

**BEFORE THE HONOURABLE NATIONAL GREEN TRIBUNAL,
PRINCIPAL BENCH AT NEW DELHI**

Original Application No 606/2018

In the matter of:

Compliance of Municipal Solid Waste Management Rules, 2016
(National Capital Territory of Delhi)

NDOH:- 16.02.2023

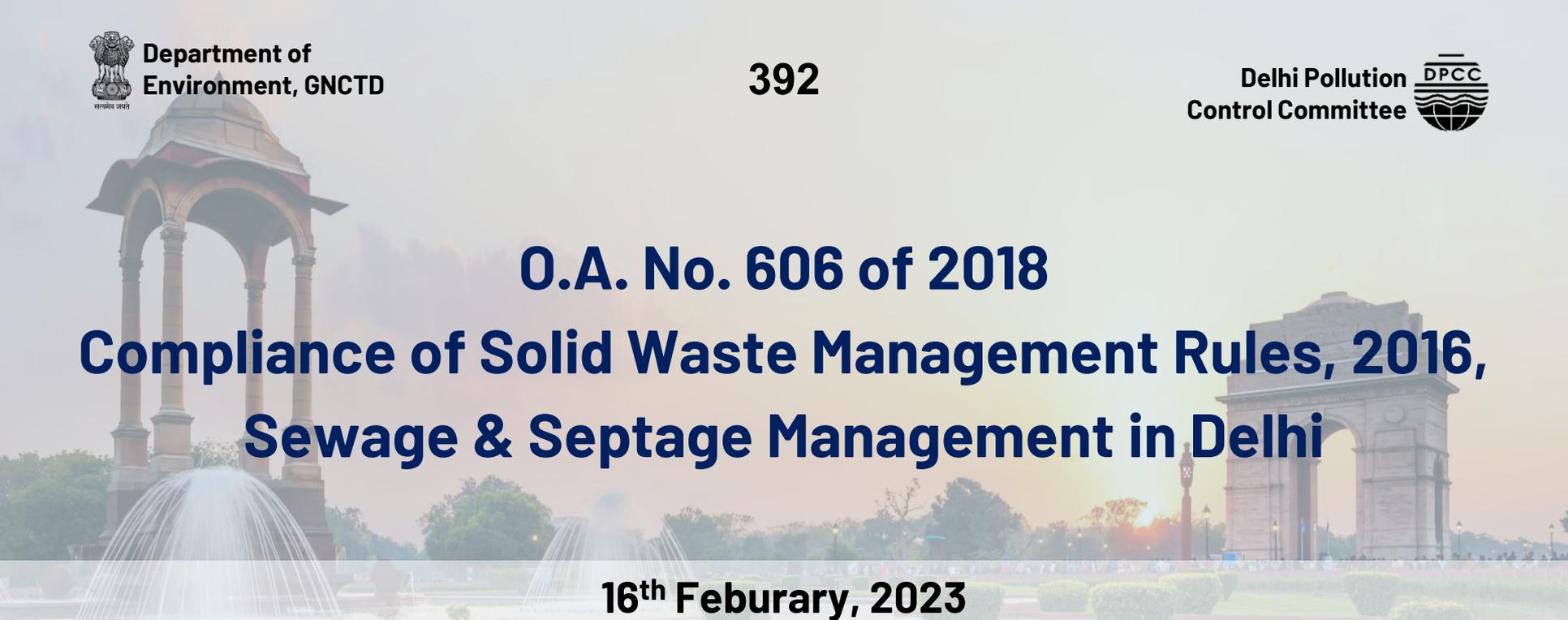
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1	A power point presentation interalia mentioning the status of collection , disposal, future action to enhance the capacity of disposal of solid and liquid waste in Delhi	

Filed by

Govt. of NCT of Delhi

New Delhi
Dated: 15.02.2023



O.A. No. 606 of 2018
Compliance of Solid Waste Management Rules, 2016,
Sewage & Septage Management in Delhi

16th February, 2023

Presentation before Hon'ble National Green Tribunal
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Municipal Solid Waste Management

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National Capital Territory of Delhi



नई दिल्ली नगरपालिका परिषद्



Population: 2.1 Crore

ULBs: 03
395

Districts: 11



Compliance Matrix of SWM Rules, 2016



Activities	Deadline	Status of Compliance		
		MCD	DCB	NDMC
Identification of Sites for MSW Processing Facilities	April 2017	6 WTEs at Okhla , Tehkhand, Narela - Bawana (2) and Ghazipur (2)[4 operational + 2 sites identified]	Tigris Road & Kirby Place	
Identification of Sites for Landfills	April 2017	1 operational SLFs at Bawana and 1 identified at Tehkhand		
Procurement of Sites for MSW Processing Facilities	April 2018	6 WTEs at Okhla , Tehkhand, Narela - Bawana (2) and Ghazipur (2)[4 operational + 2 sites possessed]	Tigris Road & Kirby Place	
Procurement of Sites for Landfills	April 2018	1 operational SLFs at Bawana and 1 identified at Tehkhand	-	-
Enforcing Waste Generators to practice segregation of waste at source	April 2018	100% by June, 2023	95 % to 100% in Civilian Area	Complied
Door to Door Collection of segregated waste	April 2018	Depends on the Timelines for Compliance of Segregation at Source		Complied
Setting up of MSW Processing Facilities	April 2018	4 WTEs at Okhla (1950 TPD) ,Tehkhand (2000TPD) Bawana (2000TPD) and Ghazipur (1300 TPD)	-	-
Setting up of Landfill	April 2019	1 operational SLFs at Bawana and 1 identified at Tehkhand (40 %)	-	-
Bioremediation of Legacy Waste at Dumpsites	April 2021	Okhla , Bhalaswa and Ghazipur (May- 2024)	-	-
Prevention of Fire Incidents at Dumpsites		Okhla Bhalaswa Ghazipur (Fire prevention measures being taken)	-	-

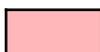
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Complied



Partially Complied



Not Complied



Processing / Disposal through WtE at Okhla

Main Components of SWM



1. **Collection &
Segregation**



4. **Bio-remediation of Legacy Waste**



2. **Pre Processing**



5. **Inert Generation and Disposal**



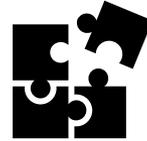
3. **Processing**



6. **Fire Incidents at Dumpsites**

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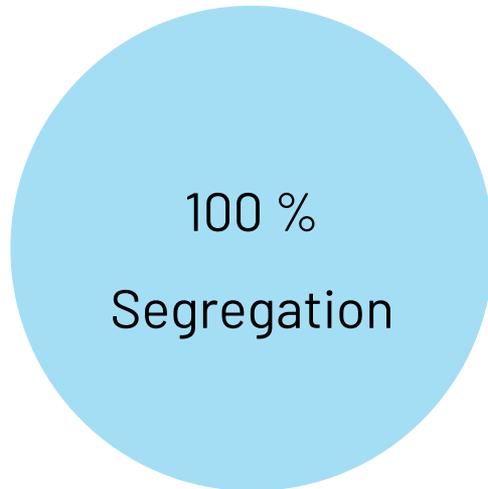
Collection & Segregation

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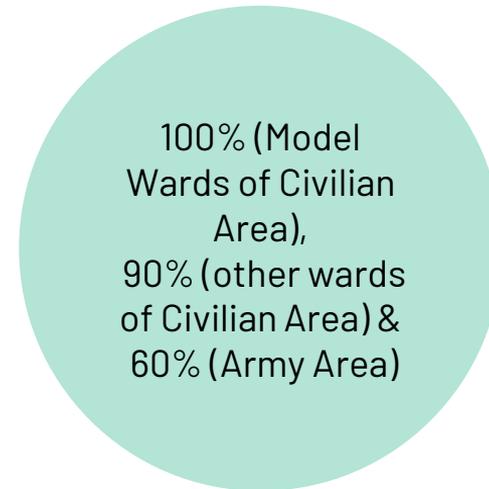
1.1. Collection & Segregation at Source – Status and Timelines



100 % Collection



NDMC: 14 Circles



DCB: 8 Wards

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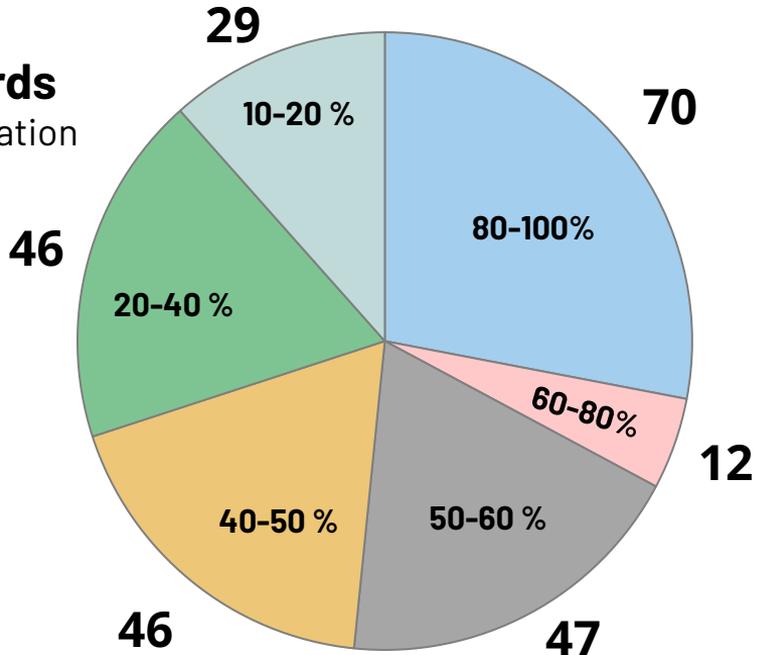
NGT deadline: Sept 2019 for model wards and March 2020 for all wards

1.2. Segregation at Source - Status and Timelines



100 % Collection

MCD : 250 Wards
Ward wise Segregation
Percentage



Timeline - Jun, 2023

400
NGT deadline: Sept 2019 for model wards and March 2020 for all wards



Pre Processing of MSWs



2.1. Pre-processing / Solid Waste Storage Facilities

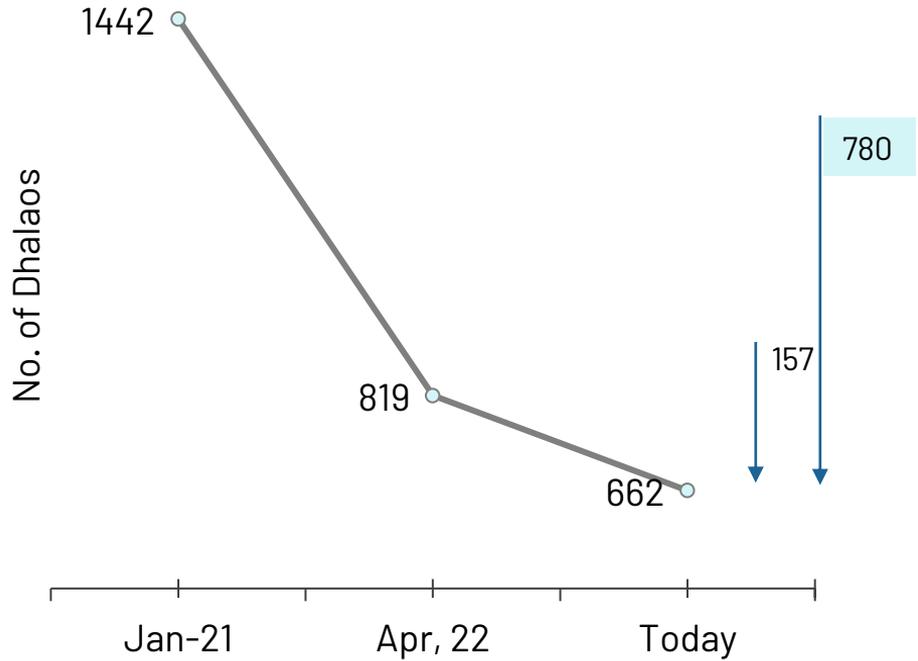
SWM Rule 15 (h)

Local Bodies shall :

- *setup material recovery facilities or secondary storage facilities with sufficient space*
- *for sorting of recyclable materials to enable informal or authorised waste pickers and waste collectors*
- *to separate recyclables from the waste and*
- *provide easy access to waste pickers and recyclers for collection of segregated recyclable waste such as paper, plastic, metal, glass, textile from material recovery facilities*

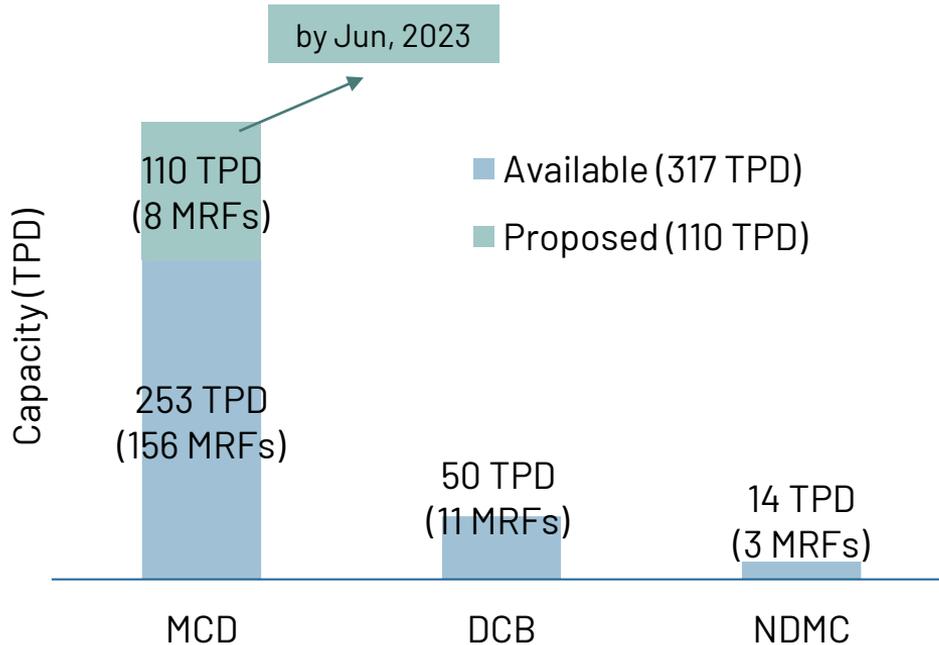
2.3. Pre-processing / Solid Waste Storage Facilities

- 780 : Dhalaos Closed since Jan 21
 - 450 : Put for alternative use
 - 330 : Proposed alternative (By Mar, 2023)
- As per SWM Rules door to door collection of waste is to be done and therefore dhalaos are not required.



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2.4. ULB wise Material Recovery Facilities (MRFs)



Proposed MRFs : MCD

- 110 TPD - 08 MRF at Keshavpuram (01), Civil lines (01), South zone (01), Central zone (02), West Zone (01), Najafagarh Zone (02)]
- Under Process for Approval



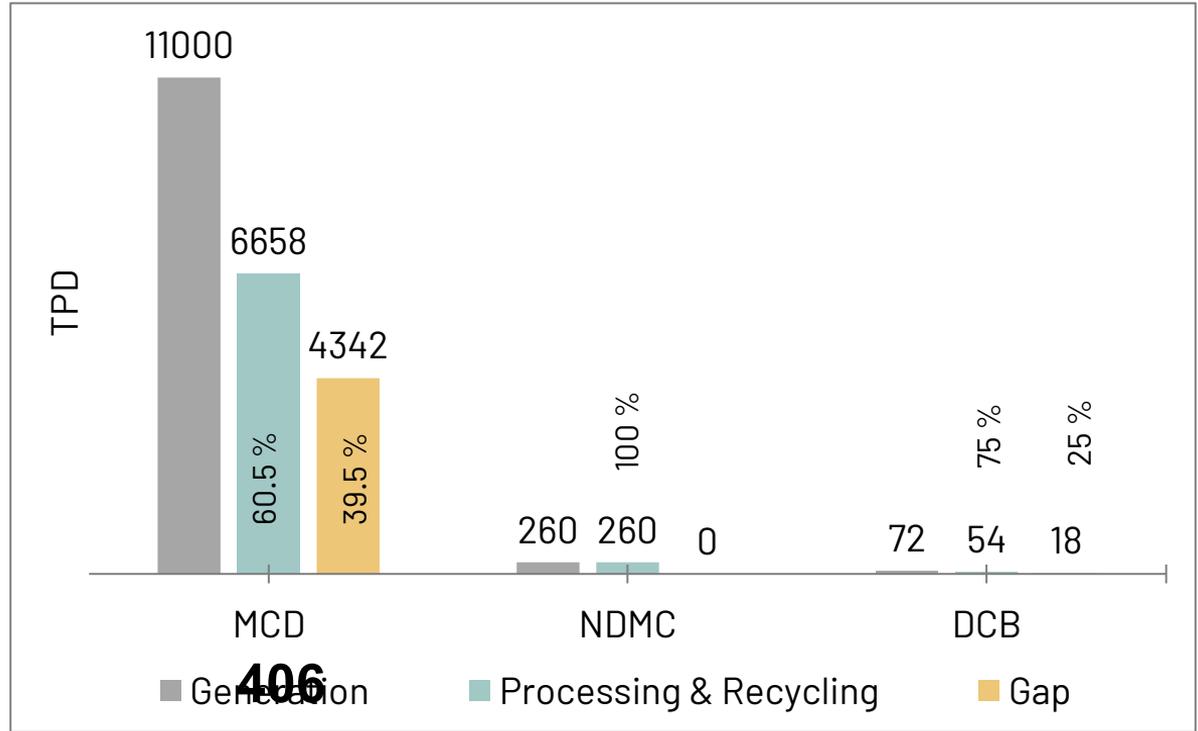
Processing of MSW

3.2. ULBs wise MSW Generation, Processing & Disposal

Total MSW Generation - 11332 TPD

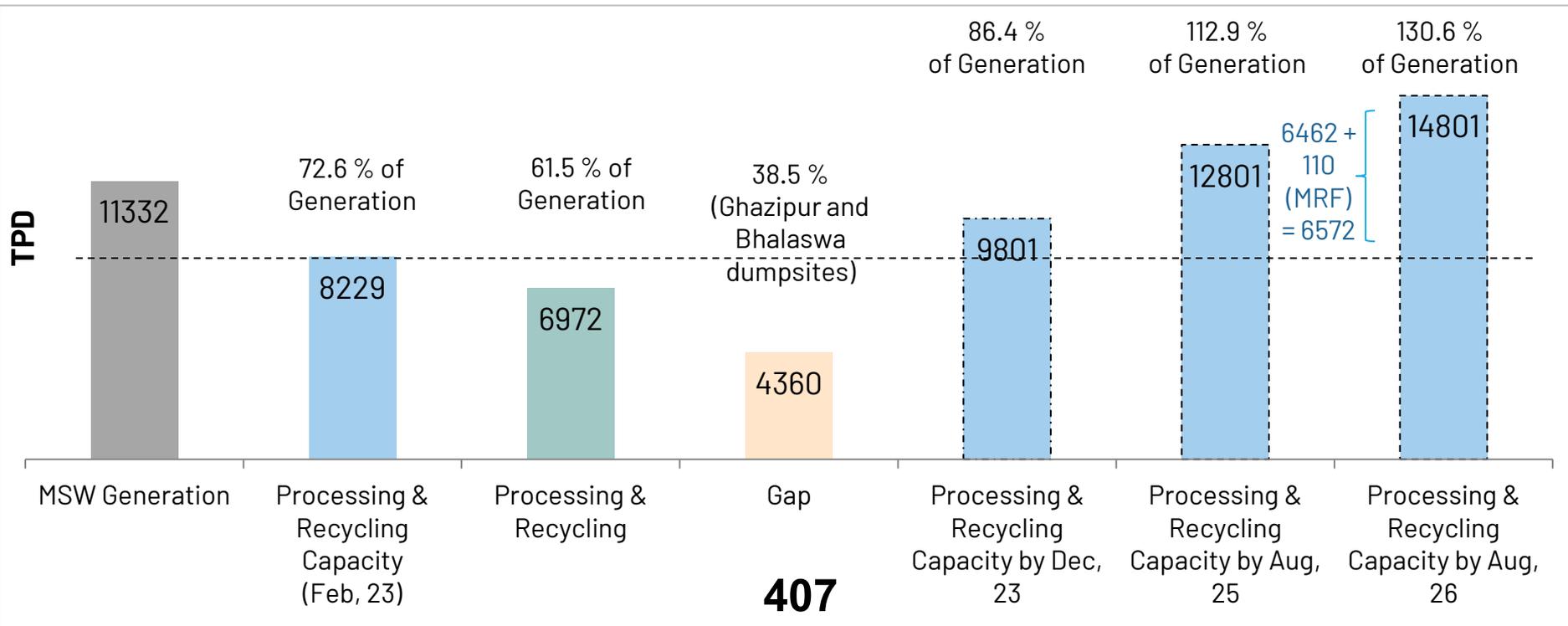
Percentage of MSW Processing:

- NDMC: 100 %
- DCB: 75 %
- MCD: 60.5 %



3.3. Gaps in MSW Generation and Processing

MSW Generation/Processing status & Plans



3.3.1 Proposed Processing Facilities

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MCD [Gap in processing: 4342 TPD (39.4%) against Generation of 11000 TPD]

S. No.	MSW Facility & Location	Capacity (in TPD)	Timeline	Progress
1	Two Compost Plants at Vishwas Nagar & New Ashok Nagar of 1 TPD each	2	Mar, 23	Work is under progress.
2	One Bio-CNG Plant at Okhla	300 TPD (In place of existing Closed Compost plant of 200 TPD)	Sep, 23	<ul style="list-style-type: none"> • Augmentation of capacity of Centralised Compost Plant of 200 TPD by 100 TPD and conversion into Bio-CNG Plant. • Work is under process. Demolition of existing structure is being done. • Progress: 10 %
3	Expansion of existing WtE at Okhla	1000 (From 1950 TPD to 2950 TPD)	Dec, 23	<ul style="list-style-type: none"> • Public Hearing held on 16.08.2022 & Proceedings of Public Hearing sent to MoEF&CC on 24.08.2022. • Environmental Clearance granted by MoEF&CC on 09.01.2023.

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3.3.1 Proposed Processing Facilities

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1. MCD [Gap in processing: 4342 TPD (39.4%) against Generation of 11000 TPD]

S. No.	MSW Facility & Location	Capacity (in TPD)	Timeline	Progress
4	Compressed Bio-Gas Plant at Ghogha Dairy	100	Dec, 23	<ul style="list-style-type: none"> MoU signed with IGL on 04.01.22 for setting up of the CBG plant at Ghogha Dairy 3 Acre land has been identified and will be handed over to IGL very soon
5	New Waste to Energy Plant at Narela - Bawana	3000	Aug, 2025	<ul style="list-style-type: none"> Regional Centre for Urban & Environmental Studies (RCUES), Lucknow engaged for providing Transaction Advisory Services for setting up of WTE of 25 MW capacity at Narela -Bawana. Bids received, under award stage
6	New Waste to Energy Plant Ghazipur	2000	Aug, 2026 (Tentative)	<ul style="list-style-type: none"> Techno Economic Feasibility Report is under preparation
	Total	6402 TPD		

- One Engineered SLF proposed to be developed at Tehkhand by MCD
 - Timelines: April, 2023 .
 - Progress : 40 %

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3.3.1 Proposed Processing Facilities

2. NDMC (Gap: 0 %)

3. DCB [Gap in processing: 18 TPD (25%) against Generation of 72 TPD]

Type of MSW Facility	Nos	Location	Capacity (in TPD)	Timeline
Sorting cum composter	03	Kirby Place, Delhi Cantt.	60 TPD (1- 30 TPD) (1- 20 TPD) (1- 10 TPD)	July, 2023



Bio-remediation of Legacy Waste



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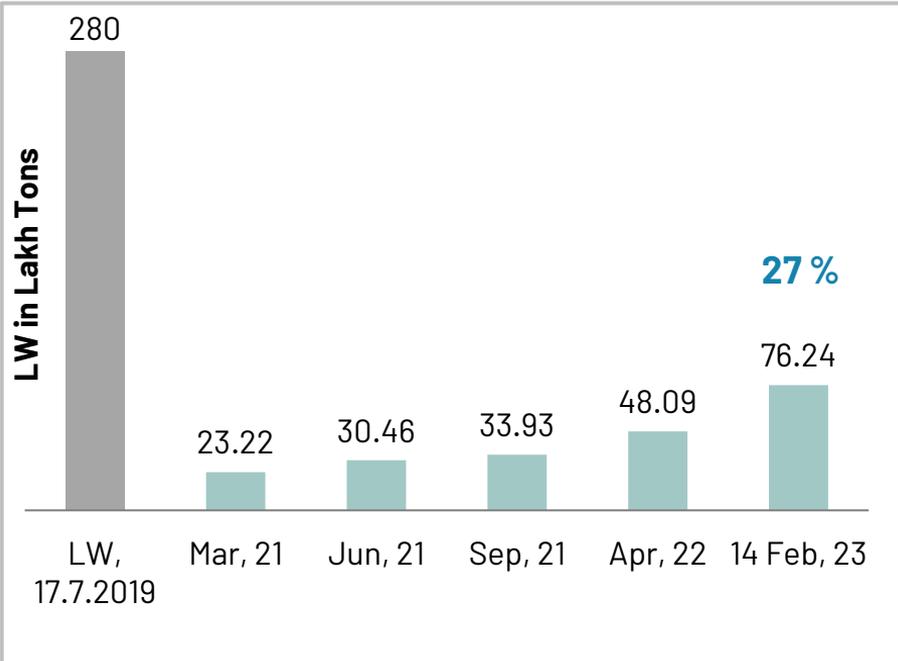
Bio-remediation of Legacy Waste

S.No	Name of the Dumpsite	Quantity of Legacy Waste Dumped (As in July, 2019)	Total Quantity of Legacy Waste Processed (As on 14 th Feb, 23)	No. of Trommels Operational	Timeline for 100% remediation
1	Okhla	60 Lakh Ton	25.09 Lakh Ton (42%)	9	May, 2024
2	Bhalaswa	80 Lakh Ton	28.95 Lakh Ton (36 %)	10	May, 2024
3	Ghazipur	140 Lakh Ton	22.2 Lakh Ton (16 %)	22	May, 2024
Total		280 Lakh Ton	76.24 Lakh Ton (27 %)	41	



4.1. Bio-Mining of Legacy Waste (LW)

Bio-mining achieved as on 14 Feb, 23 = 27 % (76.24 Lakh Ton)



Timeline for 100 % bio-mining: July, 2020 (NGT order).

Dumpsite	LW Bio-mined till 14 th Feb, 23 (in %)	Timeline for 100% Bio-mining
Okhla	42	May, 2024
Bhalswa	36	May, 2024
Ghazipur	16	May, 2024
Total	27 % (76.24 Lakh Ton)	

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Inert Generation and Disposal



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Inert Generation & Disposal

100 % disposal of inert generated through biomining.

MCD signed agreement with NHAI (11.07.2022) for utilization & disposal of inert generated from Bio-mining of Legacy Waste from three Dumpsites.

Bio-mined Inert being used by NHAI in its various projects (UER – II etc.). So far about 10 lakh MT of inert has been sent to UER-II, DND Faridabad, adjacent land of Eco-park at Badarpur.

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6

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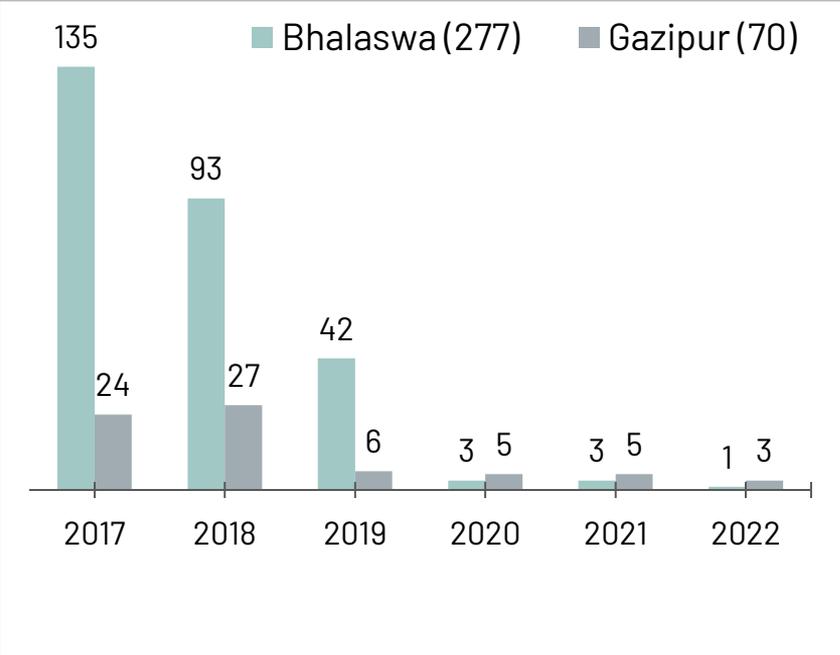


Fire Incidents at Dumpsites

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6.1. Fire Incidents at Bhalaswa & Ghazipur Dumpsites

Reasons for Fire Incidents at Dumpsites



- Dumping of Unsegregated / Mixed MSW & Presence of combustibile material
- Landfilling of MSW in Unscientific manner at the Dumpsites.
- Generation of Methane Gas
- Hot Weather, Dry Atmospheric Conditions and High Wind Speed cause fire incidents and its spread over large area.
- Absence of Vent Pipes & Gas Collection Systems for safe release of Methane
- Sparks from Machinery, Equipment or Vehicles deployed at the Dump site.
- Unauthorised entry of Persons & Ragpickers at the Dumpsite.

Fire Incidents at Bhalaswa & Ghazipur Dumpsites

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6.2. Fire Incidents at Dumpsites⁴¹⁸

Measures for Prevention and Control of Fire at Dumpsites

- Ensure proper segregation of waste at source
- Prohibition of entry of Unauthorised Persons & Ragpickers at the Dumpsite.
- Strict vigil with CCTV / Inspection mechanism for checking the unauthorised entry
- Early detection of Fire Incident and other activities at the Dumpsites.
- Declaring and maintaining the entire Dumpsite area as “No Smoking Zone”.
- Compaction of Waste with Compactors to remove air pockets followed by daily Soil Cover/Inert Debris
- Providing Gas Collection Systems/Vents at the Dumpsites for release into atmosphere/flaring of Methane Gas.
- Monitoring of subsurface temperature (generally > 170°F / 76.7°C) and Carbon monoxide levels
- Fire Affected Portion of the Dumpsite should be excavated using Excavators
- Fire should be doused with soil cover / Inert Debris .
- Stepping should be done for better management and prevention of Fire at the Dumpsite.



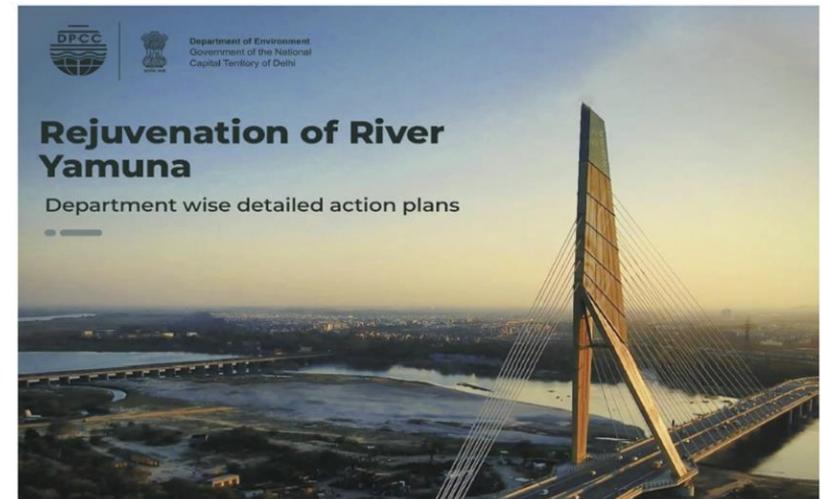
Sewage & Septage Management in Delhi

Status, Action Plans with Timelines



Action Taken

- *Two meetings of High Level Committee (HLC) headed by Hon'ble LG, Delhi held on 20.01.2023 & 14.02.2023*
- *Detailed Action Plan with timelines prepared and Order issued on 27.01.2023 to all the stakeholders for implementation.*





Improvement of water quality in Yamuna

Major Action points

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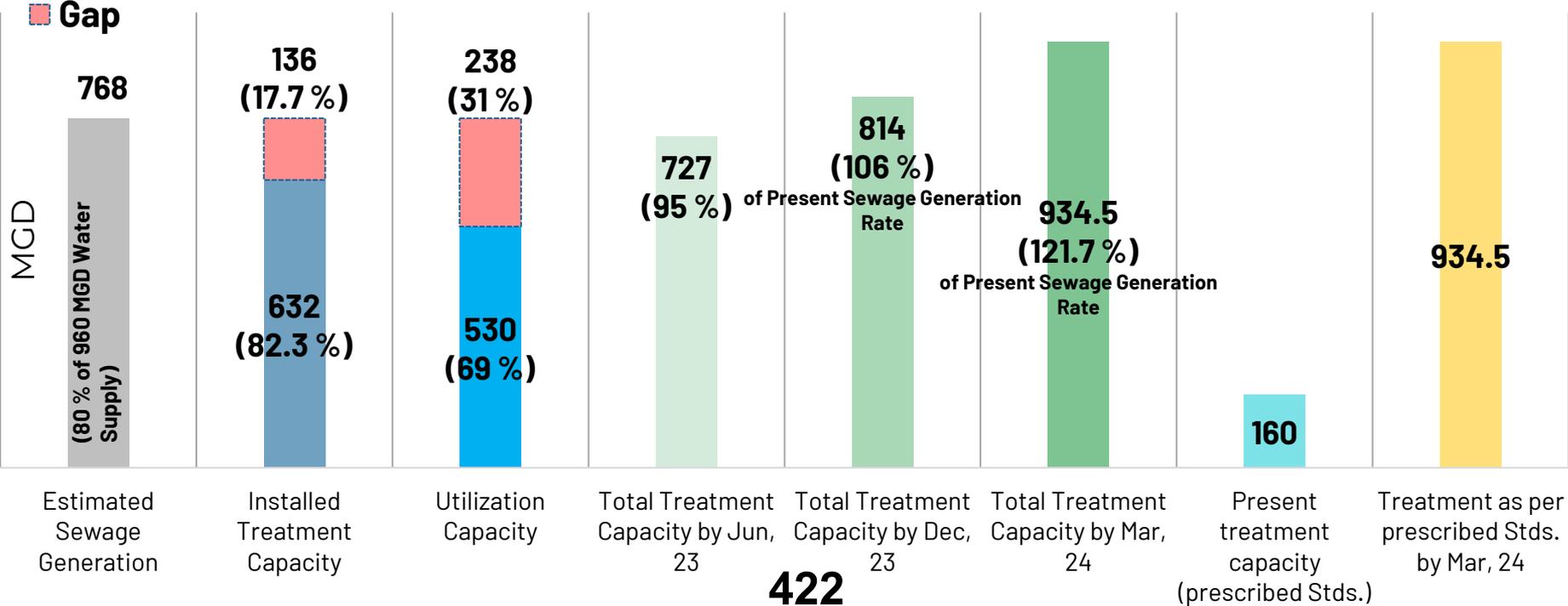


1. 100 Percent Treatment of Sewage
2. Trapping of all Drains
3. Sewerage Network in Unauthorised Colonies and JJ Clusters
4. Industrial Effluent Management by CETPs (13)
5. Faecal Sludge (Septage) Management
6. Regulation of Floodplain
7. Utilization of Treated Wastewater

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1. 100 Percent Treatment of Sewage ⁴²²

Generation, Treatment and Gap in Sewage Treatment



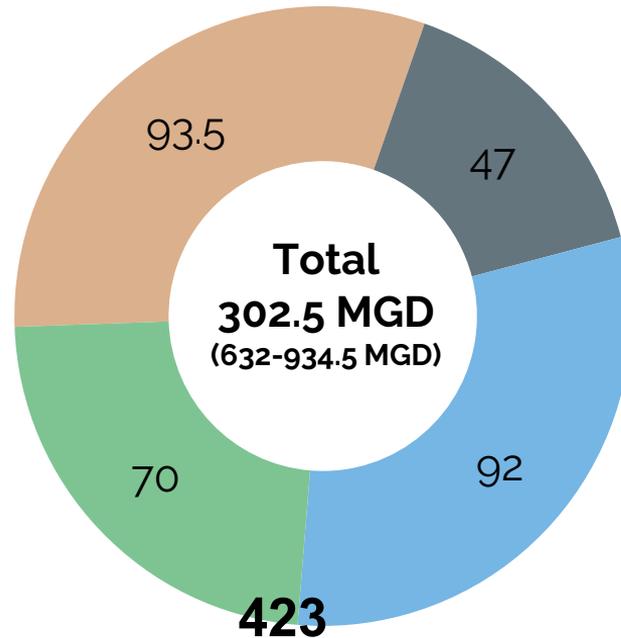
1. 100 Percent Treatment of Sewage

Focus Areas for Enhancing Sewage Treatment Capacity

Timeline : Mar, 24

4. Upgradation and increasing capacity of existing STPs (18)

3. Rehabilitation of existing STPs (3)

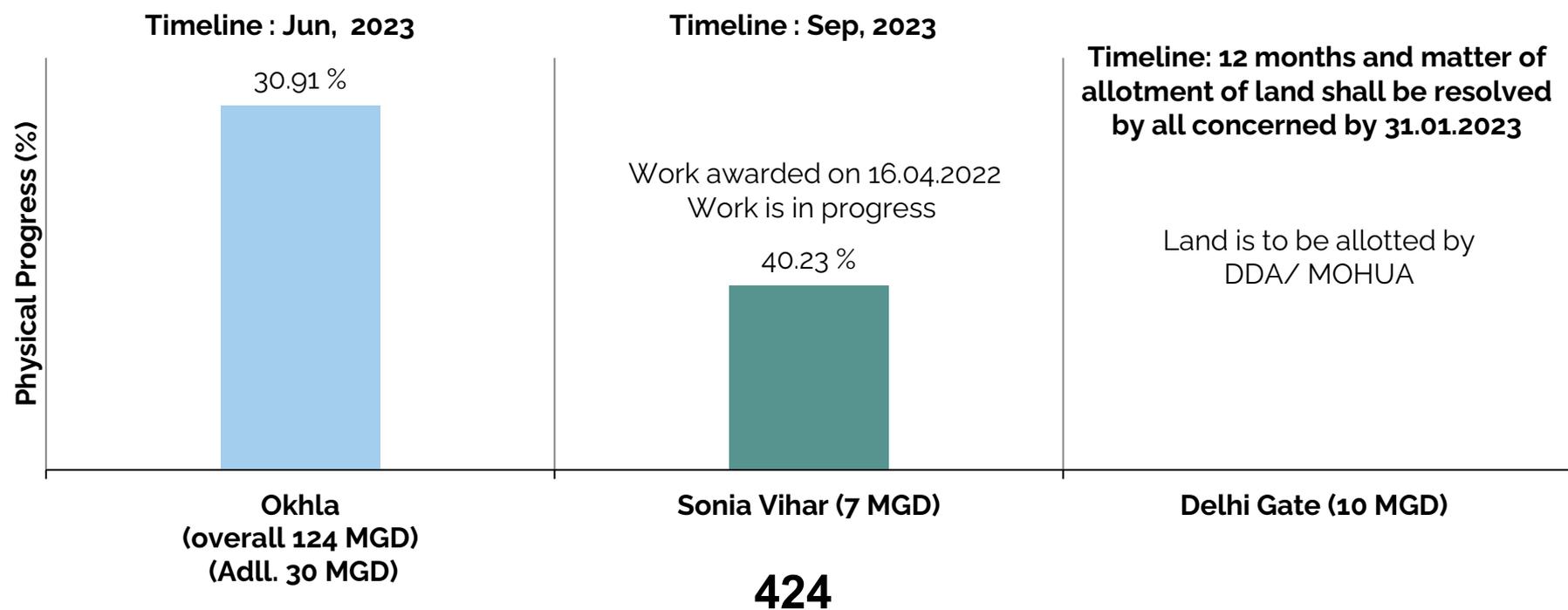


1. Construction of New STPs at Okhla, Delhi Gate & Sonia Vihar (3)

2. Construction of New DSTPs 40

1.1. Progress in Construction of 424 new STPs

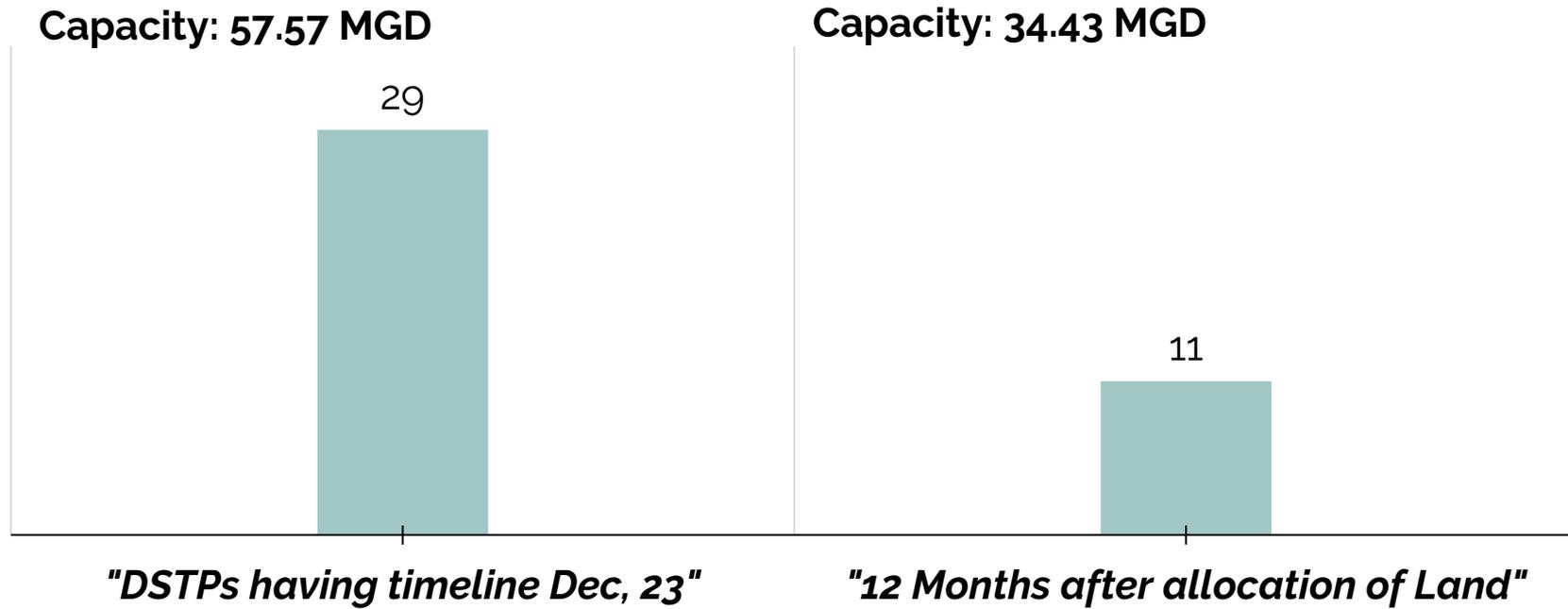
Capacity Addition: 47 MGD



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1.2. Construction of 40 New DSTPs

Capacity Addition: 92 MGD

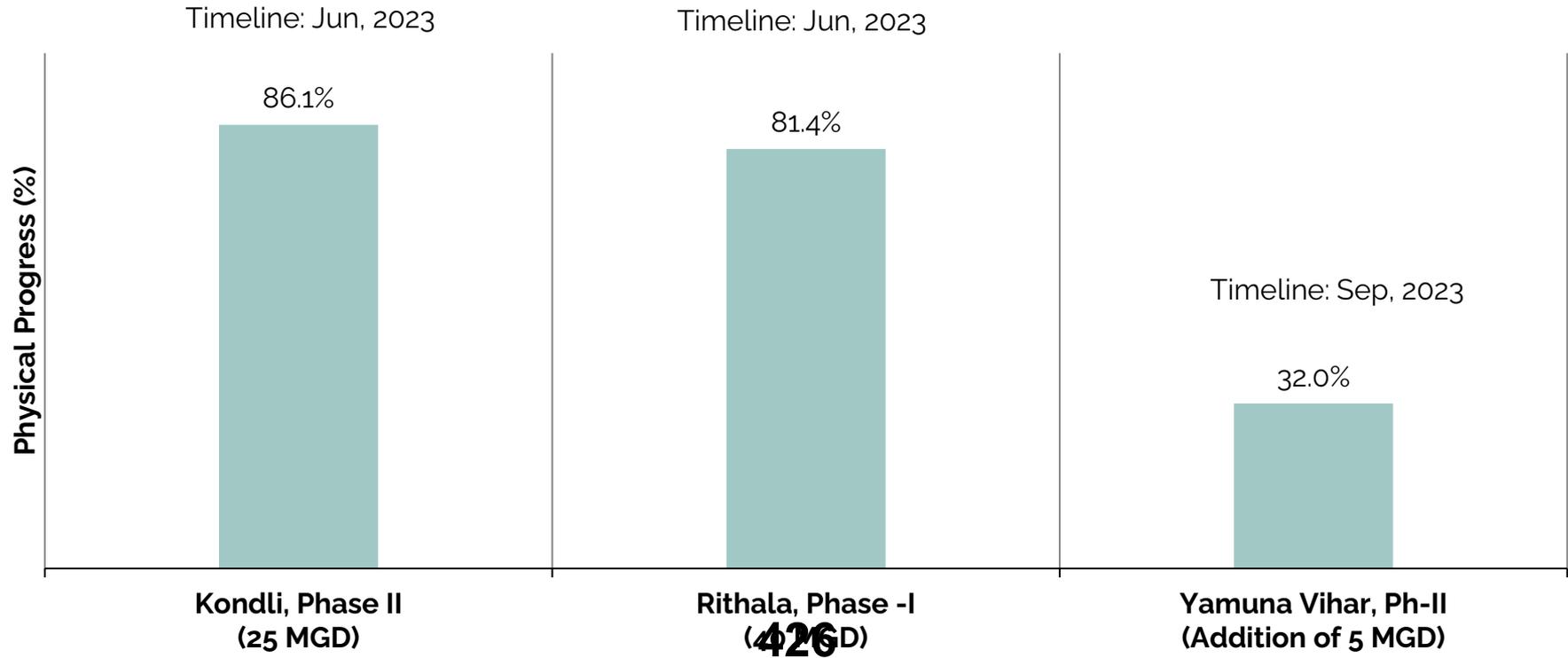


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1.3. Progress in Rehabilitation of Existing 3 STPs

426

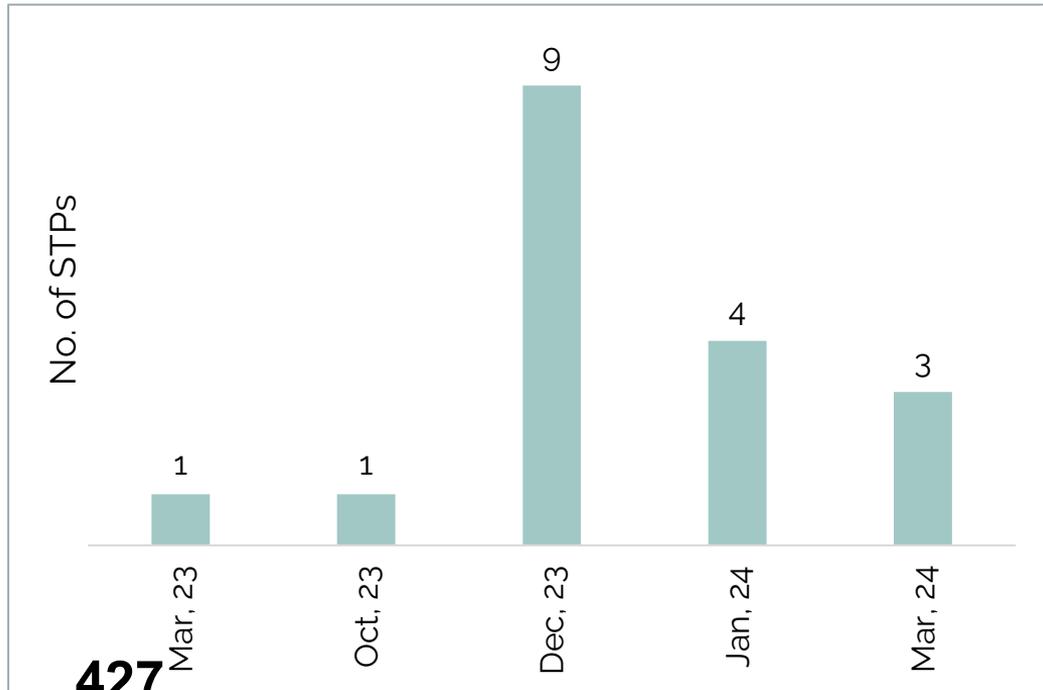
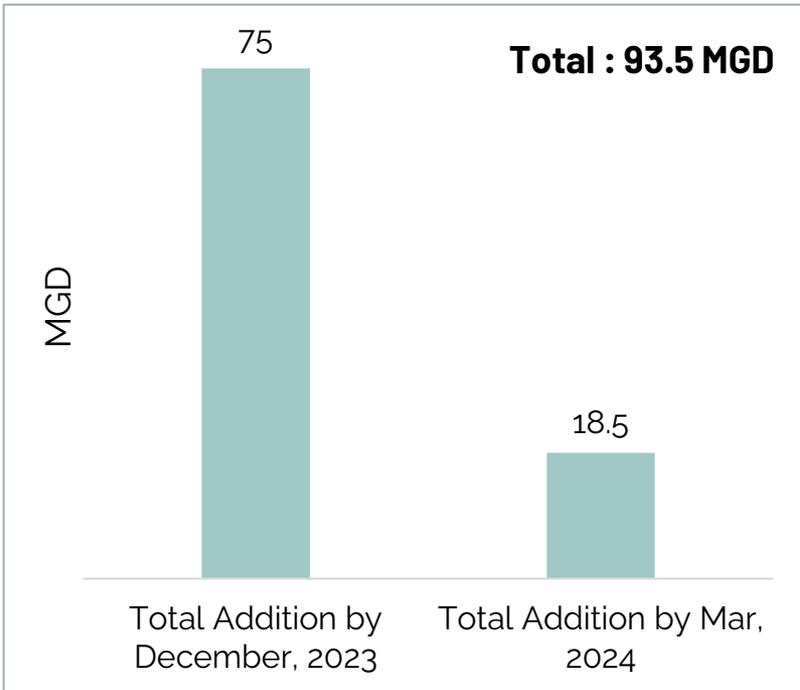
Capacity Addition: 70 MGD



1.4. Upgradation of Existing 18 Sewage Treatment Plants

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Capacity Addition: 93.5 MGD
Timeline for completion – Mar, 2024



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1.4. Upgradation of Existing 18 Sewage Treatment Plants

Sr. No.	Name of STP	Existing Capacity	Enhanced Capacity (In MGD)	Status	Timelines
1.	Rithala Phase -II	40	40	Physical Progress: 36 %	"Mar, 2023"
2.	Kondli Phase-IV	45	45	Physical Progress : 26 %	"Oct, 2023"

1.4. Upgradation of Existing 18 Sewage Treatment Plants

Sr. No.	Name of STP	Existing Capacity	Enhanced Capacity (In MGD)	Status	Timelines
3	Pappan Kalan Phase - I	20	30	Plants handed over to agency for further upgradation/ augmentation	<i>"Dec, 2023"</i>
4	Nilothi Phase -II	40	60		
5	Najafgarh	5	5		
6	Keshopur Phase -II	20	20		
7	Keshopur Phase-III	40	60		
8	Rohini Sector 25	15	25		
9	Narela	10	15		
10	Coronation Pillar Phase - I & II	20	20		
11	Coronation Pillar Phase - III	0 (Plant is non operational)	10		

1.4. Upgradation of Existing 18 Sewage Treatment Plants

Sr. No.	Name of STP	Existing Capacity	Enhanced Capacity (In MGD)	Status	Timelines
12	Okhla Phase- V	16	16	Negotiation held with single bidder but bidder did not reduce the rates within suggestive cost. Tenders are being discharged and proposal sent to Hon'ble Minister (Water) to call tender on EPC model in place of existing HAM model as there are no adequate response on tenders called on HAM model.	<i>"Jan, 2024"</i>
13	Mehrauli	5	7.5		
14	Ghitorni	5	7.5		
15	Vasant Kunj	5	7.5		

1.4. Upgradation of Existing 18 Sewage Treatment Plants

Sr. No.	Name of STP	Existing Capacity	Enhanced Capacity (In MGD)	Status	Timelines
16	Yamuna Vihar Phase – I	10	15	Tender reinvited and same is due for opening on 06.03.23	Mar, 2024
17.	Yamuna Vihar Phase – III	25	25	In-Principle approval received from Hon'ble Minister (Water) to reinvite tenders on EPC model alongwith construction of 15 MGD new STP also. DPR is under preparation. Tenders are likely to be floated first week of March, 2023 on EPC model.	
18.	Keshopur Phase- I	12	18	Proposal sent for approval of Hon'ble Minister (Water) to call tenders on EPC model as there is no response in the tenders called on HAM model in this case two times.	Mar, 2024

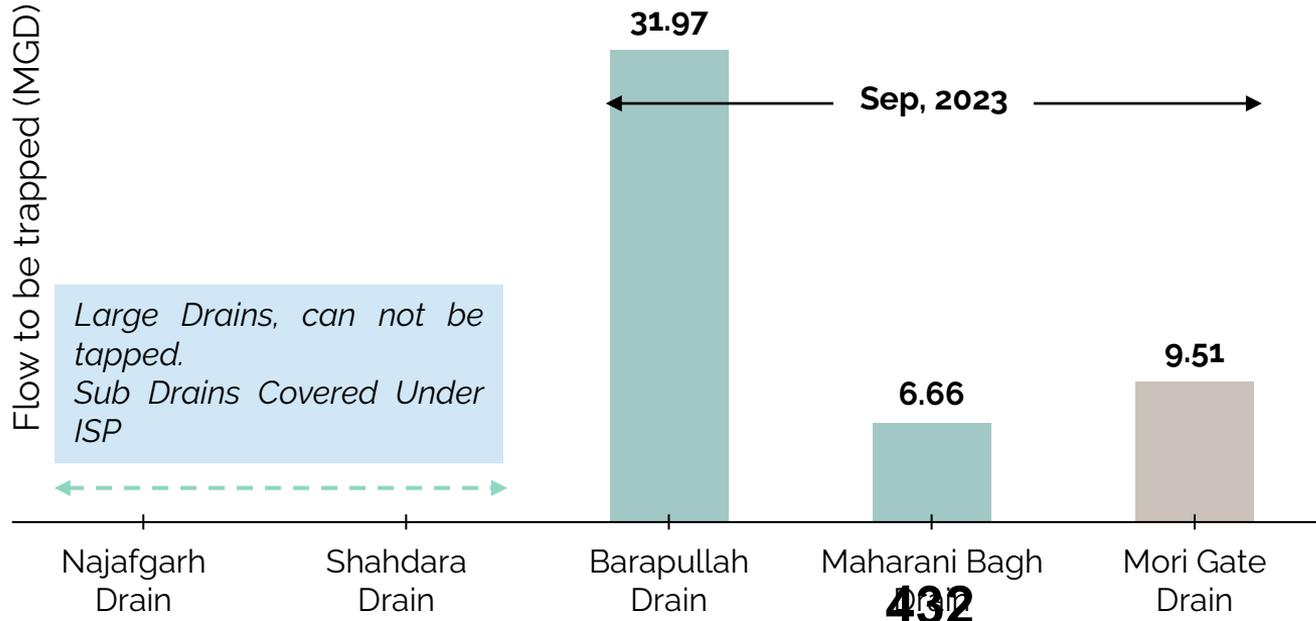
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2. Trapping of all Drains

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Trapping of Drains (Remaining 3 untapped major drains)

Total Flow to be Trapped: 48.14 MGD



i. **Barapulla Drain (31.97 MGD)**

ii. **Maharani Bagh Drain (6.66 MGD)** - on going (work awarded on 16.04.2022. Work on three fronts i.e. Laying of 1200 mm dia rising main, const. of 35 MGD SPS and laying of 1800 mm dia interceptor sewer is in progress.)

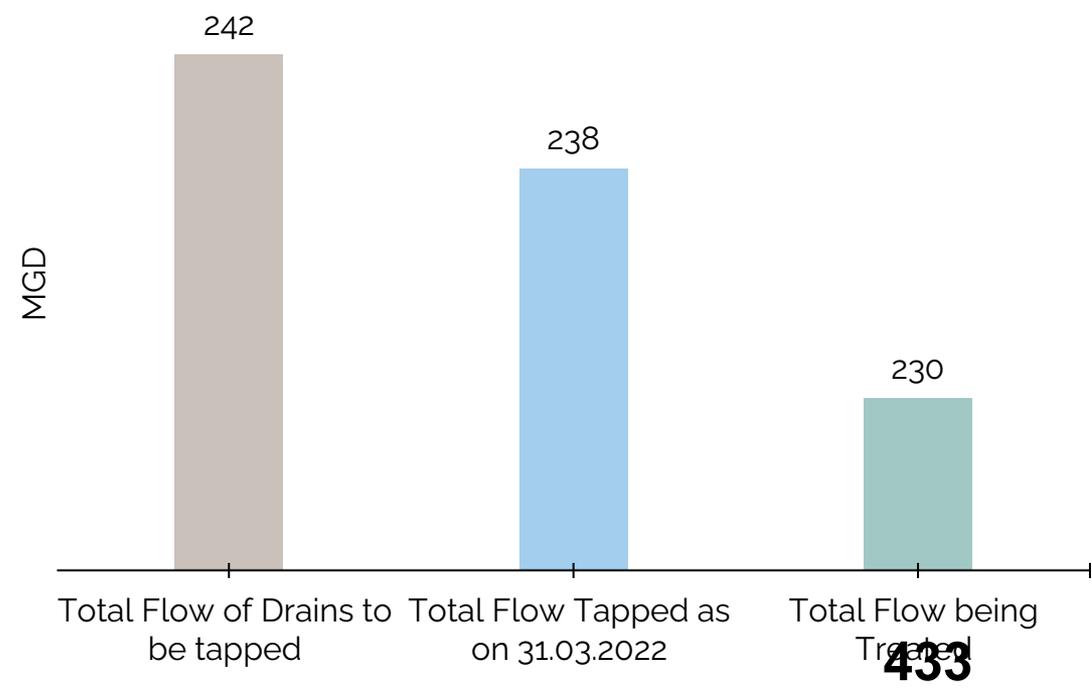
ii. **Mori Gate Drain (9.51 MGD)** - on going (work awarded on 23.12.2022 and survey work in progress)

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2. Trapping of all Drains

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Status of Interceptor Sewer Project (ISP) of DJB



- "Entire flow shall be trapped and treated by June, 2023"
- Physical work of ISP completed and commissioned.
- 230 / 242 MGD trapped & treated (238 MGD provisioned)
- Will be trapped after construction/rehabilitation of Rithala and Kondli STPs under YAP-III.

2. Trapping of all Drains

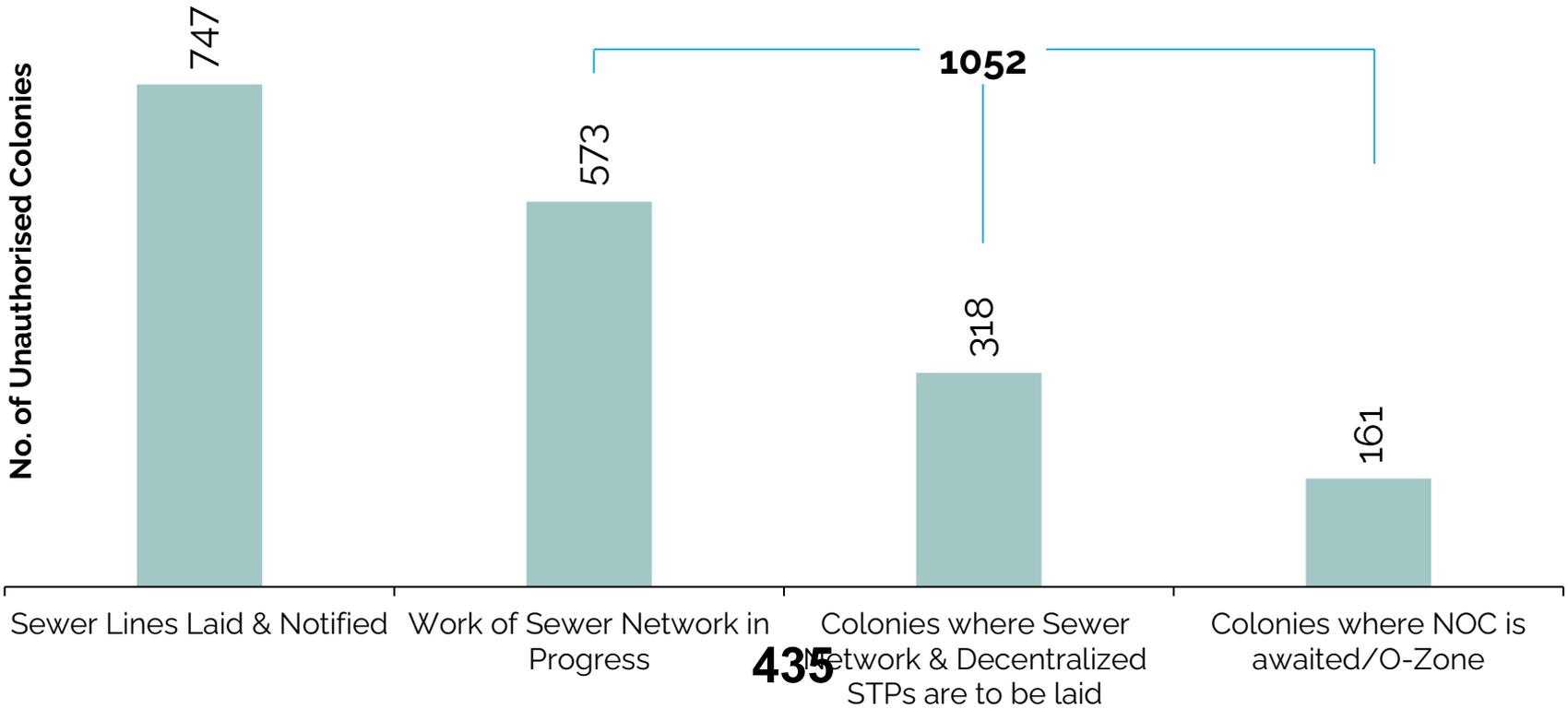
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Action plan of 76 un-trapped sub drains

Sr. No.	Name of major Drain	Total number of un-trapped drains	Number of sub drains	Timeline
1.	Najafgarh Drain	44	06	Completed
			06	Completed (Jan, 23)
			01	Completed (Feb, 23)
			04	Mar, 23
			01	May, 23
			04	Jun, 23
			22	Oct, 23
2.	Shahdara Outfall Drain	02	02	Jun, 23
3.	Supplementary Drain	30	02	Feb, 23
			07	Mar, 23
			04	Apr, 23
			1	May, 23
			14	Jun, 23
			01	Sep, 23
			01	Oct, 23

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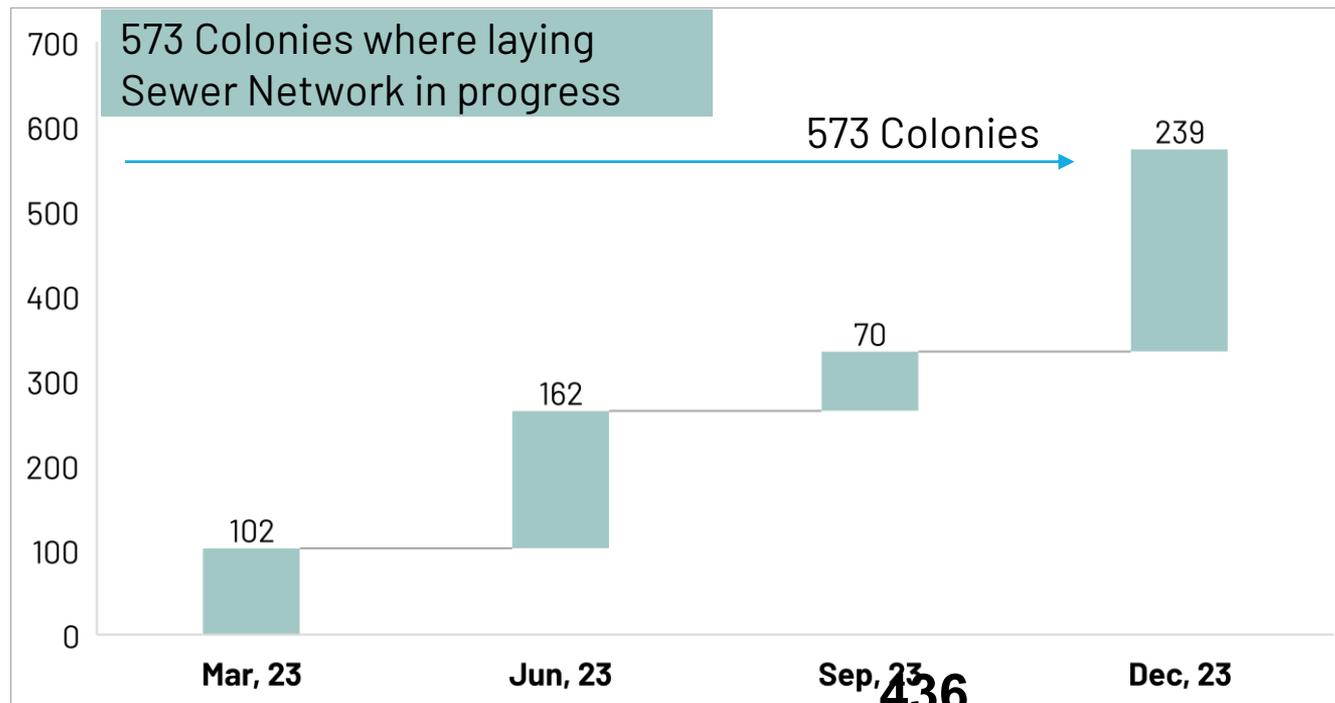
3. Sewerage Network in unauthorised colonies (1799)



3.1. Status of Sewerage Networks in remaining 1052 Colonies

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Remaining 1052 Colonies



Timeline for 318

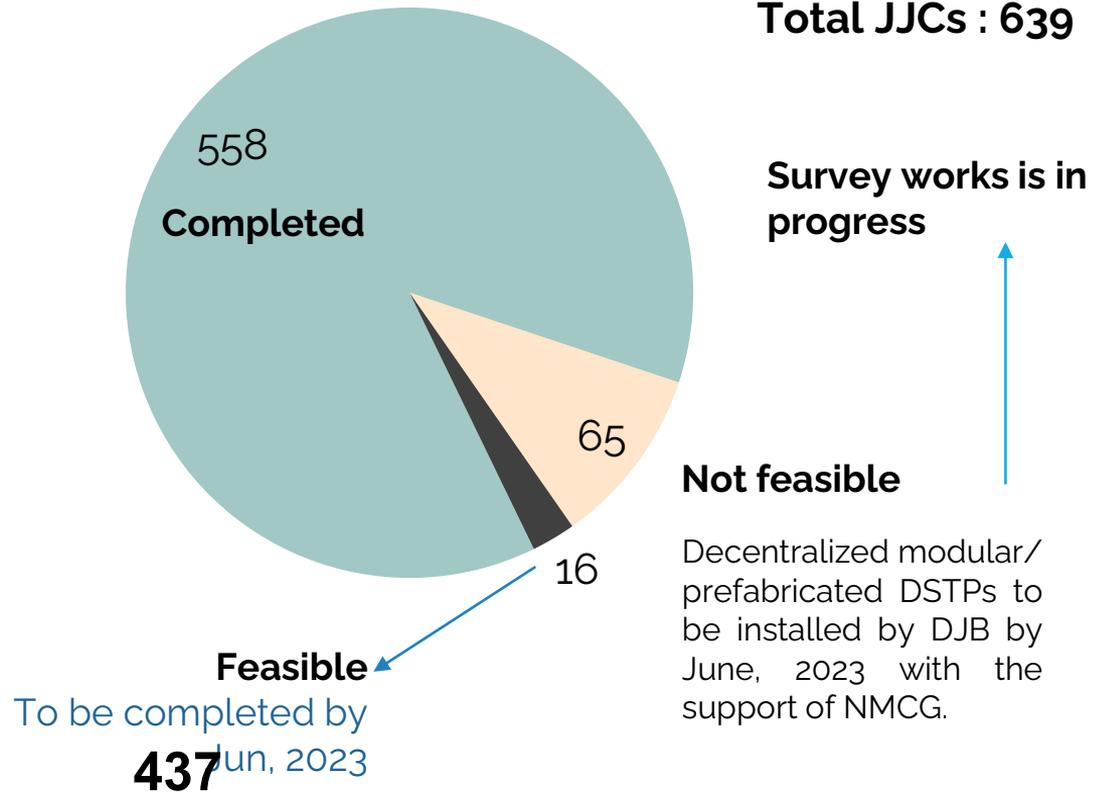
Colonies where sewerage network is to be laid along with Decentralized STPs : 117- Dec, 23 and 201- 08 month after allotment of land/ receipt of NOC.

Timeline for 161

Colonies where NOC is awaited / O Zone : 12 months after receipt of NOC. But Not later than June, 2024

3.2. Connection of Drains/ Drainage system of JJ Clusters (639 Nos) with sewerage network.

- Connection of storm water drain at outfall points/ points of JJs into nearest DJB sewerage system.
- All storm water drains out falling from JJs will be trapped into DJB sewerage system.
- **Timeline: Jun, 2023**



4. Industrial Effluent Management by CETPs (13)

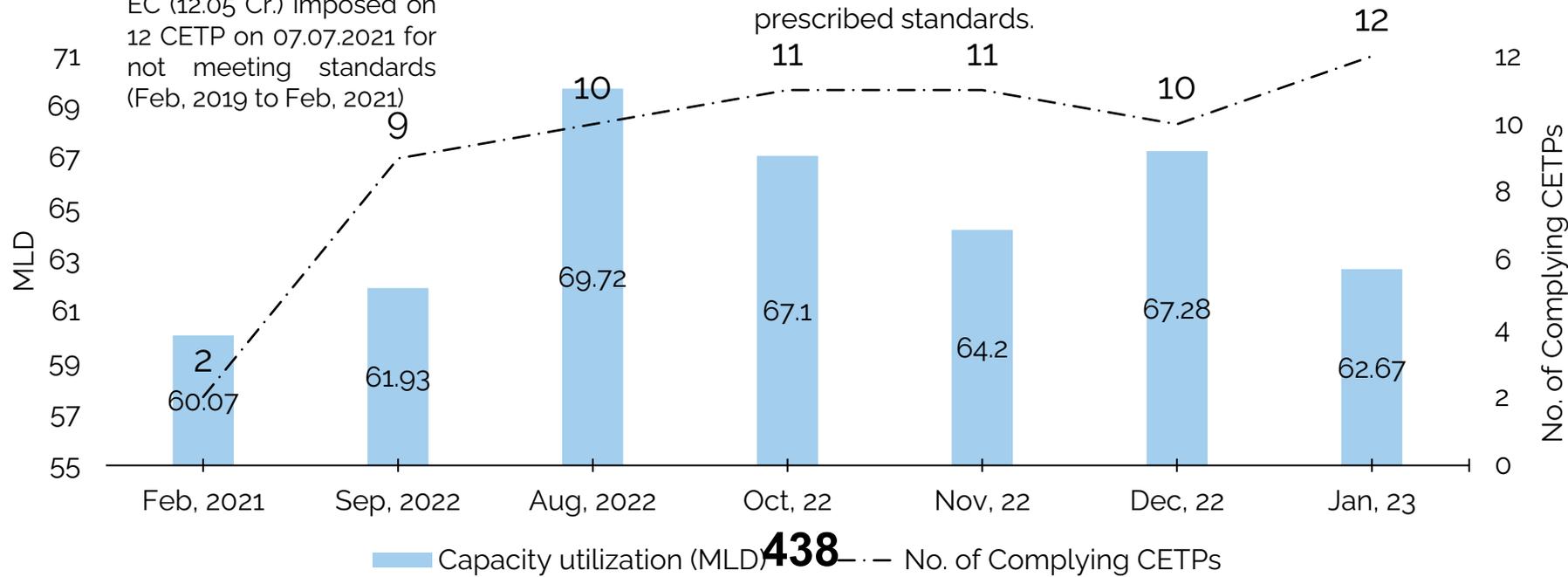
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CETPs are designed to meet prescribed standards under EP Act (Installed Capacity of all the 13 CETPs: 212.3 MLD)

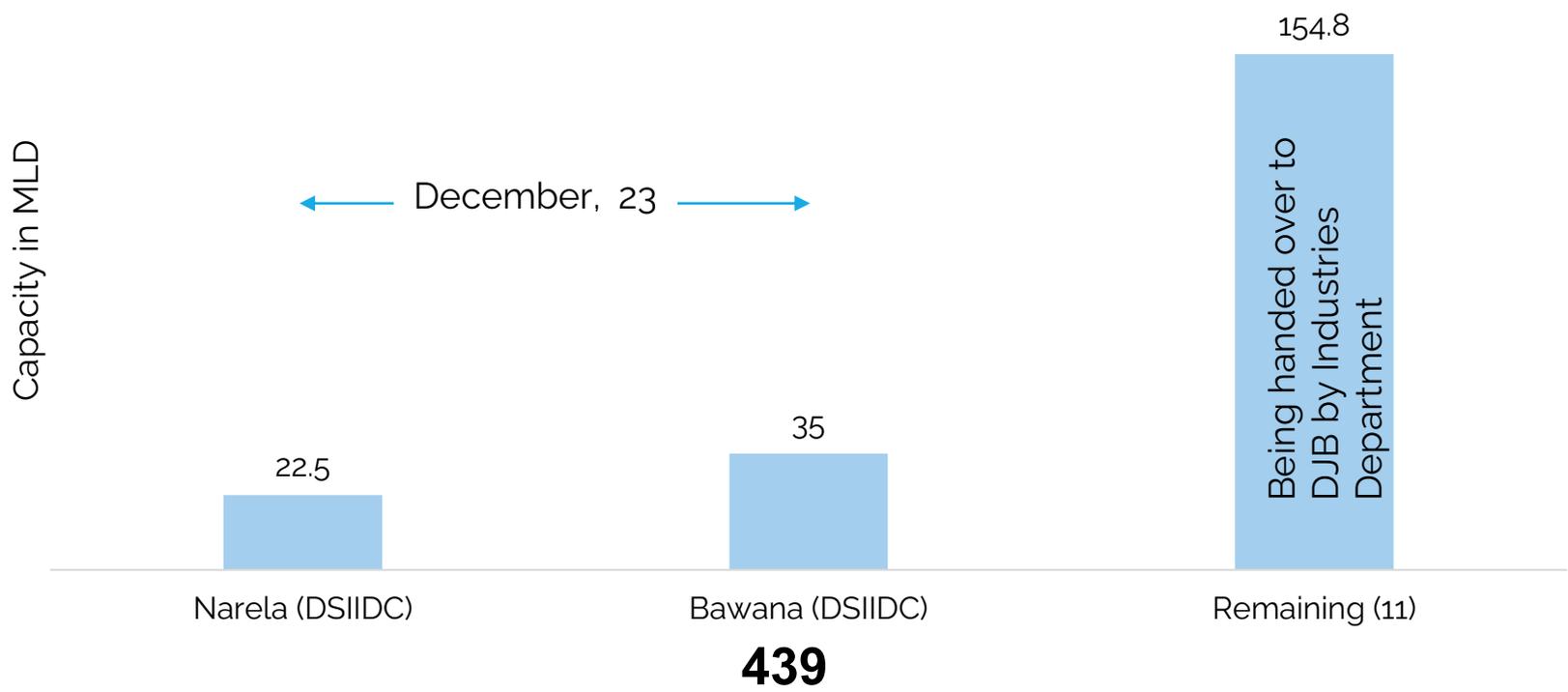
DPCC monitors CETPs on monthly basis

CETP Societies directed to take rectification measures to meet prescribed standards.

EC (12.05 Cr.) imposed on 12 CETP on 07.07.2021 for not meeting standards (Feb, 2019 to Feb, 2021)



4.1. Upgradation of CETPs with Timelines



5. Faecal Sludge (Septage) Management ⁴⁴⁰

- **Delhi Water Board Septage Management Regulations 2018** dated **12.11.2018** for collection, transportation and disposal of waste of septic tanks (Septage).
- As per said Regulations , necessary action is to be taken by DJB , District Magistrates & Local Bodies
- DM - authorized to ensure enforcement as well as compliance of these regulations.
- License issued by DJB to vendors for Collection, Transportation & Disposal at designated SPSs/STPs
- **Septage Management Committees headed by concerned District Magistrates**
- **DivCom taking review meetings with DMs on weekly basis .**

ATR (As on 5.02.2023):

- Total No. of Meetings of Septage Management Committees held - 73
- No. of Vehicles/ Tankers found unauthorizedly discharging septage into Drains etc. - 50
- No. of Vehicles/ Tankers impounded - 46
- No. of Challans/notices issued - 22
- Total Amount of Environmental Compensation Imp ⁴⁴⁰ & received - Rs 12.77 Lakh

5.1. Faecal Sludge (Septage) Collection & Treatment

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132.8 Cr. Ltrs collected/treated till 10 Feb, 23



196 Vehicles

■ Month wise septage collected/treated (in Cr. Ltrs.)
 — Cumulative septage collected/treated (in Cr. Ltrs.) (Since 2018)

"196 Vehicles to be reduced to 150 by June, 2023"

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6. Regulation of Flood plain (DDA) 442

Demarcation

- 1 in 25 years Flood Plain
- Fencing with 591 Bollards
- 375 Flag Posts
- 27 Sign Boards

Protection Measures

- 125 Security Guards
- 93 CCTV cameras at 27 locations

Enforcement

- 600 JJ/Chappar removed
- 5 Acre land reclaimed
- 42,000 MT of C&D waste lifted & utilized
- 574 Ha. repossessed (7 Projects)

Restoration Projects

- Landscaping
- Wetland Construction

Public utilities

- Pedestrian pathways
- Cycling tracks
- Bio-toilets
- Entrance plaza
- Signage

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6.1. Status of 10 Projects of DDA (Restoration & Rejuvenation of Flood Plains)



Completed Projects

- 1. Kalindi Aviral Part A (100 Ha)
- 2. Asita East (90 Ha.) DDA portion
- 3. Asita West (93 Ha.)



Projects in Advance Stage

- 1. Asita East (107 Ha) UP portion
- 2. Kalindi Biodiversity Park (115 Ha)
- 3. Asita West (107 Ha)
- 4. Amrut Biodiversity Park (116.25 Ha)
- 5. Yamuna Vanasthali (236.5 Ha)
- 6. Ghat Area(66 Ha)
- 7. Baansera (12 Ha) (Part of Kalindi Aviral Part B)



Projects in Initial Stage

- 1. Mayur Nature Park (397.75 Ha)
- 2. Eco-Tourism Area (30 Ha)
- 3. Hindon Sarovar (45 Ha)
- 4. Kalindi Aviral Part B (151 Ha)

Total Encroachment: Around 177 Ha

7. Utilization of Treated Wastewater ⁴⁴⁴

Action Plan by DJB (530 MGD)

90 MGD

Being used in Horticulture etc.



267 MGD

Mandatory Return Flow in Yamuna



70 MGD

Proposed : Raw water use at Palla (Tertiary treatment at Coronation pillar) : "*June, 2024*"
Case file for discharge of tenders as recommended by WAC and re invitation again on HAM model is in process of approval



530 MGD

Total Treated Sewage

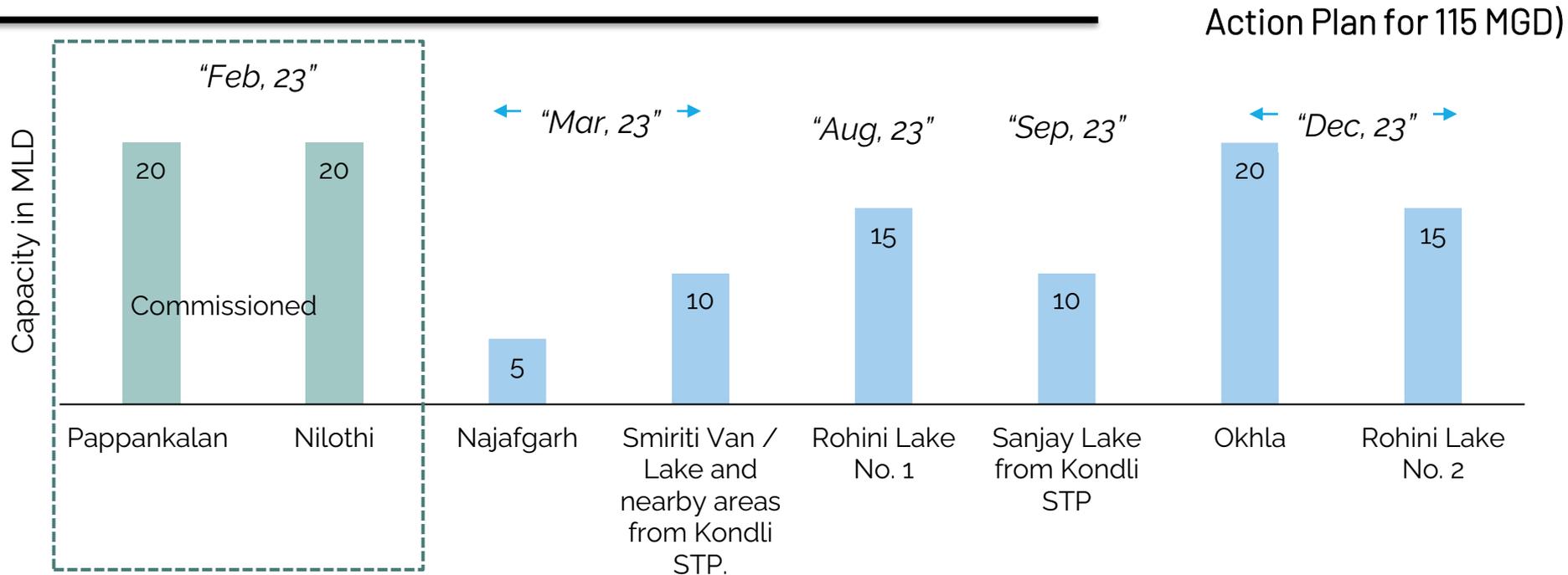
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103 MGD

Gap

7.1. Action Plan for Utilization 115 MGD Treated Wastewater



DJB is also exploring the possibility of using treated STP Water in other usages like in Farm houses, Golf courses, Construction activities etc. and has already made available treated water at its STPs @ Rs 7/ Kilolitres.

Summary of timelines for next 6 months ⁴⁴⁶

Progress made

Date	Desilting (KM)	Existing STP Capacity (MGD)	Additional Capacity (MGD)	Trapping of sub Drains	Sewerage Network UAC 1052/ JJ 81	Septage Enforcement (196)	Treated Water (MGD)	Flood Plain Regulations	Encroachment Removal
28 th Feb, 23	20 (15.2)	632 (632)	-	09 / 70 7 / 70	03 / 13 27 / 13	196 (196)	Nilothi - 20 (Done)	Kalind Aviral (B) 85 %	Asita west
31 st Mar, 23	40 +10 (New)	632	-	20 / 70	102 / 13	-	15 MGD (Najafgarh 05 + Smriti Van-10)	Asita East (Part B)+ Amrut Bio Diversity Park (90 Ha)	Amrut Bio
30 th Apr, 23	60 +20	632	-	23 / 70	116 / 13	-	-	Qudsia Ghat (16 Ha)	Vanasthali
31 st May, 23	80 + 30	632	-	24 / 70	120 / 13	-	-	Yamuna Vanasthali + Amrut Bio Diversity Park (18 Ha)	Kalindi
30 th Jun, 23	90.34 + 40	727	95 MGD (Kondli: 25, Rithala: 40 & Okhla: 30)	43 / 70	263 / 81 446	150	-	Asita West (Part B: 107 Ha)	Mayur Nature
Total	130	727	95	43 / 70	263 / 81	150	267 + 90 + 35 = 392		



सत्यमेव जयते
Government of the National
Capital Territory of Delhi

Department of
Environment, GNCTD

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Delhi Pollution
Control Committee



Thank you

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