'Our aim is to get water to every part of Delhi'

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NEW DELHI: Summer is at its peak, so is Delhi's water crisis. While many households are out of the water supply network and totally dependent on borewells and private tankers, half of the water supplied is allegedly lost to leakages. In an interview to Hindustan Times, Delhi Jal Board vice-chairperson Kapil Mishra talks about how he plans to tackle the issue. Excerpts...

Supplying water to each household in the city was your prime promise. How difficult is it considering the increasing demand?

The problem in water supply are two-pronged. There are areas where there is network but no connection to houses. We need to connect these houses to our network. The second category is where there is a pipeline but no water source. We are managing with groundwater and tankers in these areas.

What are your priorities right now?
Our immediate aim is to get water to everyone, in whichever way,

during summer. We have been managing so far and have identified the problem areas. Out of 70, around eight constituencies have a major water issue. In the long run, we are looking to get water to every home through a pipeline. This should happen within two years.

It is said Delhi is living on borrowed water. Are you in agreement with this?
Not entirely. River water belongs to everyone and 22 km of the Yamuna flows through the heart of Delhi. But yes, I agree, this is all the water we have. Beyond this, if we decide to bring it from other places, from Renuka dam (in Himachal Pradesh), that is not going to work. However, if the dam is constructed, we will fight for our share but we don't believe in large dams. We will take our share from what is being constructed but that is not the solution. Big dams create big problems.

How, according to you, can Delhi meet the rising demand?
Delhi needs to learn to save the water it has. We will have to recycle and reuse. If we are able to do that, we can meet our requirements. The

water Delhi has is not less; we just need to manage it in a more efficient manner.

There are massive leakage losses. What is the utility's plan to tackle this problem?

I don't think the problem is as severe as people have shown it to be. It has reduced a lot now. Earlier, a lot of water was wasted in filling tankers. We have created an emergency team that acts as soon as a leakage complaint is received. We try to stop the leakage within 24-48 hours of the complaint being received. Old pipelines are certainly a problem but a lot of water is not being wasted because of leakages.

