

Pure water a PIPEDREAM



The recent ammonia scare that forced DJB to suspend water supply to some areas has led to concern about the quality of potable water in the city. Families are increasingly being forced to rely on costly filters and bottled water to keep sickness at bay

Common contaminants

Ammonia
Salts
Nitrates
Nitrites
Potassium
Chlorides
Chlorine
Sulphate
Bacteria
Coliform
Iron
Metals
Traces of mud & sand

Area-wise distribution

FLUORIDE
southwest, west, northwest

NITRATE
west, southwest, some pockets of northwest

BACTERIA
southwest, central, east

METALS
various quantities from all districts

Experts have also found that the quantity of freshwater has decreased. Three big pockets of brackish (salty) water have been discovered:

YEAR	1977	1983	2000
Freshwater	1,090	1,050	815
Brackish	395	435	670

*In sq/km Source: CPCB and CGWA

Neha Lalchandani | TNN

There was a time when we could drink water straight from the tap, but not anymore. Most Delhi households are now either dependent on water purifiers or are forced to buy bottled water, as they have little faith in the water supplied by the Delhi Jal Board (DJB). Concern for quality apart, people are never sure when the water will come.

Earlier this month, DJB was forced to shut down two of its treatment plants due to high levels of ammonia in the Yamuna water reaching Delhi from Haryana, raising fears of an acute water shortage even in winter.

Though DJB spends crores on cleaning water, it accepts that the water quality deteriorates significantly by the time it reaches the end-user. According to studies done by DJB, the water is very pure when it leaves the water treatment plants.

But after flowing through old and corroded pipelines, which often run parallel to sewer pipes, the water gets contaminated on the way. DJB recently appointed a consultant to check its pipes for leaks and chalk out a plan for improving the condition

of its network. It was found that of the nearly 800-km-long network, about 6% of the pipes were more than 40 years old, while 30% were between 10 and 20 years old. At many places, the supply pipes were running parallel to sewage lines, and in case of leaks, the water was mixing with sewage.

Average water supply	Mumbai	5 hrs
	Kolkata	10 hrs
	Delhi	3.5 hrs
	Chennai	4 hrs

Source: World Bank report

DJB's CEO Arun Mathur said: "Our treatment plants are overworked. While water that is treated at our plants is safe for consumption when it leaves the WTP — for we are conforming to all international standards like those set by WHO — by the time it reaches the consumer, its quality deteriorates a bit."

"The easiest way to tell that the water is unfit for consumption is when it starts smelling. There have also been reports of consumers spotting dirt in their water. Such water will have a high content of coliform and e-coli bacteria that are responsible for stomach ailments," said an official of the Central Pollution Control Board (CPCB).

Mathur agreed that the pipes were really old and needed to be replaced. "Many of the pipes are rusty and corroded. We have appointed a consultant to check for leaks in our system, but even if we work to our full capacity, there is only a small percentage of pipes that we can change annually." In about 75% of the cases inspected by them for contamination last year, it was the old and leaking pipe network of the consumer that was to blame.

"Section 15 (4) of the Water Board Act states that if the internal pipe system is more than 15 years old, the consumer is supposed to get it checked and replaced in

case of problems. But not many consumers are aware of the problem or are willing to take remedial steps," said Mathur.

He confirmed that the problem of contamination primarily existed in areas like Old Delhi where the sewage and supply pipes lay parallel to each other. "Supplying water to unplanned areas is a huge problem. Most of today's Delhi is unplanned with about 1,500 unauthorised colonies and hundreds of slum clusters. When the supply network was laid, it was apparently done in a highly unplanned and unscientific way. To lay more pipes or even work on the present infrastructure is a huge task," said a senior DJB official.

It was noted that the problem of contamination was also acute in areas that got intermittent supply. "In plants where water is treated for short periods, there is a reverse phenomenon by which pipes suck in mud and other impurities when the plant is shut. Once supply resumes, these impurities find their way into homes," he said.

A continuous supply is essential to prevent contamination, said a CPCB official, as there's little chance of contaminants seeping into the water when it's flowing at a great force. But Delhi only gets 3.5 hours of water supply on an average per day, says a study conducted by the World Bank in 2006. This when, other Class I cities (with a population of 100,000 or more) gets an average of 4.2 hours supply. In 1997, water was available for an average of 7 hours per day, states the report, titled India-Water "Supply and Sanitation: Bridging the Gap Between Infrastructure and Service".

The supply is only expected to get worse with the drinking and domestic water requirements shooting up in the next 10 years. According to a report by the Central Groundwater Authority, DJB was supplying 630 million gallons per day (MGD) of water, as against a requirement of 810 MGD. By 2021, the population's expected to touch 270 lakh, and water demand 1,355 MGD.

The problem of contamination increases manifold during monsoon when the sewers start overflowing. Said a senior DJB official: "Mixing of water with sewage is not an uncommon phenomenon after it rains — even backflows may occur. This is an annual feature and we try to tackle the problem to the best of our ability."

But DJB officials admit that a lack of trained manpower is affecting its operations. Like for instance, water in tanks needs to be chlorinated at regular intervals, but one has to be careful to put in the right amount as excessive chlorine can be harmful. A member of a south Delhi RWA alleges that the man adding chlorine to their main water tank is a guard, and the water stinks of the chemical. "For 8-9 months, no chlorine was being added to our supply. It was only after the intervention of a local politician that the DJB send someone," said a resident of Safdarjung Enclave, Pankaj Agarwal.

Consumers can't do much if the water supply is poor. As MS Vani of Development Centre for Alternative Policies points out, the government is doing a service by providing water and hence there is no legal mandate for it to provide drinking water. "Consumers can still approach the court under the Consumer Protection Act since drinking water directly affects a person's right to life," she said.

Nitin Saxena, president of a consumer protection trust, says the Consumer Protection Act recognises the rights to safety and says one can protest against non-availability of services, and one can also file a PIL in the court. "Civic bodies are entrusted with public funds to maintain amenities and they are duty-bound to make sure they are available to consumers. In that case, they can be hauled up for violation of consumer rights. However, one may also argue that the taxes being paid for consumer services are to run the administration as a whole and hence the court may not have a jurisdiction over municipal services. Each case then is built upon specific complaints and action taken, if any, accordingly," he said.