

Monsoon Woes: Repair work, desilting of drains, construction of micro-tunnels help civic body tackle waterlogging this year

While the Brihanmumbai Municipal Corporation's (BMC) accomplishment in mitigating the waterlogging issues in Hindmata and Gandhi Market-- two chronic waterlogging junctions in south-central Mumbai-- has been known to all, there has been a slew of localised work related to the city's storm water drain (SWD) network, which was able to minimize waterlogging to a great extent this year.

Written by [Pratip Acharya](#)

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According to the BMC's data, a total of 336 chronic flooding spots were identified last year, out of which 125 were in the island city, 114 in western suburbs and 97 in eastern suburbs. (Express Photo by Amit Chakravarty)

Even though Mumbai has been recording heavy rains this season and July this year has been the wettest ever with 2,308 mm rain till July 30, there have been no major instances of prolonged waterlogging in the city so far. The maximum city, infamous for its flooding woes, not only sees partial paralysis of traffic and suburban train movement, but life itself coming to a standstill.

On July 22, the city recorded the highest ever single day rain of this season at 203.7 mm and between July 22 and 28, nearly 759 mm of rain was recorded, with three digit rain figures being recorded four times in one week. Yet, no major traffic disruptions were reported during this period.

A look into the reasons behind this transformation shows the civic body's attempt towards mitigating 336 chronic waterlogging spots that were identified last year and construction of micro-tunnels that channel out accumulated rain water to the sea.

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In order to abate flooding woes this year, a lump sum of Rs 618 crore was earmarked by the BMC in October 2022. (Express Photo by Amit Chakravarty)

Identifying Missing Links:

According to the BMC's data, a total of 336 chronic flooding spots were identified last year, out of which 125 were in the island city, 114 in western suburbs and 97 in eastern suburbs. Out of these 336 locations, the civic body has been able to complete repair and reengineering work in 238 locations — 107 in the city, 80 in eastern suburbs and 51 in western suburbs.

A flooding-spot is identified as a dry patch of land that is likely to get inundated after a brief spell of rain varying between 25 mm and 50 mm, and is likely to stay under water for longer hours, by disrupting traffic and vehicular movement.

The repair and engineering work includes widening the box drains, installing mini-pumping stations and creating sump-pits powered with dewatering pumps.

The civic body identifies flooding spots every year post monsoon. Earlier, between 2021 and 2022, 270 spots were identified, out of which nearly 180 spots were addressed. However, this year more number of waterlogging spots were identified by BMC officials, as the emphasis was on identifying 'missing links'.

In order to abate flooding woes this year, a lump sum of Rs 618 crore was earmarked by the BMC in October 2022. Out of the total amount, Rs 406 crore was allotted for western suburbs, Rs 127 crore for eastern suburbs and Rs 68 crore was earmarked for the island city.

The said works included identifying and reengineering the major missing link projects that would prevent localised waterlogging at the ward level.

"All these works were ideated and conceived back in 2020 and since then we have been identifying waterlogging spots and addressing their issues every year. However, these kinds of projects don't produce results immediately as it takes time to implement them on ground and results have started to show from 2022 onwards," said P Velrasu, additional municipal commissioner (projects), who is heading the BMC's monsoon preparedness operations.

"We are identifying missing links which are drainage and infrastructure-related issues that are contributing to waterlogging every year. These are trivial issues that are not included in big projects, yet they contribute to largescale waterlogging at the ward level. Therefore, by identifying them, we are able to counter the problems through engineering-based solutions which include creating new box drains, sump-pits, and mini-pumping stations," Velrasu added.

Some of the missing link works that were taken up this year included construction of micro-tunnels.

A micro-tunnel is a bore-hole through which pipelines are installed for channelling out accumulated rain water to the sea. Since these tunnels are created underneath the surface, they don't have the risk of choking due to floating waste.

BMC has also carried out upgradation and re-widening of the century-old conventional drains in the city and suburbs at as many as 36 chronic flooding spots including Sion, Kurla, Chembur, Kanjurmarg and Mulund which has resulted in smooth flow of water through these drains. (Express Photo by Amit Chakravarty)

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Civic officials maintained that several conventional drains in the western suburbs are being replaced with new-box drains which are wider in diameter and also carry out smooth flow of water.

The Yellow Gate junction in south Mumbai, where the Eastern Freeway meets at P D Mello Road is one of the busiest junctions of this city and is being preferred by motorists. However, this spot is infamous for flooding as the entire junction would get waterlogged even after a brief spell of rain, which further leads to traffic snarls between the island city and eastern suburbs.

Earlier during the monsoon in 2021, the traffic movement in entire eastern suburbs was affected multiple times as this junction got inundated and traffic movement in the freeway came to a standstill.

To abate this issue, the civic body has created box culverts around the junction along with a sump-pit which has resulted in abating the flooding woes.

The accumulated water from this spot used to get channelised into the railway tracks between CSMT and Masjid Bunder during the rains which would further create hindrance in train movement. This issue was tackled by creating micro tunnels that would collect and channelize the accumulated rain water without them letting go in the surface.

Likewise, the BMC has introduced additional dewatering pumps in Peela Bungalow (Bangla) locality in Dharavi which was also another chronic flooding spot. This spot is close to the Mithi River, which passes from the northern end of Dharavi. During the rains, the river swells up and water would overflow on the road, since there was no way for the water to channel out.

Civic officials said that besides adding pumps over here, new box drains were also installed for smooth water flow.

Areas like Dharavi have a majority of population living in slums due to which there are issues of drainage choking almost every other day. Therefore, the box drains have turned out to be an absolute solution for this issue as they are entirely covered and don't allow any solid waste to enter inside.

Velrasu said that even though rain water is accumulating in the city and suburbs, traffic movement was not affected even for a single day. "The only time when there was some stoppage in traffic movement this year was on July 21 when around 90 mm of rain took place during the high tide. But as soon as the low tide came, water receded really fast and within an hour everything was back to normal," he said. "Mumbai is a low-lying city that receives record rain throughout the year. Accumulation of water will be there, considering the heavy rain we receive but the real test is to see how quickly the water recedes. This year, the water did not accumulate at all and there had been no disruption in traffic movement even for a day. This clearly shows that the implementations are showing results," he added.

Experts speak:

Vivek Pai, an urban planner and architect, said that besides all the said works that BMC is doing, this year the desilting of drains have been carried out meticulously by the civic body, which is allowing the water not to stand for long hours. Desilting is the method of removing silts from the drains and river bodies, and post July 26 deluge, the civic body carries out desilting activity between March and November. "Mumbai has received good rains within some short span of time. Generally, with this kind of rainfall, the city would come to a standstill, but the desilting works have brought effective results this year. Also, another reason why I believe there has been no water logging is that the ground water might have depleted to a dangerously low level and they are getting recharged at this point," he said.

Milind Mhaske, CEO of PRAJA Foundation said, "The efforts of BMC have been there all throughout this year, but now we are seeing the results. This probably has happened due to better coordination over the past one year. But the civic body shouldn't rest on this and must try to improve itself as the issue of potholes continues to persist."

Link : <https://indianexpress.com/article/cities/mumbai/repair-work-desilting-drains-construction-micro-tunnels-civic-body-tackle-waterlogging-8868132/>