



DELHI POLLUTION CONTROL COMMITTEE
DEPARTMENT OF ENVIRONMENT, GOVT. OF NCT OF DELHI
5th FLOOR, ISBT BUILDING, KASHMERE GATE, DELHI-110006
visit us at : <http://dpcc.delhigovt.nic.in>

F. No. DPCC/WMC-II/MPR/OA 673/2020/ 497 - 500

Dated: 12/04/2024

To,

The Secretary,
Ministry of Jal Shakti, Govt. of India,
Shram Shakti Bhawan,
New Delhi- 110001

Subject – Monthly Progress Report of Govt. of NCT of Delhi for the Month of February, 2024 w.r.t Orders Dated 06.12.2019, 29.06.2020, 21.09.2020 & 22.02.2021 in OA No. 673 / 2018 in the matter of News item published in 'The Hindu' Authored by Shri Jacob Khoshy Titled "More river stretches are now critically polluted: CPCB"

Sir,

Please find enclosed herewith Monthly Progress Report of Govt. of NCT of Delhi, on the basis of inputs received from the agencies concerned, in the Format of NMCG for the **Month of February, 2024** for Rejuvenation of River Yamuna (Priority -I Stretch) w.r.t. Orders Dated 06.12.2019, 29.06.2020, 21.09.2020 & 22.02.2021 in OA No. 673 / 2018 in the matter of News item published in 'The Hindu' Authored by Shri Jacob Khoshy Titled "More river stretches are now critically polluted: CPCB".

1st Monthly Progress Report of Govt. of NCT of Delhi was submitted vide letter dated 14.02.2020 & last Monthly Progress Report for the month of January, 2024 was submitted vide letter dated 11.03.2024.

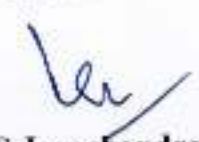
Yours Sincerely,

Enclosures: As Above


(Dr. K.S. Jayachandran)
Spl. Secy (Env) cum
Member Secretary, DPCC

Copy to:

1. The Member Secretary, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi-110032.
2. The Staff Officer to Chief Secretary, 5th Floor, Delhi Secretariat, I.P. Estate, Delhi-110002
3. PS to Chairman, DPCC.


(Dr. K.S. Jayachandran)
Spl. Secy (Env) cum
Member Secretary, DPCC

National Mission for Clean Ganga
Format for Submission of Monthly Progress Report in the NGT Matter OA No. 673 of
2018 (in compliance to NGT order dated 24.09.2020)

For the State of NCT of Delhi

Monthly Progress Report of Govt. of NCT of Delhi for the Month of February, 2024

Overall Status of the State:

I. Total Population: Urban Population & Rural Population separately

	Population as per Census in 2011 (in Lakh)	Population in 2024 (Approx. Estimated) (in Lakh)
Urban Population	163.68899	215
Rural Population	4.19042	
Total	167.87941	215

II. Estimated Sewage Generation (MLD) : 3600 MLD (792 MGD) (80 % of 990 MGD Water Supply)

III. Details of Sewage Treatment Plant:

- Existing No. of Operational STPs of DJB : 37 STPs (at 20 Locations)
- Installed Treatment Capacity of 37 Operational STPs : **3033 MLD (667 MGD)**
(84.2% of estimated sewage generation)
- Capacity Utilization of existing STPs
: **2574 MLD (566.3 MGD February, 2024)**
(84.9% of Treatment Capacity)
- MLD of sewage being treated through Alternate technology : Nil

• Gap in Treatment Capacity	: 568.3 MLD (125 MGD) [792 – 667 MGD] (15.8 %)
• Gap in Treatment	: 1023 MLD (225.7 MGD) [792 – 566.3 MGD] (28.5 %)
• No. of Operational STPs	: 37 (Refer Annexure-1)
• No. of Complying STPs	: 14 w.r.t. Standards prescribed by DPCC (BOD/TSS: 10/10 mg/l)
• No. of Non-complying STPs	: 23 (Letters are issued regularly to DJB for taking rectification measures to meet the prescribed standards).
Following 10 STPs (Total 185 MGD Capacity) are designed for BOD : TSS 10 :10 mg/l 1. Pappankalan Phase II (20 MGD) 2. Nilothi Phase II (20 MGD) 3. Delhi Gate Phase II (15 MGD) 4. Kapashera (5 MGD) 5. Chilla (9MGD) 6. Common Wealth Games Village (1 MGD) 7. Coronation Pillar New STP (70 MGD) 8. Kondli STP Phase-I (10 MGD) 9. Kondli STP Phase-II (25 MGD) 10. Kondli STP Phase-III (10 MGD)	
Standards prescribed by DPCC for STPs of DJB in Delhi as per the directions of CPCB (More Stringent than prescribed by MoEF&CC) : <i>(i) pH - 6.5 - 9.2 (ii) TSS ≤ 10 mg/l (iii) BOD ≤ 10 mg/l (iv) COD ≤ 50 mg/l (v) Ammonical Nitrogen ≤ 5mg/l (vi) Total Nitrogen (N-Total) ≤ 10 mg/l (vii) Phosphate (PO₄- P) ≤ 2 mg/l (viii) Faecal Coliform(FC) (MPN/100ml) < 230</i>	

• **Sewage Treatment Capacity Augmentation Plan of Delhi to meet the Gap and Accommodate future Increase in Sewage Generation:**

Govt. of NCT of Delhi is primarily working on following 4 Sectors for augmenting the sewage treatment capacity in Delhi and details are given in following Table:

- (i) Rehabilitation of existing 3 STPs at Kondli Ph-II & Rithala Ph-I and Yamuna Vihar Ph -II.
- (ii) Upgradation and increasing capacity of remaining 18 existing STPs
- (iii) Construction of 3 New STPs at Okhla, Delhi Gate and Sonia Vihar
- (iv) Construction of 40 DSTPs [26 DSTPs at various locations of Delhi and 14 DSTPs in Najafgarh Drainage Zone]

Rehabilitations of existing STPs and construction of New STPs/DSTPs

[Present Treatment Capacity: 667 MGD (37 STPs)]

S.No	Name of STP	Capacity Addition (in MGD)	Timelines
Sewage Treatment Plants			
1	Coronation Pillar (New STP) of 70 MGD Capacity (Completed and Commissioned) The Coronation Pillar STP is State of Art STP with latest parameters of BOD/TSS: 10/10 mg/l including removal of Nitrogen and Phosphorus along with power generation through Bio Gas. Salient features of the STP.	-	Completed and commissioned on 15.03.2022. Additional capacity of 40 MGD created by commissioning of this STP has already included in total capacity of existing 37 STPs of 632 MGD.
2	Okhla (New STP) of 124 MGD Capacity (Under Construction) [Physical Progress – 94.90% (as on 29.02.2024) Progress in February, 2024: 0.01% The new Okhla STP will be Asia's largest STP with State of Art Technology with latest parameters of BOD/TSS: 10/10 mg/l including removal of Nitrogen and Phosphorus along with power generation through Bio gas. The plant will use solar energy based sludge drying process to produce class A pathogen free sludge.	30	March, 2024 (Earlier Timeline June, 2023) (Liquid Line commissioned in December, 2023)
3	Sonia Vihar (New STP) of 7 MGD Capacity (Under Construction) [Physical Progress - 86.27 % (as on 29.02.2024) Progress in February, 2024: 1.78%	07	March, 2024 (Earlier Timeline September, 2023)
4	Delhi Gate (New STP) of 10 MGD Capacity (Land to be allotted by DDA / MOHUA) MoHUA vide letter dated 20.07.23 requested DJB to remove unauthorized structure from the proposed land/plan. MoHUA vide letter dated 14.09.23 requested to accept allotment of land by DJB "as is where is" basis. Removal of structure is required for construction of STP. DDA informed that permission for removal of religious structure has been received.	10*	12 Months after allotment of land

5	Kondli Phase- II of 25 MGD Capacity [Physical Progress: - 97.56 % (as on 29.02.2024) Progress in February, 2024: 0.26% Liquid line started on 24.06.2023.	-	March, 2024 (Earlier Timeline June, 2023) (Under Test and Trial run & included in 667 MGD capacity)
6	Rithala Phase – I of 40 MGD Capacity (Under Construction for Rehabilitation & Up-gradation) [Physical Progress: 96.69 % (as on 29.02.2024) Progress in February, 2024: 0.69%	40	March, 2024 (Earlier Timeline June,2023)
7.	Yamuna Vihar Ph-II of 40 MGD Capacity (From 10 MGD to 15 MGD, Under Construction for Rehabilitation & Up-gradation, Presently in operation) [Physical Progress: 93%] (as on 29.02.2024) Progress in Month of February, 2024: 02%	05	March, 2024 (Earlier Timeline September 2023)
Total Addition in Capacity of STPs		92	
Status of 40 New Proposed Decentralised Sewage Treatment Plants (DSTPs) [92MGD]			
A. 26 DSTPs of total Capacity of 60 MGD			
19 DSTPs (Land already allotted)		29 DSTPs (57.57MGD) – By December, 2024	
07 DSTPs (Land is yet to be allotted**)			
B. 14 DSTPs in Najafgarh Drainage Zone of total Capacity of 32 MGD		11DSTPs (34.43 MGD) –12 Months after allocation of land	
11 DSTPs (Land already allotted)			
03 DSTPs (Land yet to be allotted **)			
Up-gradation / Augmentation of Remaining 18 Existing STPs of total Capacity of 113.5 MGD		113.5	March, 2025
Total Addition by March, 2024		147	
Total Addition by December, 2024		255	
Total Addition by March, 2025		297.5	
Grand Total Capacity by March, 2025		667 + 297.5 =964.5MGD#	

Total Capacity of STPs by March, 2024 - 814 MGD [667 MGD + 147 MGD]

Total Capacity of STPs by December, 2024 - 922 MGD [667 MGD + 255 MGD]

Total Capacity of STPs by March, 2025 - 964.5 MGD [667 MGD + 297.5 MGD]

Will be sufficient to treat the sewage of 924.8 MGD (80% of 1156 MGD Water Supply) in future.

* Timelines are subject to availability of land from DDA/ MoHUA.

**Timelines are subject to availability of land from Land Owning Agencies (DDA/ Revenue Deptt.)

All the STPs (existing as well as new) with total capacity of 964.5 MGD are targeted to achieve standards prescribed by DPCC i.e BOD / TSS: 10/10 mg/l by March, 2025.

Details of Each Existing STP of Delhi Jal Board in Delhi

S. No.	Location	Existing STP Capacity	Capacity Being Utilized	Operational Status of STP	Compliance Status of STP
Details of Each Existing STP of Delhi Jal Board in Delhi and Compliance status for the month of February, 2024 is at <u>Annexure-1</u>					

Details of Upgradation / Augmentation of Existing 18 STPs of DJB are at **Annexure-2**

Details of Proposed STPs of Delhi Jal Board in Delhi

S. No.	Location	Capacity of STPs proposed (in MGD)	Status of Project (at DPR Stage/ Under Tendering/ Work to be Awarded)	Likely Date of Completion
1.	26 Decentralized STPs at various locations in Delhi (Earlier 42)	60	- Requirement of land reassessed - No. of DSTPs reduced from 42 to 26 - Land allotted at 23 locations - For balance DSTPs matter is being pursued with land owning agencies. - At one location of Naya Bans, part of land is allotted and for balance matter is being pursued with land owning agencies. Tenders are being invited for DSTPs /STPs where land has been allotted.	Out of 40 DSTPs, tenders have been received / invited / being invited in case of 32 DSTPs. Out of balance 8 DSTPs, estimate for 2 DSTPs are under approval & land for 6 DSTPs is yet to be allotted by DDA / Revenue Deptt. and expected to be completed after land allotment.
2.	14 (9+5) STPs in Najafgarh Drainage Zone	32	The work of 9-5 DSTP has been rescinded. The scheme under 9+5 DSTP has been reframed to accommodate the maximum nos. of unauthorized colonies in the 12 parcels of land already in possession of DJB. The status of construction of DSTPs and laying of sewer line is in various stages progress.	

Status of Interceptor Sewer Project (ISP) of Delhi Jal Board

Total flow to be trapped	Provision of trapping made during the month of Feb, 2024	Cumulative Status as in February, 2024 Provision of trapping made	Time line for completion of work	Remarks
1100.86 MLD (242 MGD)	-	1082 MLD (238 MGD)	Completed	Entire flow shall be trapped & treated by March 2024 after rehabilitation of Rithala and Kondli STPs under YAP-III.

Status of Sewerage Network in Unauthorized Colonies (As provided by DJB)

S. No.	Description	Cumulative Status (No.)	Timelines / Remarks
1	Sewer line laid/ commissioned	1,064	Laid / commissioned
2	Work of sewer network is in Progress	267	November, 2024
3	Colonies where NOC is awaited / "O Zone"	161	The work shall be taken up after NOC from Forest Deptt./ DDA.
4	Colonies where sewerage network is to be laid along with Decentralized STPs	307	The work shall be taken up after allotment & possession of land for DSTPs by DDA /Revenue Deptt.
Total		1799	

Sewage and Faecal Sludge Management (Septage Management)

"Delhi Water Board Septage Management Regulation 2018" were notified by the Urban Development Department, GNCTD on **12.11.2018 (published in Gazette on 21.11.2018)** and necessary action is to be taken by Delhi Jal Board, District Magistrates and Local Bodies / Municipal Corporations as per the provisions of the said Notification.

DJB has registered 160 licensed vendors (Emptiers) [reduced from 190 vehicles to 160 vehicles in view of orders of the Chief Secretary dated 27.01.2023] for collection and transportation of sewage from the septic tanks and has identified 86 designated SPS/ STPs for receiving the Septage.

Agency	No of Vehicles Authorised by DJB (As on 29.02.2024)	No. of Functional SPSs for collection of septage from vendors	Septage collected & Treated in February, 2024	Septage treated by DJB (As on 29.02.2024)
DJB	172	86	4.28 Crore Litres	192.4 Crore Litres

On an average 14.76 Lakh litres septage per day was collected and treated at STPs of DJB in February, 2024. Action Taken Report of District Magistrates w.r.t. "Delhi Water Board Septage Management Regulations, 2018" for collection, transportation and disposal of waste of septic tanks (Septage) as on 05.03.2024 is briefed below.

- Total No. of Meetings of Septage Management Committees held - 143
- No. of Vehicles /Tankers found unauthorizedly discharging Septage into Drains etc. - 64
- No. of Vehicles /Tankers impounded - 63
- No. of Challans / Notices issued - 57
(07 cases under process)
- Total Amount of Environmental Compensation Imposed - Rs. 17.19 Lakh
- Total Amount of Environmental Compensation Received - Rs. 17.19 Lakh

Joint Committee headed by Hon'ble Justice (Retd.) Sh. S. P. Garg and having members from CPCB, DPCC & DJB constituted by Hon'ble NGT vide Order Dated 22.04.2022 in OA No. 365 / 2021 in the matter of "Shamsher Singh Vs Govt. of NCT of Delhi" has submitted its Interim Progress Report Dated 17.12.2022 to the Hon'ble Tribunal. Necessary action is being taken as per the directions of the Hon'ble Tribunal in the order dated 21.12.2022 in the said matter.

"Vide order dated 27.01.2023, a Committee under the chairmanship of Divisional Commissioner, Revenue Department and consisting of CEO, DJB, Commissioner MCD as member and Secy (UD), GNCTD as member cum convener has been constituted to revisit the "Delhi Water Board Septage Management Regulations, 2018" to make them more effective enforceable.

Report of the committee of the meeting held on 28.02.2023 along with proposed amendments in the existing "Delhi Water Board Septage Management Regulation 2018" has been approved by DJB in its Board meeting on 04.05.2023 and the matter is under process.

DPCC has also issued directions u/s 33 (A) of the Water Act, 1974 on 27.03.2023 including imposition of penalties. As per the said directions, Revenue Department (An officer not lower than the rank of Nayab Tehsildar in DM offices), Sub Inspector in Delhi Police, Sanitary Inspector in MCD and Junior Engineers of DJB & IFCD are competent to impose penalties.

Copy of the directions issued by DPCC on 27.03.2023 has already been provided to Ministry of Jal Shakti vide Monthly Progress Report of April, 2023.

Tapping of Drains:

There are 22 drains which are out falling into river Yamuna in the Delhi and brief is as follows:

- 9 Drains have been tapped.
- 02 Drains (Delhi Gate Drain & Sen Nursing Home Drain) are Partially Tapped.
- 02 Drains (Najafgarh & Shahdara) are large drains and technically not feasible to tap whole drain however these drains are included in the Interceptor Sewer Project where substantial flow of sub-drains under their command areas has been / will be tapped and treated after tapping of sub drains.
- Flow is yet to be tapped / diverted to Sewer / STPs for treatment in case of remaining 09 drains.

Information about 22 Drains out falling into River Yamuna in Delhi, their Water Quality in February, 2024 and proposed action for tapping of flow is at **Annexure - 3.**

IV. Details of Industrial Pollution | Industries/Units in 28 Approved Industrial Areas (Planned Industrial Areas) in Delhi | (As per the Consent Records of DPCC) (As on 20.08.2023):

• No. of Industries / Units in 28 Approved Industrial Areas	: 29330
• No. of Industries / Units in 17 Approved Industrial Areas (out of 28 Approved Industrial Areas) connected with 13 CETPs	: 26011
• No. of Industries / Units in 11 Approved Industrial Areas (out of 28 Approved Industrial Areas) not having CETPs (Having Individual ETPs).	: 3319
• No. of Water Polluting Industries / Units in 28 Approved Indl. Areas	: 1369
• No. of Water Polluting Industries/ Units in 17 Approved Indl. Areas (out of 28 Approved Indl. Areas) connected with 13 CETPs	: 1097
• No. of Water Polluting Industries/ Units in 11 Approved Indl. Areas (out of 28 Approved Indl. Areas) not having CETPs (Having Individual ETPs)	: 272
• Quantity of Effluent generated from the Industries / Units in 28 Approved Indl. Areas (Excluding White Category Industries/Units, Shops & Other Establishments not requiring Consent from DPCC)	: 29.65 MLD
• Quantity of Effluent generated from the Industries / Units in 17 Approved Industrial Areas (out of 28 Approved Indl. Areas) Not having CETPs (Excluding White Category Industries/Units, Shops & Other Establishments not requiring Consent from DPCC)	: 25.57 MLD
• Quantity of Effluent generated from the Industries / Units in 11 Approved Industrial Areas (out of 28 Approved Indl. Areas) Not having CETPs (Excluding White Category Industries/Units, Shops & Other Establishments not requiring Consent from DPCC)	: 4.08 MLD
• Quantity of Hazardous Waste generated from the Industries in TPD (including CETPs)	: 11.36 TPD
• Number and total capacity of ETPs (details of Existing/ Under Construction / Proposed)	: 1369 ETPs
• Compliance Status of the ETPs	: -
• Number and Total Capacity of CETPs (Details of Existing/ Under Construction / Proposed)	: Existing CETPs-13(List at <u>Annexure-4)</u> Capacity - 212.3 MLD (Utilization - 68.5 MLD) (32.3%) Under Construction/Proposed - Nil

Redevelopment Areas

Besides 28 Approved Industrial Areas, there are 26 Areas Notified for Re-development (non-conforming clusters of industries for redevelopment) by the Industries Department, Govt. of NCT of Delhi. Details regarding no. of industries/units in these 26 redevelopment areas are not available. Most of the industries/ units in these areas are dry and there not much water polluting industries / units in these Redevelopment Areas. List of 26 Redevelopment Areas Notified for Re-development has already been provided through Monthly Progress Report of August, 2023.

These Redevelopment Areas are lacking infrastructural facilities which are to be developed as per the norms for redevelopment of clusters of Industrial Concentration in Non-Conforming Areas as given in point no. 7.6.2.1. of MPD- 2021. The redevelopment scheme of these unplanned Industrial Areas will have to be prepared by the concerned local body / land owning agency in consultation with the Society (to be formed by the land owners). Accordingly, the redevelopment of these 26 industrial areas is to be done by concerned local body/landowning agency.

Status of Compliance and Operation of the CETPs

Town	No. of Industries/ Units (in 28 Approved Industrial Areas)	Industrial Discharge	Status of ETPs	Status of CETPs (Existing, Under Construction & Proposed)
Delhi	29330	29.65 MLD	-	Existing – 13 CETPs List along with Compliance Status of February, 2024 is at <u>Annexure-4</u> Under Construction / Proposed - Nil Complying - - 13 Not Complying – Nil Brief of Action Taken by DPCC against CETPs in the past is as follows : • Environmental Compensation (Total EC Amount of Rupees 19.10 Crores) has been imposed by DPCC on the 11 CETP Societies and 2 Operators of CETPs at Narela & Bawana from time to time for violations / not meeting the prescribed standards in the past. • Letter issued to concerned District Magistrates for recovery of the said amount of Environmental Compensation on 27.10.2021, 12.01.2022 in Year 2023 also. • CETP Societies of Okhla, SMA, Mayapuri, Mangolpuri, GTK Road, Naraina, Jhilmil & Lawrence Road (Total 8 Cases) filed Writ Petition in the High Court of Delhi against the Directions issued by DPCC egarding imposition of Environmental Compensation and cases are at various stages. • Letters are issued regularly to the concerned CETP Societies based on the Effluent Analysis Reports of DPCC Lab for taking necessary action to ensure that CETPs meet the prescribed standards.

Common Effluent Treatment Plants (CETPs)

All the existing 13 CETPs are being monitored by DPCC Laboratory on monthly basis and Analysis Reports are placed on the website of DPCC and also conveyed to the CETP Societies/ Operator of CETPs for rectification of the deficiencies, if any, to meet the prescribed standards. Sufficient treatment capacity (212.3 MLD) is available with existing 13 CETPs for management of industrial effluent generated from

17 approved industrial areas. The units which are operational in Non-CETP Industrial Areas have individual waste water treatment facilities (ETP etc). Online Monitoring System (OLMS) have been installed on all the 13 CETPs for measuring the pH, TSS, BOD & COD at the outlet of the CETPs. OLMS are connected to servers of DPCC and CPCB.

DSIIDC had engaged CSIR-NEERI vide letter dated 05.11.2019 for providing consultancy w.r.t various issues related to CETPs including up gradation of CETPs.

NEERI carried out Overall Performance Evaluation of all the 13 CETPs in Delhi and Draft Integrated Report titled "Status, Gap Analysis and Suggestions for Improvement and Upgradation in existing 13 CETPs of Delhi" submitted to DSIIDC on 16.03.2022. Meetings were held to review the progress.

Quotations used by NEERI while preparing the estimates for the CETPs were shared with DSIIDC on 22.03.2022. A meeting was also held on 21.03.2022 with NEERI regarding cost estimation for 13 CETPs.

As per the Order dated 27.01.2023 of Chief Secretary, GNCTD issued w.r.t NGT Order dated 09.01.2023 in OA No. 21 / 2023, Out of 13 CETPs, 02 CETPs at Narela and Bawana are to be upgraded by DSIIDC. Govt. of NCT of Delhi vide Notification dated 01.01.2024 has given powers in respect of 11 CETPs presently being operated and maintained by CETPs Societies to DJB however the said Notification regarding taking over of these CETPs by DJB from the concerned CETPs Societies has been quashed by Hon'ble High Court of Delhi.

Regarding upgradation of CETPs at Narela & Bawana work is near completion and expected to be completed by March, 2024.

V. Solid Waste Management:

- Total Number of Urban Local Bodies (ULBs) : 13 [MCD, NDMC & DCB]
and their Population : Total Population – About 2.1 Crores
- Current Municipal Solid Waste Generation : 11342 TPD

(Status of Solid Waste Management including Legacy Waste in Delhi is given at **Annexure-5**)

S. No.	Particulars	Information
1.	Number, Installed Capacity and Utilization of Existing MSW Processing Facilities in TPD (Bifurcated by type of processing e.g. Waste to Energy (Tonnage and Power Output), Compost Plants (Windrow, Vermi, Decentralized, FV Composting), Biomethanation, MRF etc.	• Total Capacity of Existing MSW Processing Facilities (Including MRFs) - 8224.475TPD (72.51%) • Total MSW Processing (Fresh MSW + MRFs) - 7554.565 TPD (66.61%) • Disposal through Compost Pits (258 No) - 549.42 TPD • Recycling through MRFs - 306 TPD • Gap in MSW Processing Capacity - 3117.525 TPD (27.5%) • Gap in MSW Processing - 3787.435TPD (33.4%) • Capacity of 4 Existing WTE Plants - 6550 TPD (Power generation capacity – 84 MW) • One Operational Centralised Compost Plants - 700 TPD [200 TPD at Okhla Closed due to up-gradation into Bio-CNG plant of 300 TPD] • 08 Bio-methanation Plants of 5 TPD each - 40 TPD [Not Operational] • 20 Decentralized Composter Plants of 1 TPD each - 20 TPD

2.	Action Plan to bridge gap between Installed Capacity and Current Utilization of Processing Facilities (if Gap > 20%)	Not Applicable since installed capacity of Existing MSW Processing Facilities in Delhi is being utilized.	
3.	No. and capacity of C&D Waste Processing Plants in TPD (Existing, Proposed and under construction)	- Existing operational C&D Waste Processing Facilities Capacity - 5150 TPD - Proposed New C&D Waste Processing Facilities Capacity - 1000 TPD Existing operational C&D Waste Processing Facilities are located at (i) Jahangirpuri (Burari) (2000 TPD) (ii) Rani Khera (1000TPD) (iii) Shastri Park (1000 TPD) (iv) Backarwala (1000 TPD) (v) Rani Khera (Mundka) (150 TPD) Proposed C&D Waste Processing Facility (One No): At Tehkhand Okhla of 1000 TPD capacity. However since land allotted by DDA is part of morphological ridge, therefore DDA has been asked to provide alternative land.	
4.	Total No. of Wards, No. of Wards having Door to Door Collection Service. No. of Wards practicing segregation at source	No. of Wards - 272 [MCD-250, DCB-08 & NDMC-14 circles] Door to Door collection in all wards and circles of MCD, NDMC & DCB. Segregation of Waste : - NDMC - 100% (in all 14 Circles) - DCB - 90 % in Civilian Area - MCD - 100 % (in 12 Wards) 80 - 100% (in 70 Wards) 60-80% (in 12 Wards) 40-60% (in 81 Wards) 20-40% (in 46 Wards) 10-20% (in 29 Wards) MCD has given timeline of December, 2024 for 100 % segregation of MSW at source.	
5.	Details of MSW Treatment Facilities proposed and under construction (No., Capacity and technology)	Proposed Waste Processing & Disposal Facilities in Delhi is given at <u>Annexure -5</u>	
6.	No. and Area (in Acres) of uncontrolled garbage dumpsites and Sanitary Landfills.	Name of Dumpsite	Dumpsite Area in Acres (As per Drone Survey in June, 2022)
		Ghazipur Dump Site	75.08
		Bhalaswa Dump Site	78.47
		Okhla Dump Site	62.74
7.	No. and Area (in Acres) of Legacy Waste within 1 km buffer of both side of the rivers	Nil	
8.	No. of Drains falling into rivers and no. of drains having floating racks/screens installed to prevent solid waste from falling into the rivers:	22 Drains out falling into river Yamuna. I&FC Department has provided Floating Rafters in its 2 major Drains (Najafgarh & Shahdara Outfall Drains) to prevent solid waste falling into the river.	

Status of ULB wise Management of Solid Waste.

Please Refer **Annexure – 5** (Existing & Proposed Municipal Solid Waste Processing Facilities in Delhi)

VI. Bio-medical Waste Management:

- Total Bio-medical Waste Generation : **29.155 TPD** (Average of Bio-medical waste generation excluding Covid waste)
- No. of Hospitals and Health Care Facilities : **10591**
- No. of Beds with HCEs : **60344**
- Status of Treatment Facility/ CBMWTF : Treatment & Disposal through existing 2 CBMWTFs
There are following 2 CBMWTFs having Capacity of about 63 TPD for collection and Treatment of the Bio-medical waste generated from the Health Care Establishments in Delhi:
 1. M/s Biotic Waste Solutions Pvt. Ltd., 46 SSI Industrial Area, G.T. Karnal Road, Delhi -110033
 2. M/s SMS Water Grace BMW Pvt. Ltd., Nilothi Sewage Treatment Plant Complex of DJB, Nilothi, Delhi -110041.

Both the CBMWTFs are having Incinerators, Autoclaves & Shredders for the treatment of Bio Medical Waste collected from the Health Care Establishments in Delhi and have installed Air Pollution Control System and Online Monitoring System. Bio-medical Waste including COVID-19 waste is being dealt as per the provisions of the Bio Medical Waste Management Rules, 2016 and Guidelines issued by CPCB from time to time.

VII. Hazardous Waste Management:

- Total Hazardous Waste Generation : 4260.587MT/year (11.67 TPD)
- No. of Industries generating Hazardous Waste : 2714
- Treatment Capacity of all TSDF
(There is Only one TSDF in Delhi at Bawana) : 178 TPD (Secured Landfill)
54.79 TPD (Landfill after Treatment /Stabilisation)
12 (Incineration)
- Average Quantity of Hazardous Waste reaching TSDF: 20.43 TPD in February, 2024.
- **TSDF for Hazardous Waste at Bawana :**

Common Hazardous Waste, Treatment, Storage & Disposal Facility (TSDF) has been developed at Bawana in Delhi. Consent to operate under the Air & Water Acts and Authorisation under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 have been issued by DPCC to the Project Proponent on 04.03.2022 for Secured Land Fill (SLF), Incinerator and Associated Activities. TSDF is in operation.

VIII. Plastic Waste Management:

- Total Plastic Waste generation: 1105 TPD (About 9.7 % of Total MSW)
- Processing of Plastic Waste : 858 TPD (77.6 %)
- Gap in Processing : 247 TPD (22.4 %)
- Registration under the Plastic Waste Management Rules, 2016 (as amended) issued to 2176 units as briefed below:
 - Producers : 317
 - Importer : 1418
 - Brand Owner : 14
 - Plastic Waste Processor : 418

IX. Details of Alternate Treatment Technology being adopted by the State/UT:

In-situ Bioremediation / Phytoremediation of Sewage in Drains:

- Integrated Drain Management Cell (IDMC) headed by Chief Secy, GNCTD has been constituted vide order dated 17.03.2020 for remediation and management of all drains of Delhi as per the orders of Hon'ble NGT in OA No.06/2012.
- IDMC is having members from all the Drain Owning Agencies (DOAs).
- Meetings of IDMC are held and 16 Meetings have been held so far. Minutes of the last meeting (16th) held on 29.01.2024 is at **Annexure- 6**.
- DOAs have submitted / are submitting their Action Plan with time line subject to availability of fund.

X. Identification of Polluting Sources including Drains contributing to river pollution and action as per NGT order on in-situ treatment:

Refer Information provided at IX regarding In-situ Bioremediation / Phytoremediation of Sewage in Drains.

Prevention of Dumping of Solid Waste in Drains:

Directions issued by Chief Secretary vide order dated 09.01.2019 and Urban Development Department, GNCTD vide order dated 15.01.2019 for prevention of the dumping of solid waste in the drains are to be complied by all the Drain Owning Agencies in Delhi. The matter is being coordinated by the Urban Development Department, GNCTD.

XI. Details of Nodal Officer appointed by Chief Secretary in the State / UT:

- Chief Secretary, GNCTD is taking meetings regularly with the concerned departments to review the progress w.r.t. various projects and matters related to control of pollution in river Yamuna in Delhi including below mentioned NGT cases.
- Vide order dated 09.01.2023 in OA. No. 21/2023 in the matter of Ashwani Yadav Vs. Govt. of NCT of Delhi (Now being dealt in O.A. No. 06 of 2012 in the matter of "Nizamuddin West Association Vs. Union of India and Ors"), Hon'ble NGT has constituted a High Level Committee (HLC) of concerned authorities in Delhi with the Chief Secretary, Delhi, as Convener; and consisting of Secretaries / HODs of various Ministries/ Departments.
- High Level Committee has prepared Department wise detailed Action Plan for Rejuvenation of river Yamuna including Nodal Officer for each project after its first meeting on 20.01.2023 and submitted to Hon'ble NGT on 31.01.2023.

XII. Details of Meetings carried under the Chairmanship of Chief Secretary in the State / UT:

The matter related to control of pollution in river Yamuna is being monitored by Chief Secretary through various meetings e.g. meetings of Integrated Drain Management Cell (IDMC), Meetings on the Interceptor Sewer Project (ISP) and Meetings related to above mentioned NGT cases related to control of pollution and rejuvenation of river Yamuna in Delhi including above mentioned order dated 09.01.2023 in OA. No. 21/2023 in the matter of Ashwani Yadav Vs. Govt. of NCT of Delhi (Now being dealt in O.A. No. 06 of 2012 in the matter of "Nizamuddin West Association Vs. Union of India and Ors").

Meetings of High Level Committee were held on 20.01.2023, 14.02.2023, 14.03.2023, 21.04.2023, 09.06.2023, 10.08.2023, 10.10.2023, 10.01.2024 & 20.02.2024 w.r.t NGT Case OA No. 21 / 2023 and Department wise detailed Action Plan for Rejuvenation of river Yamuna has been submitted to Hon'ble NGT on 31.01.2023.

Status Reports were also filed in the aforementioned matter before the Hon'ble National Green Tribunal on 31.01.2023, 05.07.2023, 16.10.2023, 21.12.2023 & 12.02.2024.

XIII. Latest Water Quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river :

Water Quality of River Yamuna at 8 Locations for the samples collected by DPCC Water Laboratory in the Month of February, 2024 is at **Annexure-7**.

Water Quality of major Drains for the samples collected by DPCC Water Laboratory in the Month of February, 2024 is at **Annexure-8**.

Ground Water Quality near the 3 Dumpsites (Bhalaswa, Ghazipur & Okhla) and Engineered Sanitary Landfill at Bawana for the samples collected in December, 2021 has already been provided with the Monthly Progress Report of March, 2022.

XIV. Ground Water Regulation:

Ground water extraction and management in NCT of Delhi is regulated as per the provisions of the Notification Dated 12.07.2010 issued by Environment Department, Govt. of NCT of Delhi. As per the said Notification, it is mandatory to take permission of the Competent Authority, i.e., DJB & NDMC (as per area of jurisdiction) prior to groundwater drawl. The Deputy Commissioner (Revenue) / District Magistrate (Revenue) of each revenue area, Govt. of NCT of Delhi, has been appointed as the "Authorized Officer" and delegated with the power of dealing with issues such as checking violation, sealing illegal wells etc. including grievance redressal related to ground water, based on the recommendations of the Advisory Committee, as constituted vide said Notification dated 12.07.2010.

The issue of illegal extraction of ground water is being overseen by Hon'ble NGT in OA No 25/2019 (Abdul Farukh Vs GNCTD and Ors). The said matter deals with closure of 19661 illegal bore wells as per the list submitted by DJB to Hon'ble NGT. As per the decision taken by the Chief Secretary, GNCTD, Revenue Department is sealing the illegal bore wells based on the lists provided by DJB. DPCC has already imposed Environmental Compensation (EC) based on the formula devised by CPCB for illegal extraction of ground water for different purposes.

Out of list of 19661 illegal Borewells provided by DJB, 11364 illegal Borewells have been sealed by Revenue Deptt. till 25.10.2021. Environmental Compensation of Rs. 70.658 Crore has been imposed by DPCC on 19661 Units. Environmental Compensation received by DPCC is Rs. 54.30 Lakh till 25.10.2021.

XV. Good Irrigation Practices being adopted by the State:

Not applicable in case of NCT of Delhi since there is very less Agricultural Land available however Farmers are being made aware of the following good irrigation practices for water conservation by Development Department, Govt. of NCT of Delhi :-

1. Farmers are being advised to adopt inter-cropping and multiple-cropping to get maximum returns per unit of area and per unit of time with optimum use of water.
2. Farmers are being advised to grow crop which requires less water.
3. Farmers are being advised to adopt Sprinkler and drip irrigation system to irrigate their crops for conservation of water.
4. Farmers are being advised to use water, as per crop-wise prevailing package of practices to conserve water.
5. Farmers are being advised to conserve rain water, by adopting deep ploughing and bunding etc. of their fields for conservation of water.

XVI. Rain Water Harvesting:

Progress of Rain Water Harvesting System installed / monitored by DJB (As on 04.01.2024)

S. No.	Departments	Total	Installed	Target to be installed upto 31.03.2024	Remarks
1.	DJB Installations	594	594	0	
2.	By DJB for other Departments	89	89	0	
3.	Monitored by DJB for other Government Departments	4275	2355	1920	The Status Report as on 01.03.2024 has been submitted as per data provided by the other departments of GNCTD.
4.	Schools	4730	4083	647	
Total		9688	7121	2567	

They need to be kept in operational state by the agency concerned.

XVII. Demarcation of Floodplain and Removal of Illegal Encroachments:**(i). Demarcation of 1 in 25 years Flood Plains & Fixing up of Bollards and Fencing :**

The demarcation of 1: 25 years flood plain of River Yamuna pertains from Wazirabad to Jaitpur on both banks. 100% work for demarcation of flood plains completed. 591 Bollards (marked with GPS Coordinates), 375 Flag Posts & 27 sign boards for the entire stretch from Wazirabad barrage to Jaitpur have been installed.

(ii). Engagement of Private Security to stop illegal Dumping:

125 Security Guards have been deployed by DDA round the clock in three shifts at vulnerable points, with 4 patrolling vehicles in the Yamuna Flood Plain area from Wazirabad Barrage to Okhla Barrage to check illegal dumping of malba and to prevent encroachment. GPS monitoring of security guards & patrolling vehicles is being done.

(iii). Installation of Electronic Surveillance System:

93 No. CCTV cameras have been installed at 27 locations from Wazirabad Barrage to Okhla Barrage to check the illegal dumping of Malba in the Yamuna Flood Plain area.

(iv). Demolition Program & Removal of Encroachment from the Flood Plain:

661.22 Hectares area has been retrieved from the encroachment by DDA in the floodplains of River Yamuna. Details of removal of encroachment by DDA are given at Annexure- 09

(v). Removal of C&D Waste :

57,060 metric tonnes of C&D waste lying in floodplain has been lifted to IL&FS site or utilized for development of Yamuna Project by DDA. Details of Challans issued by DDA as on 29.02.2024 are given at Annexure- 10

(vi). Restoration and Rejuvenation of the Floodplains of River Yamuna

DDA is going ahead with the Restoration and rejuvenation of floodplains of River Yamuna. The complete stretch of Zone-'O' falling under the jurisdiction of DDA has been subdivided into 10 projects including the development of Bio-diversity Park near Kalindi Kunj Colony. Brief status of 10 projects taken up / to be taken up by DDA for development of Yamuna River Front (Restoration and Rejuvenation of River Yamuna Flood Plains Status as on 29.02.2024) is at Annexure -11

XVIII. Maintaining Minimum e-flow of River:

Minimum Environmental Flow for the dilution of the polluted water in river Yamuna in Delhi is required to meet the desired water quality levels in river Yamuna for bathing purpose i.e. BOD < 3 mg/l & DO > 5 mg/l.

To assess the minimum required environmental flow of river Yamuna for stretch between Hathini Kund to Okhla, a comprehensive study was assigned by NMCG to National Institute of Hydrology (NIH), Roorkee on 24.12.2018.

Final Draft Report has been submitted by NIH to NMCG. E-flow of 23 cumecs in the lean season has been recommended in the NIH study. Ministry of Jal Shakti (MoJS) is to take necessary action for maintaining the E-flow as recommended in the said Report of NIH. MoJS / NMCG has observed that the water sharing agreement of 1994 among the riparian states of Uttarakhand, HP, UP, Haryana, Rajasthan and NCT Delhi is due for revision only in 2025 unless any of the states so demand implying that no revision of water sharing will be possible to achieve the E-flow in river Yamuna.

XIX. Plantation activities along the river:

(i) Details of Old Plantation at Garhi Mandu and Sonia Vihar:

- Total 384.60 ha of land has been handed over by DDA to Forest Department, Delhi in phases during the period w.e.f. 1975 to 2022 for plantation purpose.
- In 384.60 ha of land 2,41,184 saplings have been planted by Forest Department, Delhi.

(ii) Details of plantations under DPTA, 1994 against tree felling permissions issued in various projects:

- Total 139.5 ha of land has been handed over by DDA to Forest Department, Delhi for the purpose in phases during the period w.e.f. 2014 to 2020 for plantation purpose.
- In 139.5 ha of land 1,70,876 saplings have been planted by Forest Department, Delhi.

(iii) Details of plantations carried out as Compensatory Afforestation against the Forest land diverted under Compensatory Afforestation Act (FCA), 1980:

- Total 105,368 ha of land has been handed over by DDA to Forest Department, Delhi for the plantation purpose in phases during the period w.e.f. 2014 to 2021.
- Out of 105,368 ha land, 102,418 ha of land has been afforested with 1,29,002 plant saplings by Forest Department, Delhi.

(iv) Plantation during World Forestry Day, 2023:

- 83,593 plants and 4,50,000 grass have been planted in 5 km stretch of DDA Land from Garhi Mandu to Shastri park near Yudhister setu along Yamuna Flood Plains (Not handed over to Forest Department)

(v) Plantation during April-June, 2023 under Yamuna Cleaning Drive:

- Plantation of 1,805 saplings on island 1, 2, and 3.
- Plantation of 1,400 saplings at Shastri Park Metro Station.
- Plantation of 2,500 saplings at Garhi Mandu track.
- Plantation of 3,333 saplings at Garhi Mandu walkway.
- Plantation of 450 saplings around pond near wazirabad near Signature Bridge.
- Plantation of 7000 saplings along Yamuna path.

- Total land handed over till date = 629.468 ha
- The area that has been afforested till date = 626ha
- Total no. of saplings planted= 6,41,143
- Total no. of grass planted= 4,50,000

XX. Development of Biodiversity Park (on Yamuna Flood Plain) :

- **Yamuna Biodiversity Park** is already existing and located in Jagatpur Khadar Yamuna Flood Plains in 9770 Hectares (upstream of Wazirabad).
- **South Biodiversity Park** is being developed by **Delhi Development Authority** in the **115 Hectares area in Yamuna Flood Plains near Kalindi Colony**. The project has been awarded to CEMDE on 13.12.2019 and the work is under progress. 02 out of 11 Wet Lands to be constructed are functional.

Details of Reuse of Treated Waste Water and the details of tanker deployment by various stakeholders departments for the month of February, 2024 is at **Annexure -12**

Vide Order dated 25.02.2021 in OA No. 386/2017 in the matter of "Rear Admiral A P Revil IN (Retd.) Vs Delhi Jal Board & Ors." regarding use of treated water for gardening in public parks **Hon'ble National Green Tribunal** directed to ensure that fresh water is not used for gardening in public parks by the DDA and the South Delhi Municipal Corporation and instead only treated water is so used. The order of the Tribunal dated 27.01.2021 in OA No. 6/2012, Manoj Mishra v. Union of India & Ors. is to be duly followed. DJB is to ensure supply of such treated water with adequate pressure and wherever piped supply is not available, supply may be ensured by tankers.

DPCC vide letter dated 09.03.2021 sent the above order to all the park Owning Agencies & concerned Authorities for taking necessary action and ensuring that only treated water [from STPs etc] is used in the parks under the jurisdiction of their departments and fresh water is not used for gardening in public parks.

Chief Secretary, Delhi took a meeting on 13.04.2021 and directed that a long term perspective plan should be prepared for the optimum use of treated effluent in Delhi, which must include the maximum utilization of treated water for horticulture purpose including the coverage of all parks and gardens in Delhi, to replace the extraction of precious ground water through bore-wells for this purpose. Delhi Jal Board is to carry out the survey, preparation of DPR, cost estimates, etc. of the complete scheme by providing piped network up to each park. Accordingly M/s WAPCOS has been directed by DJB to submit the revised proposal for feeding through pipe line network up-to all parks provided by the stakeholders. M/s WAPCOS is carrying out survey work.

XXI. Model River being adopted by the State & Action Proposed for achieving the bathing quality standards:

In case of Delhi there is only one river i.e. Yamuna river and efforts are being made to comply with the directions of Hon'ble NGT in OA No. 673/2018, OA No. 06/2012 in the matter of Manoj Mishra Vs. Union of India & others and OA 21/2023 in the matter of Ashwani Yadav Vs. Govt. of NCT of Delhi [Now OA No. 06/2012 (Nizamuddin West Association Vs Union of India & Ors)] . In absence of minimum Environmental Flow of river Yamuna in Delhi it is very difficult to achieve the bathing quality standards.

XXII. Status of Preparation of Action Plan by the 13 Coastal States: Not applicable in case of Delhi

XXIII. Regulation of Mining Activities in the State/UT: Not applicable in case of Delhi

XXIV. Action against identified polluters, law violators and officers responsible for failure for vigorous monitoring:

DPCC takes action against the violating Industries/ Units including Water Polluting Industries /Units and imposes Environmental Compensation (EC) on the Polluter Pays Principle regularly.

A Joint Team consisting of MCD, DPCC, Revenue Dept., Power Companies, DJB has been constituted for taking action taken against Dyeing units in non-conforming areas of Delhi and inspections were carried out from 28.04.2023 to 04.02.2024 and action taken is briefed below:

- Total No. of Dyeing industries found during inspection : 335
- No. of Industries / Units Close down / Sealed / Electricity Disconnected : 139

DPCC has also issued directions on 22.06.2023 to Local Bodies, DDA, DJB & Discoms (BSES/NDPL) for closure / sealing & disconnection of Electricity and Water Supply of all Dyeing units and Jeans /Denim washing units operating outside the Approved Industrial Areas /Industrial Estates / Redevelopment Areas or operating without mandatory consent of DPCC.

Details of the Operational STPs of Delhi Jal Board and Compliance Status w.r.t. Prescribed Standards in February, 2024

S. No.	Name of STP	Capacity (in MGD)	Capacity Being Utilized (in MGD)	Design Parameters BOD/TSS (in mg/l)	Date of Sampling	Compliance status [Prescribed Standards by DPCC : 10 pH 6.5 - 9.0, 1 TSS < 10 mg/l, 1 BOD $\leq$ 10 mg/l, 1 COD $\leq$ 50mg/l, $1\text{ Ammonical Nitrogen}$ $\leq$ 5mg/l, 1 Total Nitrogen $\leq$ 10 mg/l, 1 Phosphate $(\text{PO}_4 - \text{P})$ $\leq$ 2 mg/l, 1 fecal Coliform (FC) $(\text{MPN} / 100\text{ml})$ < 230] 1
1.	Mehrauli	5	5.61	20/30	12.02.2024	Not Meeting the Prescribed standard in respect of TSS (36 mg/l), COD (56 mg/l) and BOD (19 mg/l). However, not meeting the Design Parameters (BOD/TSS:20/30).
2.	Okhla, Phase-II	12	16.71	30/50	05.02.2024	Not Meeting the Prescribed standard in respect of TSS (16 mg/l) However meeting the Design Parameters (BOD/TSS:30/50).
3.	Okhla Phase-III	37	38.54	30/50	05.02.2024	Not Meeting the Prescribed standard in respect of TSS (38 mg/l) and COD (18 mg/l). However meeting the Design Parameters (BOD/TSS:30/50).
4.	Okhla Phase-IV	45	49.58	30/50	05.02.2024	Not Meeting the Prescribed standard in respect of TSS (36 mg/l) and BOD (19 mg/l) COD (56.1). However meeting the Design Parameters (BOD/TSS:30/50).
5.	Okhla Phase-V	16	16.45	30/50	05.02.2024	Meeting the Prescribed standards.
6.	Okhla Phase-VI	30	31.36	20/30	05.02.2024	Meeting the Prescribed standards.
7.	Molar Band	0.66	0.56	30/50	05.02.2024	Not Meeting the Prescribed standard in respect of TSS (30 mg/l), COD (21 mg/l), COD (54 mg/l). However meeting the Design Parameters (BOD/TSS:30/50).
8.	Sen Nursing Home Nallah	2.2	2.62	10/15	09.02.2024	Meeting the Prescribed standards.
9.	Vasant Kuri (Old) Phase-I	2.2	1.65	30/50	12.02.2024	Not Meeting the Prescribed standard in respect of TSS (30 mg/l), BOD (21 mg/l), COD (64 mg/l) and Dissolved Phosphate as P (2.9 mg/l). However meeting the Design Parameters (BOD/TSS:30/50).
10.	Vasant Kuri (New) Phase-II	3	1.68	30/50	12.02.2024	Not Meeting the Prescribed standard in respect of TSS (36 mg/l) and COD (26 mg/l), COD (56 mg/l). However meeting the Design Parameters (BOD/TSS:30/50) and Dissolved Phosphate as P (2.2 mg/l).
11.	Chitorni	5	2.52	30/50	12.02.2024	Not Meeting the Prescribed standard in respect of TSS (28 mg/l), BOD (17 mg/l). However meeting the Design Parameters (BOD/TSS:30/50).
12.	Delhi Gate Nallah (Old) Phase-I	2.2	2.50	10/15	09.02.2024	Meeting the Prescribed standards.
13.	Delhi Gate Nallah (New) Phase-II	15	16.58	10/10	09.02.2024	Meeting the Prescribed standards.
14.	Kondli Phase - I	10	9.99	10/10	09.02.2024	Meeting the Prescribed standards.

Details of the Operational STPs of Delhi Jal Board and Compliance Status w.r.t. Prescribed Standards in February, 2024

S. No.	Name of STP	Capacity (in MGD)	Capacity Being Utilized (in MGD)	Design Parameters BOD/TSS (in mg/l)	Date of Sampling	Compliance status
						[Prescribed Standards by DCC : $(pH \ 6.5 - 9.0), (TSS \leq 10 \text{ mg/l}), (BOD \leq 10 \text{ mg/l}), (COD \leq 50 \text{ mg/l}), (Ammonical Nitrogen \leq 5 \text{ mg/l}), (Total Nitrogen \leq 10 \text{ mg/l}), (Phosphate (PO}_4\text{-P) \leq 2 \text{ mg/l}), (Fecal Coliform (FC) (MPN / 100ml) < 230)]$
15.	Kondli Phase - II	25	24.64	10/10	09.02.2024	Meeting the Prescribed standards.
16.	Kondli Phase - III	10	9.99	10/10	09.02.2024	Meeting the Prescribed standards.
17.	Kondli Phase - IV	45	27.23	20/30	09.02.2024	Not Meeting the Prescribed standard in respect of TSS (28 mg/l), COD (60 mg/l) and BOD (14 mg/l). However meeting the Design Parameters (BOD/TSS:20/30).
18.	Chilla	9	8.36	10/10	09.02.2024	Meeting the Prescribed standards.
19.	Yamuna Vihar Phase-I	10	9.55	30/50	14.02.2024	Not Meeting the Prescribed standard in respect of TSS (22 mg/l) Dissolved Phosphate as P (2.2 mg/l). However meeting the Design Parameters (BOD/TSS:30/50).
20.	Yamuna Vihar Phase-II	10	8.55	30/50	14.02.2024	Not Meeting the Prescribed standard in respect of TSS (18 mg/l), However meeting the Design Parameters (BOD/TSS:30/50)
21.	Yamuna Vihar Ph-III	25	24.47	20/30	14.02.2024	Not Meeting the Prescribed standard in respect of TSS (30 mg/l) and BOD (16 mg/l) . However meeting the Design Parameters (BOD/TSS:20/30).
22.	Akshardham / Common Wealth Games Village	1	0.05	02/01	09.02.2024	Meeting the Prescribed standards.
23.	Coronation Pillar Phase-I&II	20	10.10	30/50	13.02.2024	Not Meeting the Prescribed standard in respect of TSS (30 mg/l), BOD (20 mg/l) and COD (64 mg/l) . However meeting the Design Parameters (BOD/TSS:30/50).
24.	Coronation Pillar Phase-III	10	2.00	30/50	13.02.2024	Not Meeting the Prescribed standard in respect of TSS (mg/16), BOD (14 mg/l) & COD (60 mg/l) . However meeting the Design Parameters (BOD/TSS:30/50).
25.	New Coronation Pillar	70	63.70	10/10	13.02.2024	Not Meeting the Prescribed standard in respect of TSS (28 mg/l), BOD (16 mg/l) & COD (64 mg/l) .
26.	Narela	10	3.11	30/50	20.02.2024	Not Meeting the Prescribed standard in respect of TSS (26 mg/l), BOD (18 mg/l) and COD (60 mg/l). However meeting the Design Parameters (BOD/TSS:30/50).
27.	Rithala Phase -II	40	37.04	15/20	20.02.2024	Meeting the Prescribed standards.

Details of the Operational STPs of Delhi Jal Board and Compliance Status w.r.t. Prescribed Standards in February, 2024

S. No.	Name of STP	Capacity (in MGD)	Capacity Being Utilized (in MGD)	Design Parameters (in mg/l)	Date of Sampling	Compliance status
						Compliance status Prescribed Standards by DPCC : $[pH \ 6.5 - 9.0], [TSS \leq 10 \text{ mg/l}], [BOD \leq 10 \text{ mg/l}], [COD \leq 50 \text{ mg/l}], [Ammonical Nitrogen \leq 3 \text{ mg/l}], [Total Nitrogen \leq 10 \text{ mg/l}], [Phosphate (PO_4 - P) \leq 2 \text{ mg/l}], [Faecal Coliform (FC) (MPN / 100ml) \leq 230]$
28.	Robini	15	8.79	30/50	20.02.2024	Not Meeting the Prescribed standard in respect of TSS (26 mg/l), BOD (18 mg/l), COD (52 mg/l) & Dissolved Phosphate as P (2.5 mg/l). However meeting the Design Parameters (BOD/TSS:30/50).
29.	Keshopur Phase - I (New)	12	9.80	20/30	13.02.2024	Not Meeting the Prescribed standard in respect of TSS (18 mg/l), BOD (12 mg/l) & COD (52 mg/l). However meeting the Design Parameters (BOD/TSS:20/30).
30.	Keshopur Phase-II	20	10.76	30/50	13.02.2024	Not Meeting the Prescribed standard in respect of TSS (26 mg/l), BOD (19 mg/l) and COD (52 mg/l). However meeting the Design Parameters (BOD/TSS:30/50).
31.	Keshopur Phase - III	40	34.29	30/50	13.02.2024	Not Meeting the Prescribed standard in respect of TSS (36 mg/l), BOD (21 mg/l) and COD (64 mg/l). However meeting the Design Parameters (BOD/TSS:30/50).
32.	Nitoli Phase-I	40	20.43	30/50	16.02.2024	Not Meeting the Prescribed standard in respect of TSS (34 mg/l), BOD (25 mg/l) and COD (72 mg/l). However meeting the Design Parameters (BOD/TSS:30/50).
33.	Nitoli Phase-II	20	19.97	10/16	16.02.2024	Meeting the Prescribed standards.
34.	Pappankalan Phase - I	20	9.28	30/50	16.02.2024	Not Meeting the Prescribed standard in respect of TSS (26 mg/l), BOD (20 mg/l), COD (60 mg/l) & Dissolved Phosphate as P (2.6 mg/l). However meeting the Design Parameters (BOD/TSS:30/50).
35.	Pappankalan Phase - II	20	19.97	10/10	16.02.2024	Meeting the Prescribed standards.
36.	Najafgarh	5	2.92	30/50	16.02.2024	Not Meeting the Prescribed standard in respect of TSS (30 mg/l), COD (80 mg/l) and BOD (18 mg/l). However meeting the Design Parameters (BOD/TSS:30/50).
37.	Kapashera	5	4.93	10/10	12.02.2024	Meeting the Prescribed standards.
	Total	667.26 MGD				

Note:-

- As per the Analysis Reports of DPCC Water Laboratory for February, 2024, out of 37 operational STPs of DJB, 14 STPs were meeting the standards prescribed by DPCC and 23 STPs were found not meeting the prescribed standards.

Upgradation/ Augmentation of Existing STPs

(Interventions –for Existing STPs to achieve BOD: TSS 10/10)

[Integrated Fixed Film Activated Sludge (IFAS), Increased Aeration, Disc Filter, UV Disinfection & Odour Control]

S. No.	Name of STP	Existing Capacity (In MGD)	Enhanced Capacity (In MGD)	Status (Cumulative Progress as on 29.02.2024)	Timelines
1.	Rithala Phase –II	40	40	100%	Completed
2.	Kondli Phase-IV	45	45	84 %	March,2024 (Earlier Timeline Oct, 23)
3.	Pappan Kalan Phase- I	20	30	37%	March,2024
4.	Nilothi Phase –I	40	60	37%	(Earlier Timeline December, 2023)
5.	Najafgarh	5	5	56%	
6.	Keshopur Phase –II	20	20	56%	
7.	Keshopur Phase-III	40	60	56%	
8.	Rohini Sector 25	15	25	45%	
9.	Narela	10	15	45%	
10.	Coronation Pillar Phase -I & II	20	20	45%	
11.	Coronation Pillar Phase –III	10	10	45%	
12.	Okhla Phase- V	16	16	The case has been put on hold due to scarcity of funds.	Dec.,2024 (Earlier Timeline Jan. 2024)
13.	Mehrauli	5	7.5		March, 2025
14.	Ghitorni	5	7.5		(Earlier Timeline January, 2024)
15.	Vasant Kunj	5	7.5		
16.	Yamuna Vihar Phase– I	10	15	4th consecutive call of tender has been done, in the recent the competent authority has been decided to discharge the previous tender and re-invite it with open technology. The Tender is likely to be invited by this week.	March, 2025 (Earlier Timeline June, 2024)
17.	Keshopur Phase- I	12	18		Dec. 2024 (Earlier Timeline June, 2024)
18.	Yamuna Vihar Phase – III	25	55	File has been sent to the competent authority for administrative approval of Estimate.	March, 2025 (Earlier Timeline June, 2024)
	Total	343	456.5	Addition of 113.5 MGD by March, 2025.	

Annexure-3
Information about 22 Drains out falling into River Yamuna in Delhi, their Water Quality in February, 2024 and Proposed Action for Tapping of Flow

S. Drain No. Owning Agency	Name of Drain	Flow in MLD (As per DJB)			Water Quality of Discharge into River Yamuna (February, 2024) (As per DPCC Lab Report)				Point of Sampling (Before Outfall into river)	Status of Drain (Tapped / Partially Tapped / Untapped)	STP in which tapped waste water is treated / proposed to be treated STP in which tapped waste water is treated				Proposed Action/ Timeline for Tapping of Drain
		Total Waste Water	Treated Waste water	Untreated Waste water	pH (5.5 - 9)	TSS (mg/l) (100)	COD (mg/l) (250)	BOD (mg/l) (30)			Name	Compliance (As per DPCC, Feb, 2024 w.r.t Prescribed Standards)	End Point of Disposal		
1	MCD Mercalf House Drain	17.25 (3.79 MGD)	0	17.25					No Flow	28.6803991, 77.2291258	Tapped	Treated in Okhla STP (Phase II/III/ IV/V/VI)	Okhla Ph V, VI: meeting, Okhla Ph- II, III IV: not meeting	Agra canal	Drain Already tapped
2	Khyber Pass Drain	1.7 (0.37 MGD)	0	1.7					No Flow	28.6953254, 77.2279064	Tapped	Treated in Okhla STP (Phase II/III/ IV/V/VI)	Okhla Ph V, VI: meeting, Okhla Ph- II, III IV: not meeting	Agra canal	Drain Already tapped
3	Sweeper Colony Drain	8.6 (1.89 MGD)	0	8.6					No Flow	28.6900959, 77.2282293	Tapped	Treated in Okhla STP (Phase II/III/ IV/V/VI)	Okhla Ph V, VI: meeting, Okhla Ph- II, III IV: not meeting	Agra canal	Drain Already tapped
4	Magazine Road Drain	7.8 (1.72 MGD)	0	7.8					No Flow	28.6977573, 77.2274876	Tapped	Treated in Okhla STP (Phase II/III/ IV/V/VI)	Okhla Ph V, VI: meeting, Okhla Ph- II, III IV: not meeting	Agra canal	Drain Already tapped
5	Tonga Stand Drain	7.8 (1.72 MGD)	0	7.8					No Flow	28.6679212, 77.2407143	Tapped	Treated in Okhla STP (Phase II/III/ IV/V/VI)	Okhla Ph V, VI: meeting, Okhla Ph- II, III IV: not meeting	Agra canal	Drain Already tapped
6	Civil Mill Drain	14.68 (3.23 MGD)	0	14.68					No Flow	28.6507572, 77.2525033	Tapped	Treated in Okhla STP (Phase II/III/ IV/V/VI)	Okhla Ph V, VI: meeting, Okhla Ph- II, III IV: not meeting	Agra canal	Drain Already tapped

S. No.	Drain Owning Agency	Name of Drain	Flow in MLD (As per DIB)			Water Quality of Discharge into River Yamuna (February, 2024) (As per DPCC Lab Report)				Point of Sampling (Before Outfall into river) (Latitude, Longitude*)	Status of Drain (Tapped / Partially Tapped / Untapped)	STP in which tapped waste water is treated / proposed to be treated			Proposed Action/ Timeline for Tapping of Drain
			Total Waste Water	Treated Waste water	Untreated Waste water	pH	TSS (mg/l)	COD (mg/l)	BOD (mg/l)			Name	Compliance (As per DPCC, Feb. 2024 w.r.t Prescribed Standards)	End Point of Disposal	
7	MCD	Moat Drain (Vijay Ghat)	-	0	0	5.5 - 9	(100)	(250)	(30)	Dry	Tapped (no flow at present)	Treated in Okhla STP (Phase II/III/IV/V/VI)	Okhla Ph V, VI: meeting Okhla Ph- II, III IV: not meeting	Agra canal	Drain Already tapped
8		Drain No.14	25.87 (5.69 MGD)	0	25.87			No Flow		28.6115925, 77.2517744	Tapped	Treated in Okhla STP (Phase II/III/IV/V/VI)	Okhla Ph V, VI: meeting Okhla Ph- II, III IV: not meeting	Agra canal	Drain Already tapped
9		Telkhand Drain	39.74 (8.74 MGD)	0	39.74						Tapped	Treated in Okhla STP (Phase II/III/IV/V/VI)	Okhla Ph V, VI: meeting Okhla Ph- II, III IV: not meeting	Agra canal	Drain Already tapped
10		Abul Fazal Drain	7 (1.54 MGD)	0	7	7.7	84	256	58	28.5458359, 77.7982617	To be tapped	Proposed to be treated in Okhla STP (Phase II/III/IV/V/VI)	Okhla Ph V, VI: meeting Okhla Ph- II, III IV: not meeting	Agra canal	Sewage to be tapped after completion of Bafis House Sewage scheme, Timeline: March 2024

S. No. Drain No. Owner Agency	Name of Drain	Flow in MLD (As per DJB)			Water Quality of Discharge into River Yamuna (February, 2024) (As per DPCC Lab Report)				Point of Sampling (Before Outfall into river) (Latitude & Longitude)	Status of Drain (Tapped / Partially Tapped / Untapped)	STP in which tapped waste water is treated / Proposed to be treated			Proposed Action/ Timeline for Tapping of Drain
		Total Waste Water or	Treated Waste water	Untreated Waste water	pH (5.5 - 9)	TSS (mg/l) (100)	COD (mg/l) (250)	BOD (mg/l) (30)			Name	Compliance (As per DPCC Lab Feb, 2024 as per Prescribed Standards)	End Point of Disposal	
11	MCD Sen Nursing Home Drain	43.20 (9.5 MGD)	0	43.2	7.2	72	200	35	28.6205472, 77.2516466	Partially tapped	Tapped Waste water is treated in Sen Nursing Home STP, remaining to be treated in Okhla STP	Meeting	Agra canal	Overflow/ un-trapped waste water will be treated at Okhla STP after desilting and commissioning of Ring Road SPS Timeline: December, 2024.
12	ISBT Drain (Qudsia Bagh/ Mori Gate Drain)	20.80 (4.58 MGD)	0	20.80	7.7	88	240	40	28.6694576, 77.2336664	To be tapped	Proposed to be treated in New Coronation Pillar	Not Meeting	Najafgarh drain	Work of construction of SPS at the outfall point of the drain is in progress and likely to be completed by May 2024
13	Delhi Gate Drain / Power House Drain	122.58 (26.96 MGD)	62.79	59.79	7.1	168	280	60	28.6350404, 77.2554442	Partially tapped	Tapped Waste water is treated in Delhi Gate STP, remaining to be treated in proposed STP at Delhi Gate	Meeting	Yamuna River	There are 2 operational STPs of 68.2 MLD (15 MGD) capacity and 10 MLD(2.2 MGD) capacity for treatment of tapped wastewater of this drain.15.30 MLD is being used by PPCL (Cooling towers, Delhi Secretariat, Plant Horticulture, Pvt. Agencies). Another STP of 45.46 MLD (10 MGD) is proposed for the treatment of remaining untapped waste water of this drain. Land to be allotted by.

S. No.	Drain Owning Agency	Name of Drain	Flow in MLD (As per DJB)			Water Quality of Discharge into River Yamuna (February 2024) (As per DPCC Lab Report)				Point of Sampling (Before Outfall into river) (Latitude, Longitude ^o)	Status of Drain (Tapped / Partially Tapped / Untapped)	STP in which tapped waste water is treated / Proposed to be treated			Proposed Action/ Timeline for Tapping of Drain
			Total Waste Water	Treated Waste water	Untreated Waste water	pH (5.5 - 9)	TSS (mg/l) (100)	COD (mg/l) (250)	BOD (mg/l) (30)			Name	Compliance (As per DPCC, Feb, 2024 w.r.t Prescribed Standards)	End Point of Disposal	
14	MCD	Sonia Vihar Drain (On Eastern Bank of Yamuna)	27.24 (5.99 MGD)	0	27.24	7.5	120	400	65	28.7084002, 77.2360452	To be tapped	Sonia Vihar STP (under construction)	-	Yamuna River	7 MGD STP is being constructed at Sonia Vihar which is likely to be completed by March, 2024
		Kailash Nagar Drain (On Eastern Bank of Yamuna)	13.62 (3.0 MGD)	0	13.62	7.4	88	160	45	28.6640877, 77.2494362	To be tapped	Proposed to be treated in Kondh STP	-	Yamuna River	Feasibility of diverting the flow of the drain to Kondli STP through Geeta Colony and Preet Vihar SPS is being worked out jointly with MCD, DUSIB and DJB.
16		Shastri Park Drain (On Eastern Bank of Yamuna)	5.45 (1.2 MGD)	0	5.45	7.2	46	128	36	28.6621096, 77.2546735	To be tapped	Proposed to be treated in Yamuna Vihar	-	Yamuna River	Feasibility of construction of DSTP is being worked out jointly by MCD, DUSIB, DDA and DJB.
17		Maharani Bagh Drain	30.24 (6.65 MGD)	0	30.24	7.4	92	200	50	28.5723966, 77.2686193	To be tapped	Proposed to be treated in Okhla STP (Phase II/III/ IV/V/VI)	Okhla Ph V, VI: meeting Okhla Ph- II, III IV: not meeting	Agra canal	The completion of the scheme is likely to be completed by May-2024.
18		Jaitpur Drain	5.68 (1.25 MGD)	0	5.68	7.3	88	224	42	28.5419379, 77.3083086	To be tapped	Proposed to be treated in Okhla STP (Phase II/III/ IV/V/VI)	Okhla Ph V, VI: meeting Okhla Ph- II, III IV: not meeting	Agra canal	Sewage to be tapped after completion of Madanpur Khadar GOC scheme by June 2025.
19		Fuglakabad Drain (Kalkaji Drain merged in this drain)	25.05 (5.51 MGD)	0	25.05	7.2	120	320	68	28.5419317, 77.3082674	Tapped	Treated in Okhla STP (Phase II/III/ IV/V/VI)	Okhla Ph V, VI: meeting Okhla Ph- II, III IV: not meeting	Agra canal	-

S. No.	Drain Name of Drain	Flow in MLD (As per DJM)			Water Quality of Discharge into River Yamuna (Feb, 2024) (As per DPCC Lab Report)				Point of Sampling (Before Outfall into river) (Latitude, Longitude°)	Status of Drain (Tapped / Partially Tapped / Untapped)	STP in which tapped waste water is treated / Proposed to be treated			Proposed Action/ Timeline for Tapping of Drain
		Total Waste Water	Treated Waste water	Untreated Waste water	pH (5.5-9)	TSS (mg/l) (100)	COD (mg/l) (250)	BOD (mg/l) (30)			Name	Compliance (As per DPCC, Feb, 2024 w.r.t Prescribed Standards)	End Point of Disposal	
20	Barapulla Drain	91 (20.02 MGD)	0	91	7.4	100	280	55	28.5831727, 77.2640264	To be tapped	Proposed to be treated in Okhla STP (Phase II/III/IV /V/VI)	Okhla Ph V, VI: meeting	Agra canal	Work of Intercepting, the Barapullah drain flow by laying of intercept sewer through micro tunneling and conveying the flow to Okhla WWTP for treatment is in progress and expected to be completed by May, 2024.
21	Najafgarh Drain	2056.32 (452.34 MGD)	1380	676.32	7.6	112	280	64	28.7090142, 77.2286028	Being large drain not feasible to be tapped	-	-	Yamuna River	ISP has been commissioned and provision for Tapping of 77 drains have been made. There is about 453 MGD flow in the Najafgarh drain. Out of this at present 303.85 MGD comprises of treated effluent from STPs. From Haryana, untreated discharge of 105 MGD is being discharged through Badliapur & DL-6 drains.
22	Shahdara Drain	840 (184.78 MGD)	363	477	7.3	116	224	56	28.5588984, 77.3207987	Being large drain not feasible to be tapped	-	-	Yamuna River	ISP has been commissioned and provision for tapping of 29 drains have been made. Total untreated discharge in Shahdara drain is about 105 MGD, out of which 50 MGD (i.e., 45%) is untreated sewage is being discharged by UP through Sahibabad, Indirapur and Bantala drain.
		3411.6 (750.4MGD)	1805.8 (397.2 MGD)	1605.8 (353.2MGD)										

Brief Status of Common Effluent Treatment Plants (CETPs) in Delhi
(Based on the Analysis Reports of DPCC Laboratory for the Month of February, 2024)

Annexure -A

S. No.	Name of CETP	Industrial Areas Connected with CETP	Capacity (in MLD)	Monthly Average Flow (in MLD)	Date of Sampling	Influent Quality at Inlet (in mg/l)	Effluent Quality at Outlet (in mg/l)	Compliance Status w.r.t Prescribed Standards.
1	Philmit CETP	Philmit and Friends Colony Indl. Areas	16.8	3.928	14.02.2024	pH - 6.5 TSS - 460 COD - 640 BOD - 185 Oil & Grease - 12.0 Ammonical Nitrogen (N) - 25.1 Phosphate-10.5 Sulphide 4.1	pH - 7.6 TSS - 74 COD - 176 BOD - 30 Oil & Grease - 3.6 Ammonical Nitrogen (N) - 3.6 Phosphate-2.2 Sulphide 1.2	Meeting the Prescribed Standards.
2	Badli CETP	Badli Industrial Estate	12	4.028	06.02.2024	pH - 6.9 TSS - 372 COD - 480 BOD - 110 Oil & Grease - 10.0 Ammonical Nitrogen (N) - 33.2 Phosphate-13.2 Sulphide - 4.5	pH - 7.3 TSS - 56 COD - 112 BOD - 26 Oil & Grease - 4.4 Ammonical Nitrogen (N) - 7.2 Phosphate-1.4 Sulphide - 1.4	Meeting the Prescribed Standards.
3	Mayapuri CETP	Mayapuri Indl. Area	12	3.61	19.02.2024	pH - 6.8 TSS - 388 COD - 480 BOD - 175 Oil & Grease - 10.8 Ammonical Nitrogen (N) - 37.1 Phosphate-15.4 Sulphide - 2.6	pH - 7.5 TSS - 50 COD - 80 BOD - 28 Oil & Grease - 2.8 Ammonical Nitrogen (N) - 4.2 Phosphate-2.6 Sulphide - 1.7	Meeting the Prescribed Standards.

Brief Status of Common Effluent Treatment Plants (CETPs) in Delhi
(Based on the Analysis Reports of DPCC Laboratory for the Month of February, 2024)

Annexure -A

S. N. o.	Name of CETP	Industrial Areas Connected with CETP	Capacity (in MLD)	Monthly Average Flow (in MLD)	Date of Sampling	Influent Quality at Inlet (in mg/l)	Effluent Quality at Outlet (in mg/l)	Compliance Status w.r.t Prescribed Standards.
4	Mangolpuri CETP	Mangolpuri Indl. Area	2.4	1.41	19.07.2024	pH -6.6 TSS -432 COD -440 BOD -135 Oil & Grease -14.4 Ammonical Nitrogen (N) -14.9 Phosphate-10.4 Sulphide -3.1	pH -7.2 TSS -50 COD -64 BOD -18 Oil & Grease 8.8 Ammonical Nitrogen (N) -2.6 Phosphate-2.2 Sulphide 1.3	Meeting the Standards. Prescribed
5	Wazirpur CETP	Wazirpur Indl Area	24	3.974	06.02.2024	pH -6.9 TSS -324 COD -480 BOD -19 Oil & Grease -18.8 Ammonical Nitrogen (N) -31.2 Phosphate-6.2 Sulphide -4.2	pH -7.5 TSS -48 COD -64 BOD -18 Oil & Grease -2.8 Ammonical Nitrogen (N) -8.6 Phosphate-1.8 Sulphide -1.2	Meeting the Standards. Prescribed
6	Nangloi CETP	Nangloi & Udyog Nagar Indl Areas	12	3.987	19.02.2024	pH -6.5 TSS -344 COD -400 BOD -150 Oil & Grease 13.2 Ammonical Nitrogen (N) -26.4 Phosphate-9.6 Sulphide -3.8	pH -7.3 TSS -40 COD -96 BOD -18 Oil & Grease 4.4 Ammonical Nitrogen (N) -2.4 Phosphate-1.5 Sulphide -1.2	Meeting the Standards. Prescribed

Brief Status of Common Effluent Treatment Plants (CETPs) in Delhi
(Based on the Analysis Reports of DPCC Laboratory for the Month of February, 2024)

Annexure -A

S. No.	Name of CETP	Industrial Areas Connected with CETP	Capacity (in MLD)	Monthly Average Flow (in MLD)	Date of Sampling	Influent Quality at Inlet (in mg/l)	Effluent Quality at Outlet (in mg/l)	Compliance Status w.r.t Prescribed Standards.
7	SMA CETP	SMA, Rajasthani Udyog Nagar and SSI Industrial Areas	12	3.961	06.02.2024	pH -6.6 TSS - 384 COD - 560 BOD - 165 Oil & Grease - 16.4 Ammonical Nitrogen (N) -23.5 Phosphate-12.5 Sulphide -4.5	pH -7.4 TSS - 62 COD - 64 BOD - 20 Oil & Grease - 5.6 Ammonical Nitrogen (N) - 4.2 Phosphate- 1.4 Sulphide 1.4	Meeting the Prescribed Standards.
8	Okhla CETP	Okhla Indl. Area	24	2.748	05.02.2024	pH -6.5 TSS - 352 COD - 560 BOD - 185 Oil & Grease - 16.4 Ammonical Nitrogen (N) -31.3 Phosphate-11.8 Sulphide -4.4	pH -7.6 TSS - 68 COD - 64 BOD - 26 Oil & Grease -5.6 Ammonical Nitrogen (N)-15.6 Phosphate-1.4 Sulphide 1.8	Meeting the Prescribed Standards.
9	Narela CETP	Narela Indl. Area	22.5	10.229	20.02.2024	pH -6.8 TSS - 288 COD - 360 BOD - 100 Oil & Grease - 15.6 Ammonical Nitrogen (N) -13.7 Phosphate-14.8 Sulphide -4.1	pH -7.5 TSS - 54 COD - 96 BOD - 22 Oil & Grease - 4.8 Ammonical Nitrogen (N) -6.5 Phosphate-2.5 Sulphide - 1.2	Meeting the Prescribed Standards.
10	Bawana CETP	Bawana Indl. Area	35	21.664	20.02.2024	pH -6.8 TSS - 320 COD - 400 BOD - 170 Oil & Grease - 14.8 Ammonical Nitrogen (N) -13.2 Phosphate-12.3 Sulphide - 4.1	pH -7.7 TSS - 54 COD - 96 BOD - 20 Oil & Grease - 3.6 Ammonical Nitrogen (N) -4.6 Phosphate-3.1 Sulphide - 1.6	Meeting the Prescribed Standards.

Brief Status of Common Effluent Treatment Plants (CETPs) in Delhi
(Based on the Analysis Reports of DPCC Laboratory for the Month of February, 2024)

Annexure 4

S. No.	Name of CETP	Industrial Areas Connected with CETP	Capacity (in MLD)	Monthly Average Flow (in MLD)	Date of Sampling	Influent Quality at Inlet (in mg/l)	Effluent Quality at Outlet (in mg/l)	Compliance Status w.r.t Prescribed Standards.
11	Naraina CETP	Naraina Indl. Area	21.6	4.86	19.02.2024	pH - 6.9 TSS - 376 COD - 440 BOD - 115 Oil & Grease - 9.2 Ammonical Nitrogen (N)-19.9 Phosphate-13.2 Sulphide - 4.5	pH - 7.5 TSS - 52 COD - 80 BOD - 26 Oil & Grease - 3.6 Ammonical Nitrogen (N)-2.1 Phosphate-1.5 Sulphide - 1.4	Meeting the Prescribed Standards.
12	GTK CETP	GTK Road Indl. Area	6	2.21	06.02.2024	pH - 6.6 TSS - 456 COD - 480 BOD - 125 Oil & Grease - 10.8 Ammonical Nitrogen (N)-34.2 Phosphate-12.6 Sulphide - 4.2	pH - 7.6 TSS - 50 COD - 80 BOD - 24 Oil & Grease - 2.8 Ammonical Nitrogen (N)-8.1 Phosphate-1.2 Sulphide 1.2	Meeting the Prescribed Standards.
13	Lawrence Road CETP	Lawrence Road Indl. Area	12	1.90	06.02.2024	pH - 6.3 TSS - 432 COD - 680 BOD - 170 Oil & Grease - 14.8 Ammonical Nitrogen (N)- 16.9 Phosphate-12.3 Sulphide - 4.2	pH - 7.4 TSS - 52 COD - 112 BOD - 24 Oil & Grease - 4.4 Ammonical Nitrogen (N)- 8.2 Phosphate 2.5 Sulphide - 1.1	Meeting the Prescribed Standards
		Total	212.3	68.5				

Existing & Proposed Municipal Solid Waste Processing Facilities in Delhi (As on 29.02.2024)**Total Municipal Solid Waste (MSW) Generation- 11342 TPD**

[MCD- 11000 TPD, NDMC- 280 TPD, DCB- 62 TPD]

S.No	MSW Processing Facility	Capacity (in TPD)	Processing of MSW (in TPD)
1.	Waste to Energy Plant at Okhla	1950 [MCD - 1550 + 400 (NDMC & DCB)]	1747* (Fresh MSW)
2.	Waste to Energy Plant at Ghazipur	1300 (MCD)	916 (Fresh MSW- 802.6+RDF-113.4)
3.	Integrated MSW Facility at Bawana (1300 TPD Waste to Energy Plant & 700 TPD Compost Plant)	2000 (MCD) (As per Consent of DPCC)	2287* (Fresh MSW)
4.	Waste to Energy Plant at Tehkhand	2000 (MCD)	1833* (Fresh MSW- 1833 + RDF - 0)
5.	8 Bio Methanation Plants of 05 TPD each at various locations	40 (MCD)	0
6.	20 Composters of 1 TPD each	20 (MCD)	20
7.	One Sorting Cum Composter Plant of 20 TPD at Tigris Road (in DCB area)	20 (DCB)	0
8.	Food Composter Plant at Tigris Road (in DCB area)	0.175 (DCB)	0.175
9.	06 Bio-Gas Plants in NDMC Area	7.5 (NDMC)	2.9
10.	29 Organic Waste Convertors (OWCs) in NDMC Area	15.15 [NDMC]	6.47
11.	258 Compost Pits including one Community Composting Pit of NDMC [MCD-211+ NDMC-47 - DCB - 0]	549.65 [MCD - 543 + NDMC-6.65 + DCB-0]	549.42 [MCD - 543 + NDMC-6.42+DCB-0]
Total		7902.475	7361.965 [Fresh MSW-7248.565 +RDF-113.4]
12	Recycling through 170MRFs [MCD- 156 + NDMC- 03 -DCB-11]	322 TPD [MCD- 258 (40+218) + NDMC-14+ DCB - 50]	Recycling - 306 TPD [MCD - 258+ NDMC - 14- DCB - 34]
Grand Total (in TPD) [Processing Fresh MSW+Recycling]		8224.475 TPD (72.51 %)	7554.565 TPD (66.61 %)
11	Disposal of Fresh MSW at the Dumpsites	3787.435 TPD (33.4 %) [11342 TPD - 7248.565 TPD (Fresh MSW Processed) - 306 TPD (Recycled through MRFs)]	

Note - *Based on the information provided by the operator of the Waste to Energy Plant.

Generation (in TPD)	Total Capacity of Existing MSW Processing Facilities + MRF (in TPD)	Processing of Fresh MSW+MRF (in TPD)	Gap in Processing Capacity (in TPD)	Gap in Processing (in TPD)	Additional Proposed Capacity of Facilities by 2026 (in TPD)	Additional Proposed Capacity of Facilities by 2027 (in TPD)	Total Capacity of Facilities by 2027 (in TPD)
(1)	(2)	(3)	(4) = (1)-(2)	(5) = (1)-(3)			
11342	8224.475 TPD (72.51 %)	7554.565 TPD (66.61 %)	3117.525 (27.5 %)	3787.435 TPD (33.4 %)	5410	7410	14634.475 (129%)

Proposed Waste Processing & Disposal Facilities in Delhi

S. No.	MSW Facility	No(s)	Location	Local Body	Capacity Addition(in TPD)	Timeline for Completion
1	New Waste to Energy Plant at Narela-Bawana	1	Narela-Bawana	MCD	3000	2026 (APTEL has set aside the orders of DERC regarding adoption of tariff arrived through competitive bidding process. Matter is pending in Supreme Court)
2	New Waste to Energy Plant at Ghazipur	1	Ghazipur	MCD	2000	2027 (TEFR Approved. Petition pending in DERC for approval of RFP and DCA)
3	Expansion of Existing Waste to Energy Plant at Okhla	1	Okhla	MCD	1000 (From 1950 TPD to 2950 TPD)	December, 2025 (EC for expansion accorded, fixation of revised tariff is pending in DRC)
4	Expansion of Existing Waste to Energy Plant at Tekhand	1	Tekhand	1000	1000 (From 2000 TPD to 3000 TPD)	December, 2026 (Approval accorded and conveyed to Concessionaire and EC and fixation of revised tariff to be obtained)
5	Bio CNG Plant	1	Okhla	MCD	300 TPD (In place of existing Closed Compost plant of 200 TPD)	October, 2024
6	Compressed Bio Gas (CBG) Plant	1	Ghogha Dairy	MCD	100 TPD	December, 2024
7	Organic Waste Converter	8	NDMC Area	NDMC	8 (8 Plants of 1 TPD each)	March, 2024
8	Decentralised Composter Plants	1	Vishwas Nagar	MCD	1 TPD	May, 2024
		1	New Ashok Nagar		1 TPD	
	Total	16			7410 TPD (MCD- 7402 & NDMC- 8)	

Note : 1. Bio-CNG Plants at Nangli Dairy (215 TPD, under test commissioning **since October, 2023**) and Goyla Dairy (215 TPD) & Ghogha Dairy (290 TPD) are proposed to be completed by **June, 2024 & December, 2024 respectively** (These are mainly for the Waste generated from Dairies and not included in total MSW Generation of 11000 TPD of MCD).

2. One Engineered Sanitary Landfill (SLF) at Tehkhand is inaugurated and commissioned on 12th March 2024

Status of Bio-Mining of Legacy Waste at 3 Dumpsites at Okhla, Ghazipur & Bhalaswa (As on 29.02.2024)

Dumpsite	Quantity of Legacy Waste Dumped (July, 2019) (Lakh Ton)	Total Quantity of Legacy Waste Bio-mined (Since Oct, 2019 to 29.02.2024) (Lakh Ton)	Legacy Waste (Volumetric Assessment through Drone Survey in June, 2022) (Above Ground) (Lakh Ton)	Quantity of Fresh MSW Dumped from July, 2022 to 29.02.2024 (Lakh Ton)	Total Quantity of Legacy Waste Bio-mined from July, 22 to 29.02.2024 (Lakh Ton)	Balance Quantity of Waste at Dumpsite (Lakh Ton)	No. of Trommels Operational	Revised Timeline for 100% Remediation (Earlier Timeline - May, 2024)
Bhalaswa	80	59.88	73	15.40	34.91	53.49	22	2025*
Ghazipur	140	23.60	85	10.64	12.18	83.46	25	2026*
Okhla	60	41.01	45	10.78	22.70	33.08	11	2024
Total	280	124.49	203	36.82	69.79	170.03	58	

*Subject to the stoppage of incoming fresh waste and formation of Statutory Committee in MCD.

MCD has awarded integrated work for 30 Lakh MT (extendable upto 45 Lakh MT) for each dumpsite @ Rs. 745 per MT under SBM 2.0

Segregation of Waste at Source

- NDMC - 100% (in all 14 Circles), DCB - 90 % in Civilian Area
- MCD - 100 % (12 Wards), 80 - 100% (70 Wards), 60-80% (12 Wards) 40-60% (81 Wards), 20-40% (46 Wards), 10-20% (29 Wards)
(100 % segregation at source by December, 2024)

No. of Zero Waste Colonies - 504

GOVERNMENT OF NCT OF DELHI
INTEGRATED DRAIN MANAGEMENT CELL (IDMC)
DELHI SECRETARIAT, I.P. ESTATE, NEW DELHI

No: CEO/IDMC/2024/04

Dated: - 06-02-2024

Minutes of the 16th Meeting of Integrated Drain Management Cell (IDMC) for remediation and drain management of all drains of Delhi, chaired by the Chief Secretary, Govt. of NCT of Delhi on 29.01.2024, constituted on the direction of Hon'ble NGT dated 05.03.2020 in OA No 06/2012 in the matter of Manoj Mishra V/s Union of India & Others.

1. The 16th IDMC meeting was held on 29.01.2024 under the chairmanship of the Chief Secretary. It was attended by Nodal officers of all Drain owning Agencies. List of Officers attended the meeting is enclosed.
2. At the outset CEO, DJB, Member Secretary of IDMC informed that the Hon'ble High Court, Delhi vide their Order dated 16.01.2024 in the case W.P.(C) 7594/2018 & CM APPL.30022/2018 vide their order dated 16.01.2024 taking on its own motion had issued certain directions regarding (i) water logging (including intermixing of storm water with sewer etc.), Drainage Master Plan along with Rainwater Harvesting Plan in GNCTD. A copy of Order at **Annexure- I**.
3. The relevant portion of directions issued by Hon'ble High Court vide their order dated 16.01.2024 are reproduced below:
 - (3.) This court takes judicial notice of the fact that in Delhi Storm Water drains have not been segregated from the drains carrying sewage and in monsoon, there is normally a backflow of sewage in a number of residential areas. Though desilting of drains is occasionally carried out, yet the same is not very effective further, some of the drains do not flow into each other and are broken at places. It is also common knowledge that drain have not been constructed by taking proper bed level and road height into consideration.
 - (5.) This Court directs the Chief Secretary, GNCTD as well as Principal Secretary (Finance), GNCTD to join the proceedings by way of online audio-video link on the next date of hearing.

- (6.) On the said date of hearing i.e. 30th January 2024 at 2:15 PM, they will give a short presentation as to how they intend to tackle the issue of water logging and as to whether a Drainage Master Plan and Rain Water Harvesting Plan has been prepared for Delhi and whether the same are being implemented. It is clarified that the Chief Secretary, GNCTD will be at liberty to convene a meeting of the Integrated Drain Management Cell prior to the next date of hearing i.e. 30th January 2024 at 2:15 PM.

4. The Chair was informed that the following major issues have to be considered and deliberated in compliance of directions of Hon'ble High Court, Delhi- (i) Water logging (including intermixing of drainage and sewage, desilting of sewer line and desilting of drains) (ii) Preparation/implementation of drainage master plan (iii) Rainwater harvesting plan.

5. Interconnections/mixing of storm water and sewerage (both way)

5.1 The Committee was informed that the total length of storm water drain in Delhi is 3740.31 kms wherein PWD is the biggest stakeholder having a total length of 2064.08 kms which amounts to 55.18% of the total length. The second biggest stakeholder is MCD having 521.87 kms which is about 13.95%. The other big stakeholders are I&FCD, NDMC, DDA and DSIIDC, which are having I&FC 426.55 km (11.4%), NDMC 335.29 km (8.96%), DDA 98.12 Km (2.62%) and DSIIDC 251.3 kms (6.72%) respectively. The other small stakeholders are DCB, NTPC and Old Agra Canal having 39.68 km., 3.11 km. & 0.31 km respectively. The sewerage system is solely looked after by DJB having length approximately 10,000 km lines.

5.2 The IDMC was informed that High Level Committee (HLC) constituted by GNCTD has been reviewing the issue of sewerage system and storm water drainage faulty interconnections. Eight meetings of HLC have already taken place. In the last meeting held, MCD informed that they have carried out survey of 304 drains and have taken necessary action for plugging / closing such points of storm water drains joining / connected with the sewerage system of

DJB. Further, MCD informed that they have disconnected 183 no's of such drains and action plan has been prepared for 13 drains. It was informed that 52 drains pertain to PWD/I&FCD/ DSIIDC which requires joint survey. It was found that trapping of 56 drains was not technically feasible. Representative of MCD further informed that they have already sent the proposal of Rs. 36 crore to Urban Development (UD) Department, GNCTD for funding the projects of MCD. It was informed that in Najafgarh drain basin, work has started for providing storm water drains in unauthorized colonies and JJ clusters.

5.3 It was noted that the following directions were given by the HLC in the 8th meeting:

- (i) MCD to complete the works of plugging / closing such points of storm water drains joining / connected with the Sewerage System of DJB of 13 drains for which action plans have been prepared by it, immediately without any further delay.*
- (ii) MCD to provide list of 52 drains pertaining to PWD/ I&FCD/ DSIIDC to the DJB latest by 31.01.2024. Further, list of 56 drains, wherein MCD is of the opinion that it is not feasible to disconnect/ plug these drains, shall also be provided by the MCD to DJB latest by 31.01.2024. DJB shall plug these points;*
- (iii) MCD and UD Department, GNCTD to explore funding from Amrut 2.0 scheme;*
- (iv) DPCC to also explore funding from the Environmental Compensation received in view of such directions;*
- (v) Further, list of 191 points / drains in which there is discharge of waste water from the sewerage system of DJB shall be shared by MCD to DJB, and DJB shall plug these points.*

MCD, DJB, DPCC and UD Department should submit a report to the HLC on or before 05.02.2024 in this regard.

*(Copy of relevant portion of Minutes of 8th HLC Meeting held on 10.01.2024 is attached as **Annexure- II**)*

5.4 Taking into account of directions of HLC, the Chairman IDMC further directed to form joint teams comprising of following Nodal Officers of IDMC i.e. CE (I&FCD), CE (PWD), CE (DJB), CE(MCD) and CE

(DSI IDC) to get 108 (52 + 56) drains as mentioned to inspect, identify ownership of the drain along with technical viability for trapping by concerned drain owning agencies and to complete the survey by 05.02.2024.

- 5.5 It was apprised to the Committee that the list of 191 points/drains in which there is the discharge of wastewater from the sewerage system of DJB had initially been identified by I&FCD and the same had been reported by MCD. Subsequently, MCD surveyed jointly with DJB and I&FCD and observed that most of the stormwater drains are either dry or carried rainwater during rains. In some cases, I&FCD and DJB had already provided trapping to respective STPs. There are only a few drains that still carry discharge for which DJB has been requested to disconnect the sewers. Nodal officer, MCD has been requested to share a list of un-trapped drains to DJB immediately.
- 5.6 The Chairman, IDMC directed that a joint survey of un-trapped drain, including above mentioned 191 points/drains be done again along with a team of officers from DJB, I&FCD, MCD, PWD and DSI IDC. DJB was directed to submit an action plan along with timelines by 15.02.2024.

6. Desilting of sewer lines-trunk, peripheral and internal.

- 6.1 The Committee was informed that sewerage system of Delhi comprises of Trunk Sewer, peripheral sewer and internal sewer system. Total length of sewer system is about 10,000 kms and as per requirement, action plan has been prepared for desilting of sewer line in length for about 7167 km. Trunk sewer (of size >1000 mm and above) has to be desilted covering length of about 137 km. In phase 1, desilting of about 95 kms lines is already in progress and 66 kms have been desilted so far and entire desilting of trunk sewer is likely to be completed by June 2024. In phase 2 desilting of trunk sewer in length of about 42 km have also been planned for which estimates have been approved and target of completion is December, 2024. It was further informed to committee that average cost of desilting is in the range of Rs.70 lakh per km.
- 6.2 Peripheral sewer (of size between 450 mm to 1000 mm) has to be desilted in length of about 530 km. 162 kms have been desilted so far and entire desilting of trunk sewer is likely to be completed by June 2024. It was further informed to committee that average cost of desilting is Rs. 15 lakh per km.

- 6.3 Internal sewer (of size between 250 mm to 300 mm) has to be desilted in length for about 6500 km. 2100 kms have been desilted so far and it has been planned to desilt 700- 800 km per month and entire desilting of internal sewer is likely to be completed by June 2024. It was further informed to committee that internal sewage system is broadly cleaned by DJB by deploying Sewer Cleaning Machines i.e. 134 Suction cum Jetting Machines, 189 Mukhyamantri Small Sewer Cleaning Machines (DICCI) and 62 desilter machines. About 385 numbers of machines have been deployed for preventive maintenance and day to day maintenance of sewer line and about 30-50% of sewer cleaning machines are being deployed exclusive for desilting of sewer line as a part of preventive maintenance.

7. Desilting of Drains.

- 7.1 IDMC was informed that about 55.18% drains having length of about 2064.08 km belongs to PWD and about 13.95% of length i.e. 521.87 kms pertains to MCD, 11.4% i.e. 426.55 kms pertains to I&FC Department. Rest of the drains belong to NDMC, DDA, DSIIDC and other agencies. It was informed by the PWD that desilting of drains is carried out twice in a year. As per the reports given by Delhi Traffic police, 49 water-logging points were reported in 2019; 136 in 2020; 195 in 2021 and 207 in 2022. Out of the 207 locations identified in 2022, 151 location pertains to PWD, short-term measures have been taken at 47 and long-term measures have already been completed at 55 locations and work at 49 locations is in progress. Similar actions have to be taken by rest of Drain owning Agencies.
- 7.2 PWD informed that Permanent Solution at Four locations i.e. (1) Minto Bridge, (2) Pul Prahladpur, (3) I.P. Estate, Ring Road opposite WHO Building, (4) Jahangir Puri Metro Station have already been completed and at other three locations i.e. (1) Jakhira, (2) Karala Khanjawala (3) Loni Gol Chakar work is in progress and will be completed by 31st May 2024.
- 7.3 To monitor the water logging issues, regular review meetings are taken in PWD. CCTV cameras have been installed at 41 Vulnerable Locations to monitor the situation in the control room to take necessary action to avoid water logging. PWD has also installed around 700 permanent pumps of cumulative capacity of around 25,000 HP at different locations including underpasses, subways,

low-lying areas, etc. Apart from permanent pumps, around 325 temporary/mobile pumps cumulative capacity of around 3250 HP are also deployed at different vulnerable locations, during the rainy season between 1st July to 30th September, to pump out accumulated water.

7.4 It was further informed to Committee that in view of the extensive flood in River Yamuna during July 2023, a High Level Committee on flood management study on River Yamuna have been formulated by Minister of Jal Shakti, GoI on dated 06.08.2023 under chairmanship of Central Water Commission comprising of other stakeholders as members. Committee has to submit the final report within six months and interim report within two months. It was further informed to the committee by the I&FC Department that draft interim report has been received and is being studied for further comments. (Copy of the order enclosed as **Annexure-III**).

7.5 During the discussion on the way forward, members were of the view that management of all the drains should be assigned to a single agency to avoid disputes during modelling, maintenance, and infrastructure development. PWD was of the view that desilting of drains is the obligatory function of the MCD as per Section 42(a) of the DMC Act 1957 and, therefore, all desilting work should be done by MCD only. This will also avoid disputes related to clogging of drains as all these are interconnected and one department complains about clogging of its drain due to inadequate desilting by other departments. It was also informed that there are about 18 major drains which are discharging into river Yamuna. Najafgarh Drain, Shahdara Drain and Barapula Drain belongs to I&FCD and remaining drains belongs to other agencies, such as MCD.

7.6 It has been proposed that all 12 major drains in Delhi should be maintained by I&FCD and rest of the drain should be maintained by single agency i.e. MCD. In this regard proposals may be forwarded to the GNCTD for approval. It was directed that till the above decision is approved, the respective Drain owning Agency shall ensure proper desilting of drain to ensure smooth flow and prevention of water logging in the area.



8. Preparation/implementation of drainage master plan

- 8.1 It was informed to the Committee that Delhi Drainage Master Plan 1976 was approved in 1980 wherein Delhi was sub divided into 5 sub- basins namely Najafgarh, Kanjhawala, Alipur, Shahdara & Mehrauli Basin. In addition to the existing drains, a number of new drain works were proposed in areas chronically affected located both in the urban and rural sections having no drainage system. At that time, more than 60% of the existing drains were found to be of inadequate capacity and needed remodeling. I&FC Deptt., NDMC, DDA & other departments have implemented the master plan. The work of remodelling of existing drains & construction of new drains was completed from 1980 to 1995.
- 8.2 Thereafter, the Delhi Drainage Master Plan was assigned to IIT Delhi in July 2012 by I&FC Department. The Final Report was submitted by IIT Delhi on 13.07.2018. The technical committee appointed by I&FC Dept. found the discrepancies in the data and the solutions were found not implementable. It was further informed that due to incapability of stakeholders to run the model and non-satisfactory response from IIT, Delhi to build capacity building of stakeholders, the report was not accepted by the GNCTD.
- 8.3 Subsequently on 06.09.2021, GNCTD decided that a comprehensive Delhi Master Plan needs to be prepared for entire Delhi. It should comprise short, medium and long term solutions to resolve water logging and drainage problem in Delhi and PWD shall be Nodal agency for the same. It was informed by the PWD that entire Delhi have been divided into three zones and three different consultants are being appointed for these basins i.e. Najafgarh, Barapullah & Trans Yamuna.
- 8.4 PWD informed that the Consultant of Najafgarh Basin has already been appointed by PWD. The consultant for this basin has already started its work/studies and the target date of completion of study work and submission of DPR is in July 2024. It was informed that there is delay of about three months and DPR is likely to be finalised by October 2024. For the other two basins, tenders have been called to appoint consultants.

8.5 Chairman directed that all efforts should be made to get this study completed without further delay. PWD further informed that technical bids for appointment of consultants for Barapulla Basin and Trans- Yamuna Basin have already opened, and technical evaluation is in process. The Chairman expressed his displeasure on the delay in the appointment of consultants and directed that the consultancy works for the remaining two basins viz Barapulla & Trans-Yamuna should be awarded by 15/02/24 and DPR should be obtained from the consultant within the stipulated period of six months. He also directed that a committee may be formed to include senior and experienced officers from DJB, Irrigation and Flood Control Department, PWD, and MCD to review the study works being done by these consultants regularly for preparing master plan for drainage so that a realistic and feasible detailed project report is prepared. It was informed, that PWD Secretariat had also constituted an Apex Committee and Technical Committee to review the progress and technical work done by the Consultants.

9. Rain-waterHarvesting Plan.

9.1 It was apprised to the committee that there is proper rainwater harvesting plan formulated by DJB and details of the same are available on website. Various incentive schemes are in place wherein plot area having size of between 100 sqm to 500 sqm, there is provision of grant of Rs. 25,000/- or 50% of the cost of rainwater system whichever is less. There is grant of 50,000/- or 50% of the cost of rainwater system whichever is less for plot area more than 500 sqm. There is provision of 10% rebate on water bill for plot area more than 100 sqm. It was further informed to the committee that total 8793 installations are already in place in the city. Further, 666 recharge pits have also been made for better aquifer management. Detail status of RWH system at Government installations is as under:-

S.NO.	Departments	Total	Installed	RWH System yet to be installed
1.	DELHI JAL BOARD	594	594	NIL
2.	OTHER THAN DJB	89	89	NIL
3.	SCHOOLS, COLLEGES	4549	4144	405
4.	OTHER DEPTT	5472	3966	1506
	TOTAL	10704	8793	1911

- 9.2 The Chairman, IDMC directed to Geo-Tag all the RWH installations. He further stated that Standard Operating Procedure (SOP) be made on maintenance of these structures. It was also directed to undertake the third-party audit by DJB with teams of officers from Govt. departments. He further instructed to explore RWH installations at all big land parcels including forests.

10. Direction of Hon'ble High court order dated 21.07.2023.

- 10.1 Hon'ble High Court directed vide its order dated 21.07.2023 in matter of Ashish Ganju V/s Duda W.P. (C) 5690/2016, to resolve the issue of back flow of water into the internal drain of the colony - phase -V Aaya Nagar, New Delhi as below

I am informed that the Government of National Capital Territory of Delhi (hereinafter referred to as the 'GNCTD') has established an Integrated Management Cell under the Chairmanship of the Chief Secretary, GNCTD to address the issues similar to the one raised by the petitioner herein and to ensure proper coordination amongst the different departments in resolving them.

Accordingly, let the present application be placed before the Integrated Management Cell, with a direction to ensure that the issues raised by the petitioner herein are resolved with proper coordination amongst the different departments and do not re-occur because of even slight rain. The petitioner would be entitled to approach the Integrated Management Cell and present her case before the same.

An action taken report from the Integrated Management Cell shall be filed by the respondent no.1 at least a week in advance of the next date of hearing.

- 10.2 The Chairman IDMC directed Nodal officer of MCD, DSIIDC and I&FCD to jointly inspect the site and concerned Drain Owning agency to design, execute and maintain the drainage system of the area to ensure that there should be no water logging in the area. The nodal officer of the concerned Drain owning Agency will submit the Action Taken Report and proper action plan along with a timeline for appraisal to IDMC by 15.02.2024 and to file a report before the Hon'ble High Court.

11. Directions of Hon'ble High Court dated 13.09.2022.

- 11.1 It was apprised to the Committee that the matter regarding W.P.(C) 10459/2021 "LOKESH KUMAR AND ORS. VERSUS UNION OF INDIA AND ORS." was also referred to IDMC regarding overflow of drains in Srinivaspuri locality. As per directions of IDMC, MCD, DUSIB, PWD, DJB, and APMC have visited the site jointly and report was submitted for the appraisal of the Hon'ble High Court. As per directions of the Hon'ble High Court dated 01.09.2023, writ petition was disposed off.
- 11.2 It was explained by DJB that this case may reopen any time because of fact that upstream and downstream of the drain are open and broad in size whereas in the Srinivaspuri area drain have been encroached by residents and it is covered and narrow in size. During the heavy rain there are chances of water logging again in the area and case may reopen. The Chairman IDMC, directed Nodal officer of MCD for necessary corrective action in advance, including removal of encroachment so informed.

12. Maintenance of Drainage System in 1799 Unauthorized Colonies

- 12.1 It was reported by the DJB that storm water drainage system in 1799 unauthorized colonies are being provided by either I&FCD or DSIIDC but these drainage systems are not being maintained neither by them nor by MCD. The Chairman IDMC pointed out that in some cases even final connectivity is not there for proper drainage system.
- 12.2 Accordingly, directions have been issued to I&FCD and DSIIDC to handover drainage system to MCD as per relevant provisions of DMC Act, 1957 and in the interim to maintain the same in order to avoid water logging in the area. ACS, UD will oversee expeditious handing over and taking over of the drains from the construction agency to the MCD as a long-term measure. As a short-term measure, construction agency shall maintain it till final handover of all assets to MCD.

13. It was informed to the committee that IDMC was constituted to prepare and execute an Action Plan along with timeline on Alternate technologies for management of wastewater in drains as per the CPCB report. IDMC was constituted in compliance of Hon'ble NGT direction dated 05.03.2022 and till date, 15 meetings have held in the past. In spite of clear directions of IDMC, most of the Drain Owning Agencies could not adhere to action plan due to technical and financial constraints. It was reported by the Drain owning Agencies that some of the drains are very narrow while other drains are carrying excess wherein insitu treatment is not technically possible as per technologies suggested by CPCB. It was informed that 15th meeting of IDMC was held on 18.10.2022.

Subsequently as per directions of Hon'ble LG dated 09.01.2023, a High-Level Committee was formulated under chairmanship of Hon'ble LG to monitor the progress with respect to action points of the "Action Plan for rejuvenation of river Yamuna". Eight number of HLC meetings have been held so far and last meeting was held on 10.01.2024. Jurisdictions/mandate of both the committees is broadly related to abatement of pollution in River Yamuna. Chairman, IDMC directed that henceforth the services of this committee should be utilized to resolve inter-departmental issues related to drainage, sewage, water logging etc.

14. Reconstitution of IDMC-

In light of Hon'ble High Court direction dated 16.01.2024 regarding constitution of IDMC, the Chairman IDMC directed to nominate the members with only designation and advised to include other relevant departments. Agencies such as Central Water Commission, Delhi Police (Traffic), Central Ground Water Authority (CGWA) etc. as members of IDMC.

Meeting ended with a vote of thanks to the Chair.

All Concerned


Member (Secy.) IDMC
A. ANBARASO
CHIEF EXECUTIVE OFFICER
DELHI JAL BOARD, VARUNALAYA-II
KAROL BAGH, NEW DELHI-05

List of Officers who attended the 16th Meeting of Integrated Drain Management Cell (IDMC) for remediation and drain management of all drains of Delhi, chaired by the Chief Secretary, Govt. of NCT of Delhi on 29.01.2024, constituted on the direction of Hon'ble NGT dated 05.03.2020 in OA No 06/2012 in the matter of Manoj Mishra V/s Union of India & Others.

1. Sh. Naresh Kumar, Chief Secretary – in Chair
2. Sh. Manish Gupta, ACS (UD)
3. Sh. A.K. Singh, Pr. Secretary (Environment)
4. Sh. A. Anbarasu, Pr. Secretary PWD, CEO, DJB
5. Sh. O.P. Tripathi, ENC PWD
6. Sh. K.S Jayachandran, Member Secretary (DPCC)
7. Sh. Ajay Gupta, CEN (Drainage) DJB
8. Sh. S.K. Bhardwaj, CE(Dr.) Proj.-II (DJB)
9. Sh. Rakesh Allahabadi, CE (MCD)
10. Sh. Mukesh Kumar, CE (I&FC)
11. Sh. Anil Kumar Sharma, CE (I&FC)
12. Sh. Sanjay Arora, CE (NDMC)

ANNEXURE-1



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\$-A-19 & 20

* IN THE HIGH COURT OF DELHI AT NEW DELHI

+ W.P.(C) 7594/2018 & CM APPL.30022/2018

COURT ON ITS OWN MOTION

..... Petitioner

Through:

versus

UNION OF INDIA & ORS

..... Respondents

Through: Mr.Ripu Daman Bhardwaj, CGSC with Mr.Kushagra Kumar, Mr.Abhinav Bhardwaj and Ms.K.Manaswini, Advocates for R-1. Mr.Anuj Aggarwal, ASC with Mr.Vikrant Chawla, Ms.Arshya Singh, Mr.Aakash Dahiya and Mr.Siddhant Dutt, Advocates for R-2 and R-3. Mr.Tushar Sannu, ASC with Mr.Drona Negi and Ms.Kunika Singh, Advocates for NDMC. Ms.Puja Kalra, Advocate for MCD, Ms. Monika Arora, Advocate with Mr.Subhrodeep Saha and Mr.Kushal, Advocates. Mr.Tarveen Singh Nanda, Advocate for DCB, Mr.Joginder Singh, SI (Parvi Officer Traffic).

+ W.P.(C) 9617/2022

COURT ON ITS OWN MOTION

..... Petitioner

Through:

versus



7571c

GOVT. OF NCT OF DELHI AND ORS

..... Respondents

Through: Mr.Kirtiman Singh, CGSC with
Mr.Waize Ali Noor, Ms.Shreya
V.Mehra and Ms.Vidhi Jain.
Advocates for R-1.
Mr.Anuj Aggarwal, ASC with
Mr.Vikrant Chawla, Ms.Arshya
Singh, Mr.Aaxash Dahiya and
Mr.Siddhant Dutt, Advocates for R-1,
6, 7 and 8.
Mr.Vikrant Goyal, Advocate with
Ms.Mahima Kadam, Advocate for R-
1.
Dr.S.S.Hooda, Advocate with
Mr.Ayushman Aeron and Ms.Rashmi
Rawat, Advocates for R-4.
Mr.Sanjeev Sabharwal, Advocate
with Ms.Shweta Singh, Advocate for
MCD.
Mr.Tarveen Singh Nanda, Advocate
for DCB.
Ms.Aarushi Behl, Advocate with
Ms.Sangeeta Bharti, Advocate for R-
9.
Mr.Joginder Singh, SI (Parvi Officer
Traffic).

CORAM:

HON'BLE THE ACTING CHIEF JUSTICE

HON'BLE MS. JUSTICE MANMEET PRITAM SINGH ARORA

ORDER

16.01.2024

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1. Learned counsel for GNCTD states that the Authorities which are involved in taking care of the water logging problems are as under:-

- a) Delhi Jal Board
- b) Delhi Development Authority



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- c) Municipal Corporation of Delhi
- d) Irrigation & Flood Control Department
- e) Public Works Department
- f) Central Public Works Department
- g) Central Water Commission
- h) New Delhi Municipal Council
- i) Department of Health & Family Welfare
- j) India Trade Promotion Organisation
- k) National Buildings Construction Corporation
- l) National Highways Authority of India
- m) Delhi Urban Shelter Improvement Board
- n) District Magistrates
- o) Delhi Metro Rail Corporation
- p) Delhi Police
- q) Department of Food Supplies and Consumer Affairs
- r) Delhi Transco Limited
- s) BSES

2. He further states that an Integrated Drainage Management Cell headed by Chief Secretary, GNCTD has been set up by the National Green Tribunal. However, he is not sure that all the aforesaid authorities are part of the Integrated Drainage Management Cell.

3. This Court takes judicial notice of the fact that in Delhi storm water drains have not been segregated from the drains carrying sewage and in monsoon, there is normally a backflow of sewage in a number of residential areas. Though desilting of drains is occasionally carried out, yet the same is



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not very effective. Further, some of the drains do not flow into each other and are broken at places. It is also common knowledge that drain have not been constructed by taking proper bed level and road height into consideration.

4. At this stage, Mr. Santosh Kr. Tripathi, learned counsel for GNCTD states that adequate funds have been sanctioned in the Budget for Delhi Jal Board, but the second instalment has not been released to the Delhi Jal Board by the Principal Secretary (Finance), GNCTD.

5. Consequently, this Court directs the Chief Secretary, GNCTD as well as Principal Secretary (Finance), GNCTD to join the proceedings by way of online audio-video link on the next date of hearing.

6. On the said date of hearing, they will give a short presentation as to how they intend to tackle the issue of water logging and as to whether a Drainage Master Plan and Rain Water Harvesting Plan has been prepared for Delhi and whether the same are being implemented. It is clarified that the Chief Secretary, GNCTD will be at liberty to convene a meeting of the Integrated Drain Management Cell prior to the next date of hearing.

7. List on 30th January, 2024 at 2:15 PM.

ACTING CHIEF JUSTICE

MANMEET PRITAM SINGH ARORA, J

JANUARY 16, 2024/TS

This is a digitally signed order.

The authenticity of the order can be re-verified from Delhi High Court Order Portal by scanning the QR code shown above.

The Order is downloaded from the DHC Server on 16/01/2024 at 10:26:22

Minutes of the "Eighth Meeting" of the High Level Committee (HLC) constituted by the Hon'ble National Green Tribunal (NGT) to monitor the progress w.r.t action points of the "Action Plan for Rejuvenation of River Yamuna" and various other directions of the Hon'ble NGT held under chairmanship of Chief Secretary, GNCTD on 10.01.2024.

Eight meeting of the High Level Committee (HLC), constituted by the Hon'ble National Green Tribunal (NGT) vide Order dated 09.01.2023 in OA No. 21/2022 in the matter of "Ashrafi Yodav Vs Govt. of NCT of Delhi" (now OA No. 06/2012 "Nizamuddin West Association Vs Lal") to monitor the progress w.r.t action points of the "Action Plan for Rejuvenation of River Yamuna" and other directions of the Hon'ble NGT, was held under chairmanship of Chief Secretary, Government of NCT of Delhi (GNCTD) in the Conference Room of Chief Secretary at 5th Level, Delhi Secretariat on 10.01.2024 at 02:00 PM.

2. The meeting was attended by the members of HLC and Secretaries/ HODs of various Departments / Organizations. List of attendees is at Annexure - "A".

3. Special Secretary (Environment)-cum-Member Secretary, DPCC presented before the HLC the status of various projects & action points of the "Action Plan for Rejuvenation of River Yamuna" and Order dated 27.01.2023 issued by the Chief Secretary, GNCTD pursuant to 1st meeting of the HLC held on 20.01.2023 under Chairmanship of Hon'ble Lt. Governor. It was informed that status reports in the aforementioned case were filed before the Hon'ble NGT on 31.01.2023, 05.07.2023, 16.10.2023 and 21.12.2023. The order dated 17.10.2023 of Hon'ble NGT in the said matter was also briefed to the HLC, which is as follows:

6. The situation with regard to cleaning of river Yamuna is far from satisfactory. The report submitted by all the above agencies seems to be deficit on the following issues.

i. Details of the drains discharging into the River Yamuna (both with treated waste water/untreated waste water). The details include quantity and quality of the discharge water.

ii. Details of the STPs that have been constructed and operational to treat the waste water discharged from the above drains. The capacity of the existing STP and the quality of the treated waste water, if it is meeting the standards or not.

iii. Details of upgradation of the existing STPs.

iv. Details of those areas/colonies which have so far not been covered in the above scheme shall be furnished indicating timelines for laying down sewage network system to trap all the sewage generated from authorized and unauthorized colonies and linking to the main drain for treatment & disposal.

v. Measures/steps taken for utilization of the treated waste water for agriculture, horticulture, construction activities, dust mitigation and other non-contact purposes.

vi. Details of monitoring of the functioning of the STPs, water quality monitoring.

8.1.10.1 The progress of de-silting of Trunk/ Peripheral sewer lines (approximate 200 km) was briefed to the Committee. Out of 200 km, only 66.428 km sewer line has been de-silted against the target of 94.93 km with timeline of June, 2023. The Committee observed that since 10.10.2023 (when de-silting of 30.516 km was completed), only 5.912 km sewer line has been de-silted in last 3 months and expressed its dissatisfaction on such slow speed of de-silting works.

8.1.10.2 Member Drainage, DJB informed that de-silting work of Trunk / Peripheral Sewer Lines delayed due to imposition of GRAP in Delhi due to which Diesel Generator Sets used by the contractors were not allowed to operate.

8.1.10.3 In respect of de-silting of remaining 110 KMs of Trunk /peripheral sewer, Member Drainage informed that de-silting of remaining 110 KMs has reduced to 40 KMs now and the same is pending in legal department of DJB. In respect of de-silting of remaining 110 KMs of Trunk / Peripheral Sewer DJB, it was advised to seek opinion of Ld. ASG to resolve the legal issues, if any.

8.1.10.4 Revised Timeline for completion of de-silting of Trunk / Peripheral sewer lines is June, 2024.

8.1.10.5 It was also informed that de-silting work of sewer line below 1000 mm diameter (approx. 529.5 Km) has also been taken up by DJB and 162.25 m of sewer line has been de-silted. Revised Timeline for completion of de-silting of sewer line below 1000 mm diameter (approx. 529.5 Km) is June, 2024 against earlier timeline of December, 2023.

8.1.10.6 DJB was directed to look for possibility of arranging Gas-based-Generator Sets only in all of their tenders (if so required) for execution of de-silting work instead of Diesel Generator Sets, so that work does not get hampered during invocation of GRAP advisories.

8.1.10.7 DJB was also directed to expedite the work of de-silting of Trunk / Peripheral Sewer Lines and Sewers below 1000 mm diameter without any further delay.

8.1.11 Interconnections between Storm Water Drains and Sewerage System (both way)

8.1.11.1 It was informed to the Committee that there are number of locations where there is inter-connection between storm water drains and sewerage system (both way) therefore the Committee in its earlier meeting decided to take up this issue as a new action point as "Sewerage system and storm water drainage faulty interconnections".

8.1.11.2 Representative of MCD informed that:

- (i) MCD has carried out survey of 309 drains and has taken necessary action for plugging / closing such points of storm water drains joining / connected with the Sewerage System of DJB.

- (ii) MCD has disconnected 183 no. of drains;
- (iii) in case of 13 drains action plan has been prepared by MCD.
- (iv) 52 drains pertain to PWD/ IF&CD/ DSIIDC,
- (v) 5 drains are not traceable; and
- (vi) in case of 56 drains it is not feasible to disconnect/ plug these drains.

8.1.11.3 Representative of MCD informed that MCD has sent a proposal of Rs.37 crores to Urban Development (UD) Department, GNCTD for funding the projects of MCD. It was informed that in Najafgarh drain basin, work has started for providing storm water drains in unauthorized colonies and JJ clusters.

8.1.11.4 The following directions were given by the Committee:

- (i) MCD to complete the works of plugging / closing such points of storm water drains joining / connected with the Sewerage System of DJB of 13 drains for which action plans have been prepared by it, immediately without any further delay;
- (ii) MCD to provide list of 52 drains pertaining to PWD/ IF&CD/ DSIIDC to the DJB latest by 31.01.2024. Further, list of 56 drains, wherein MCD is of the opinion that it is not feasible to disconnect/ plug these drains, shall also be provided by the MCD to DJB latest by 31.01.2024. DJB shall plug these points;
- (iii) MCD and UD Department, GNCTD to explore funding from Amrut 2.0 scheme;
- (iv) DPCC to also explore funding from the Environmental Compensation received in view of such directions;
- (v) Further, list of 191 points / drains in which there is discharge of waste water from the sewerage system of DJB shall be shared by MCD to DJB, and DJB shall plug these points.

MCD, DJB, DPCC and UD Department should submit a report to the HLC on or before 05.02.2024 in this regard.

8.2 Tapping of Drains:

8.2.1 It was informed that following 22 drains are cut-falling into river Yamuna in Delhi:

- 02 Drains [Najafgarh (including Supplementary Drain) & Shahdara] being large drains and technically not feasible to tap whole drain however included in Interceptor Sewer Project where substantial flow of sub-drains has been / will be tapped.
- 02 Drains (Delhi Gate Drain & Sen Nursing Home Drain) Partially Tapped;
- 09 drains flow yet to be tapped / diverted to Sewer / STPs for treatment.
- 09 Drains Tapped;

1/80850/2023

Government of India
Ministry of Jal Shakti
Department of Water Resources, RD&GR
(Flood Management Wing)

Block-11, 8th Floor, CGO Complex,
Lodhi Road, New Delhi-110003.
Dated 06 August 2023

Office Memorandum

Subject: Constitution of a Committee for joint flood management study of river Yamuna for its reach between Hathnikund and Okhla barrage

The extensive flooding in river Yamuna during July 2023 necessitated giving a fresh look for flood management of the river in its reach between Hathnikund and Okhla barrage. In this regard, the undersigned is directed to convey that, with the approval of the Competent Authority of DoWR, RD&GR, Ministry of Jal Shakti, a Committee is constituted for conducting a **joint flood management study of river Yamuna for its reach between Hathnikund and Okhla barrage**, as per the following details:

2. Composition of the Committee:

1.	Chairman, Central Water Commission	Chairman
2.	Member (D&R), Central Water Commission	Member
3.	Member (RM), Central Water Commission	Member
4.	Commissioner (FM), DoWR, RD&GR, MoJS	Member
5.	Commissioner and Secretary, Irrigation and WRD, Government of Haryana	Member
6.	Engineer in Chief, Irrigation and WRD, Government of Haryana	Member
7.	Principal Secretary, Irrigation and WRD, Government of Uttar Pradesh	Member
8.	Engineer in Chief and HoD, Irrigation and WRD, Government of Uttar Pradesh	Member
9.	Principal Secretary, Irrigation and Flood Control Department, Government of NCT	Member
10.	Chief Engineer-Zone-1, Irrigation and Flood Control Department, Government of NCT	Member
11.	Director, Central Water & Power Research Station, Pune	Member
12.	Representative of National Remote Sensing Centre, Hyderabad	Member
13.	Representative of IMD	Member

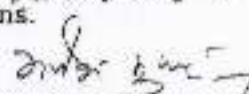
850/2023

14.	Chief Engineer(FMO), Central Water Commission,	Member-Secretary
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The Committee shall review and advise the study as per Terms of Reference given at Annexure-I.

3. The Committee will submit its final report within a period of six months from the date of its constitution. However, an interim report regarding meteorological aspects, return period floods, discharging capacity of barrages, functional requirement of ITQ barrage etc along with interim measures to be taken shall be submitted within two months. The Committee may co-opt other members, if required, and may invite any officer from expert organizations to present the outcome of related technical studies carried out by them, if any.

4. The expenditure on TA/DA etc. of the officials for participating in meetings/visits shall be borne by the respective Organizations.


 (Rajesh Kumar)
 Sr. Joint Commissioner-II, FM
 Ph.No. 9650550015
 E-mail: sjcer2-mowr@nic.in

To,
The Members of the Committee

Copy to:

1. Chief Secretary, Government of Uttar Pradesh
2. Chief Secretary, Government of Haryana
3. Chief Secretary, Government GNCDD
4. Director General, IMD, New Delhi
5. Director, NRSC, Hyderabad.

Copy for kind information to:

1. PS to Hon'ble Minister Jal Shakti
2. Sr.PPS to Secretary (WR,RD&GR), Ministry of Jal Shakti
3. Sr. PPS to Special Secretary (WR,RD&GR), Ministry of Jal Shakti

Annexure-I**TERMS OF REFERENCE****FOR**

**FLOOD MANAGEMENT STUDY OF RIVER YAMUNA FOR ITS
REACH BETWEEN HATHNIKUND AND OKHLA BARRAGE**

1.0 Background

River Yamuna, one of the largest tributaries of River Ganga, originates from Yamunotri Glacier on the southwestern slope of Bandarpunch peaks of the Lower Himalayas in Uttarakhand. The Yamuna River basin lies in Uttarakhand, Himachal Pradesh, Haryana, Delhi and Uttar Pradesh. Before its confluence with River Ganga at Sangam in Prayagraj district of Uttar Pradesh, important tributaries such as Hindon, Tons, Pabbar, Chambal, Sindh, Betwa and Ken join the river. The country's huge population depends upon the water of the river Yamuna. There are six barrages constructed on the main course of the river. These barrages are Dakpathar Barrage, Hathnikund Barrage, Wazirabad Barrage, ITO Barrage, Okhla Barrage and Mathura Barrage. From Hathnikund Barrage, water is diverted to Eastern and Western Yamuna Canals. The river water takes about 2-2.5 days to travel from Hathnikund to Delhi. Central Water Commission started flood forecasting services in 1958 with its first forecasting station on Yamuna at Delhi's old railway bridge.

Due to a combination of Western Disturbances and Southwest Monsoon, heavy rainfall in different places of Himachal Pradesh, Uttarakhand and Haryana occurred during 09-13 July 2023, leading to extensive landslides and flooding in the hills and plains. The heavy rainfall in the catchment area of river Yamuna resulted in huge runoff in the river, due to which an earlier HFL of 207.49 m recorded at the CWC gauging site of Delhi's old railway bridge on 6th September 1978 surpassed and a new HFL of 208.66 m was observed on 13th July 2023. This necessitated giving a fresh look at the river's flood management in its reach from Hathnikund Barrage up to Okhla Barrage.

2.0 Scope of the Study

For any flood management intervention by structural or non-structural measures, an in-depth understanding of the hydrological and hydro-dynamic aspects of the river/stream is essential. Hence, for the reach of river Yamuna from Hathnikund barrage up to Okhla barrages, the following studies are proposed:

- i. Detailed catchment representative rainfall analysis to compare the floods of the year 1978 and 2023 and other years as decided

- ii. Estimation of 5, 10, 25, 50, 100 and 500-year return period floods at Hathnikund Barrage, Wazirabad Barrage, Delhi old railway bridge and Okhla Barrage
- iii. Carrying capacity of the river between Hathnikund barrage and Okhla barrage
- iv. Maximum water level at salient locations of the study river reach for 5, 10, 25, 50, and 100-year return period floods
- v. Afflux of barrages, bridges, flood protection dykes and other structures in the study reach of the river
- vi. 2D modelling and submergence area estimation for the reach of river Yamuna from 10 km upstream of Wazirabad barrage and up to 10 km downstream of Okhla barrage.
- vii. Identification of possible drainage congestion in Delhi in case of high spate of river Yamuna.
- viii. To review the utility of ITO barrage in present context.
- ix. Examine the feasibility of some innovative measures like creating underground reservoirs for flood moderation in line with Tokyo model.
- x. Examine the feasibility of creation of storages for surplus flood water in the flood plains of Yamuna and thereafter identification of such sites.

3.0. Tasks to be performed

- a. Review of Data availability, Data Collection and Compilation
- b. Collection and compilation of all the requisite information/data for the study as suggested
- c. Delineation of river catchment and estimation of physiographic parameters
- d. Preparation of DTM up to 200 m on either side of the river from river banks using a combination of Drone and hydrographic survey and merging this DTM with other available DTM/DEM for the study purpose
- e. Catchment representative rainfall analysis using IMD gridded rainfall data to estimate 1-day, 3-day and 5-day maximum rainfall depths from the year 1970 to Year 2023.
- d. Estimation of 5, 10, 25, 50, 100 and 500-year return period floods at Hathnikund barrage, Wazirabad Barrage, Delhi old railway bridge and Okhla barrage
- e. Development of a 1-D mathematical model of the study river reach to estimate water level at salient locations for 5, 10, 25, 50 and 100-year return period

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floods and channel carrying capacity

1. Development of a 2-D mathematical model for the reach of river Yamuna from 10 km upstream of Wazirabad barrage and up to 10 km downstream of Qahla barrage for submergence area estimation.
2. Identification of drainage congestion in Delhi in case of high spate of river Yamuna

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DELHI POLLUTION CONTROL COMMITTEE
WATER LABORATORY
 4thFLOOR, ISBT BUILDING, KASHMERE GATE, DELHI-06
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WATER QUALITY STATUS OF RIVER YAMUNA

REPORT NO: DPCC/W/Y/2024/ 698
 DATE OF SAMPLING: 02.02.2024

Dated 07/03/2024

S. No.	Locations	Latitude Longitude	pH	COD (mg/l)	BOD (mg/l)	DO (mg/l)	Fecal Coliform MPN/100ml
Water Quality Criteria ('C' Class)			6.5-8.5	-	3mg/l or less	5mg/l or more	500(desirable) 2500 (max permissible)
1	Palla	28.8138023, 77.2100181	7.32	24	1.3	9.6	2×10^2
2	Wazirabad	28.7131310, 77.2319304	7.41	48	6.7	5.3	4×10^2
3	ISBT Bridge	28.6713533, 77.2338207	7.34	136	41	NIL	11×10^3
4	ITO Bridge	28.6284288, 77.2534977	7.25	88	28	0.8	8×10^3
5	Nizamudin Bridge	28.5915608, 77.2715342	7.48	160	42	NIL	9×10^3
6	Okhla Barrage	77°18'49" 28°32'40"	7.24	176	50	NIL	17×10^4
7	Agra Canal at Okhla Barrage	28.545414, 77.311075	6.98	168	45	NIL	12×10^4
8	River Yamuna at Asgarpur (After confluence of Shahdara & Tuglakabad drains)	28.4657003, 77.3390523	6.82	184	54	NIL	25×10^4

N. Mittal
I/C WATER LAB
 Dr. Nandita Mittal
 Scientist (I)





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WATER LABORATORY
4thFLOOR, ISBT BUILDING, KASHMERE GATE, DELHI-06
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WATER QUALITY STATUS OF DRAIN

REPORT NO: DPCC/W/D/2024/
Date of Sampling: -02.02.2024

697

Dated 07/03/2024

S.No.	Name of Sample	pH	TSS (mg/l)	COD (mg/l)	BOD (mg/l)
	Standards	5.5-9.0	100	250	30
1.	Najafgarh Drain	7.6	112	280	64
2.	Metcalf House Drain	NO FLOW			
3.	Khyber Pass Drain				
4.	Sweeper Colony Drain				
5.	Magazine Road Drain				
6.	ISBT Drain	7.7	88	240	40
7.	Tonga Stand Drain	NO FLOW			
8.	Civil Mill Drain				
9.	SEN Nursing Home Drain	7.2	72	200	35
10.	Drain No. 14	NO FLOW			
11.	Power House Drain	7.1	168	280	60
12.	Indrapuri Drain	7.3	95	200	40
13.	Sonia Vihar Drain	7.5	120	400	65
14.	Kailash Nagar Drain	7.4	88	160	45
15.	Shastri Park Drain	7.2	46	128	36
16.	Barapulla Drain	7.4	100	280	55
17.	Maharani Bagh Drain	7.4	92	200	50
18.	Old Agra Canal Drain	NO FLOW			
19.	Jaitpur Drain	7.3	88	224	42
20.	Sarita Vihar Pool	7.2	80	208	46
21.	Tuglakabad Drain	7.2	120	320	68
22.	Drain Near LPG Bottling Plant	NO FLOW			
23.	Drain Near Sarita Vihar Bridge (Mathura Road)	7.6	124	352	60
24.	Shahdara Drain	7.3	116	224	56
25.	Sahibabad Drain	7.2	114	240	52
26.	Molarband Drain	7.4	72	200	48
27.	Abul Fazal Drain	7.7	84	256	58
28.	Supplementary Drain	7.2	92	256	58

I/C WATER LAB

Dr. Nandita Moitra
Scientist D

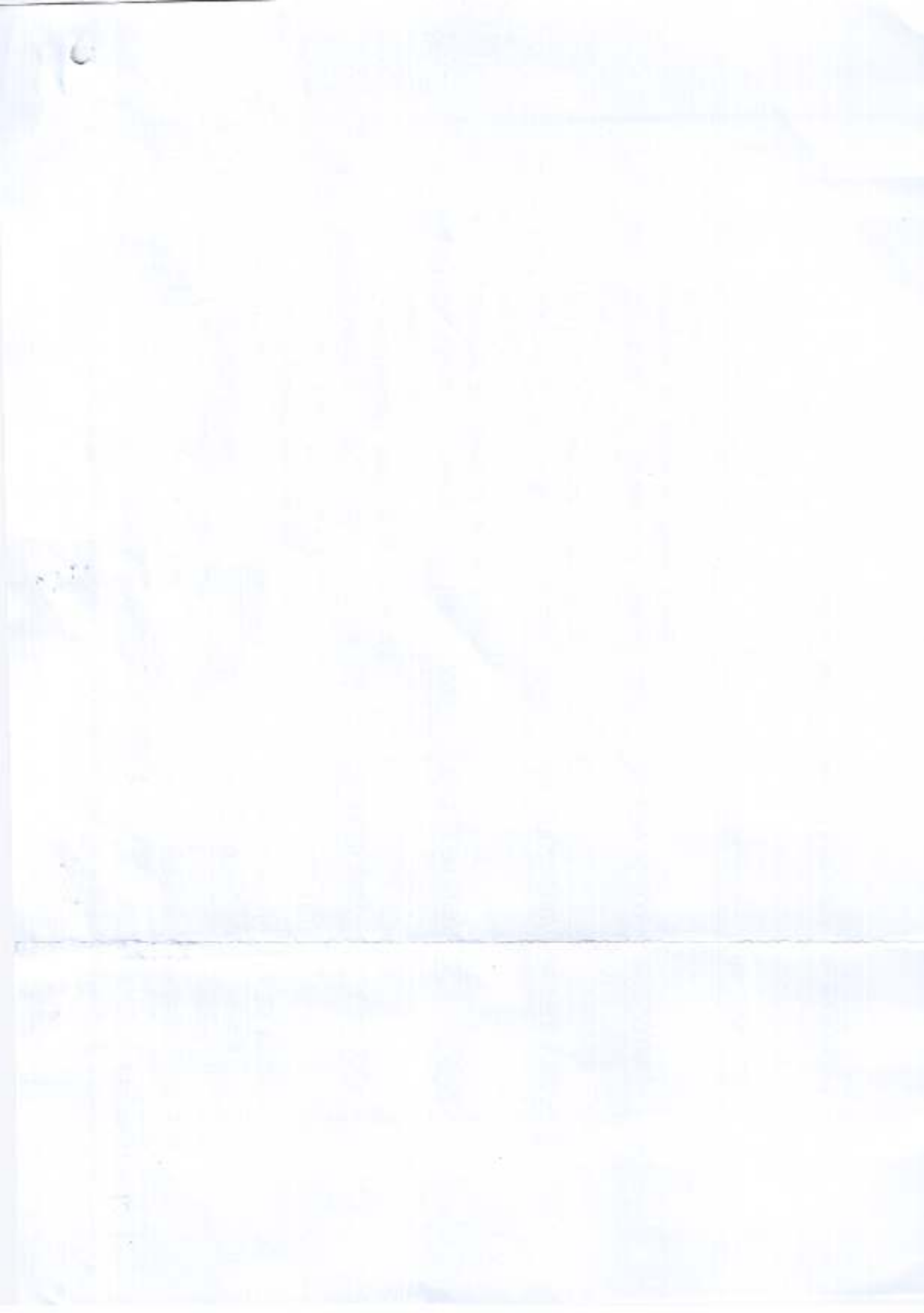
Annexure- 9

S. No.	Project Area	Total Site Area (In Ha)	Area repossessed (In Ha)	Area to be repossessed (In Ha)	Details
1.	Asita East (DDA)	90	90	Nil	-
	Asitabast (UP)	107	75.09	*4.00	21 Hectares area has Already been transferred to PWID by UP Irrigation Deptt.
2.	Kalindi Avital	263	54.81	02	05 Ha under litigation.
3.	Kalindi Biodiversity Park	115	2.5	-	-
4.	Asita West	200	181.89	-	-
5.	Amrut Biodiversity Park (DDA)	108	92.5	-	-
	Amrut Biodiversity Park (CPWD)	8.25	-		
6.	Yamuna Vansathali	236.5	105.36	15.7	
7.	Mayur Nature Park (DDA)	235	67.77	*35.25	Part land is under litigation. 100 Ha land de-notified.
8.	Mayur Nature Park (UP)	162.75			
	Eco-Tourism (DDA)	22.7*	7.3	0.00	
	Eco-Tourism (DTC)	7.3			
	Total	1555.5	677.22	76.95	Regular demolition programmes are being organized to remove the encroachments in time bound manner.

DETAILS OF CHALLANS FROM THE YEAR 2018-24

Annexure-10

Sl. No.	Year	Offence	No. of challans	Compensation amount	Recovery amount
1.	2018	Dumping of malba	1	Rs.50,000/-	Nil
2.	2019	Dumping of malba, unauthorized parking and garbage dumping in Yamuna River flood plain.	186	Rs. 90,40,000/-	Rs.25,47,500/-
3.	2020	Dumping of malba and unauthorized parking in Yamuna River flood plain.	54	Rs.21,30,000/-	Rs.6,45,000/-
4.	2021	Dumping of malba and illegal parking in Yamuna River Flood Plain	776	Rs.1,22,95,000/-	Rs.31,70,000/-
5.	2022	Dumping of malba and illegal parking in Yamuna River Flood Plain	1167	Rs.2,75,25,000/-	Rs.26,20,000/-
6.	2023	Dumping of malba and illegal parking in Yamuna River Flood Plain	1250	Rs.1,29,50,000/-	Rs.8,20,000/-
7.	2024	Dumping of malba and illegal parking in Yamuna River Flood Plain	221	Rs.73,60,000/-	Rs.1,65,000/-
TOTAL =			3655	Rs. 7,13,50,000/-	Rs.99,67,500/-



Project	Area/ Encroached area/Ha/egs	Water bodies (Total) Completed	Timelines	Status
1. Asita East-- (Old Railway Bridge to ITO Barrage - Eastern Bank)	Total Area- 197 Ha			
PART A: Under the jurisdiction of DDA.	PART A: 90 Ha	PART A: 1/1	PART-A: Completed	PART B: Present progress is 74% (Civil) & 100% (Flort). Work completed are as under: 1. Excavation of 3 water bodies. 2. Construction of 3 ramps. 3. Embankment of 1 parking. Work was delayed due to flooding & sludgy site and GRAP imposed by CAQM. Fresh tender has been called for the works as directed by Hon'ble LG. Case No: SLJ (C) 14342/2022 Case Title: Shikaripur Slum Union vs DDA Court: Supreme court of India. Panel lawyer: Ms. Shalini Chandra & Mr. Sanjay Jain (ASG) Next Date of Hearing: 12.03.2024 & No stay
PART B: Under the jurisdiction of UP Irrigation Deptt. (Deposit work)	PART B: 107 Ha/0.4 Ha	PART B: 3/3	PART-B: 30.09.2024	
2. Kalindi/Aviral (NLL24 to DND Flyway- Western Bank)	Total Area : 263 Ha Part A : 100 Ha Part B : 163 Ha/5Ha/100mos (approx)	3/3	Part A : Completed Part-B: 31.03.2025	Part B : Children play area & Bamboo Shelter tendering in progress. Catereria work completed. Maintenance work in progress. 05 Hec under litigation NDQH-12/03/2024 26 Court Cases under 24(2) are pending in the Supreme Court of India.
3. Kalindi Biodiversity Park-- (DND to proposed Kalindi By-Pass- Western Bank) Entrusted to CFMDP	115 Ha		Within 9 months after completion of NLLA project.	Project is being executed by CFMDP. (Prof. C R Babu) 3 mos. Wetlands are completed in available space. Further work is held up due to NHAI work. DUB is initiating a project to tap the drains. A total of 35 cases are currently active in various courts (High Court, Saket Court) Case no: (Cmt. case- 11477/2023, NDQH-29.04.2024 Case no: WP (C) 5822/2021, NDQH- 30/07/2024 Case no: (S/SCJ) 1352/2023, NDQH- 19/03/2024 Case no: WP (C) 15746/2023, NDQH- 15/07/2024

Status of 'Restoration and Rejuvenation of River Yamuna floodplains' as on 29th February, 2024

4.	Asita West- (Old Railway Bridge to ITO Barrage- Western Bank) Part A : 93 Ha (Already developed) Part B : 107 Ha (under development)	200 Ha / 0.00 Ha	Part A : 2/2 Part B : 5/4	Part A : Complete Part B : On directions of Hon'ble I.G the proposal is being revised and timeline will be shared once proposal is approved. (30/04/2024)	Part B :- (for 107 Ha) Present progress is 85 % (Civil) & 100% (Hort.). Work completed are as under : 1. Excavation of 4 water bodies. 2. Excavation of 1 oxidation pond. 3. 1100 m cycle hike zone (cycle track) out of 1200 m 4. Pathways drawings are being revised. 5. Work of floral field in progress. 6. De-silling of drain in progress. Layout Plan is being revised as per direction of Higher Authority. Case no: SLP(C) No. 9284/2023 Next date of hearing- 12/03/2024.
5.	Amrut Bio Diversity Park- ITO to NH-24 (Eastern & Western Bank)- Area South of CWG Village Area Part A : 90 Ha (Eastern bank) - DDA Part B : 18 Ha (Western bank) - DDA Part C : 8.25 Ha (Western bank) - CPWD	18 Ha / 0.5/-	6/6	22.05.2024	Part A : For 90 Ha of land: Present progress is 85% (Civil) 20% (Hort.). Work completed are as under (for 90 Ha): 1. Excavation of 6 water bodies. 2. 11800 m pedestrian path out of 12000m. 3. 1 entrance plaza out of 2. 4. Construction of Plaza-2 & Nursery in progress. Work was delayed due to flooding & sludge site and GRAP imposed by CAQM. Part B : HC / LM (36878)19/L.WP(C) No 12504/2019; NDOH: 12.03.2024 Demolition carried out on 17 th October. Part C : Area handed over to CPWD (Nav Bharat Udyan) Part A : Present progress is 79% (Civil) 73% (Hort.). The work has been assigned to M/s INTACH on nomination basis for Qudsia Ghat. Work was delayed due to flooding & sludge site and GRAP imposed by CAQM. The work of parking in progress at Nigam booth ghat side. The work of grit wash for garden well completed. The storey bell structure is completed. Case no: W.P.(C) 1980/2023, NDOH: 27.03.2024 Case no: RCA/NCJ 17/2022, NDOH: 23.02.2024 Case no: HC/LM (32198)2018 W.P.(C)9342/2018, NDOH: 21.05.2024. Case no: W.P.(C)2377/2023/ACM Appl. 26530/2023, NDOH: 10.05.2024. Case no: CS No. 1191/23, NDOH: 22.07.2024. Case no: Appt. No. 72/2023, NDOH: 03.04.2024.
6.	Ghat Area : Wazirabad to Old Railway Bridge- Western Bank Part A : Entrusted to INTACH (Qudsia Ghat) Part B : Sur ghat, Eco-trail, Yamuna Bazaar	Total Site Area- 66 Ha (Qudsia Ghat- 16 Ha, Sur Ghat- 13.6 Ha, Eco-trail- 33 Ha, Yamuna Bazaar Area- 3.4 Ha)	1/-	Part A : 03/04/2024 Part B : 30/06/2024	Part B: Work awarded on 01st March 2023. Works to be undertaken. Waterbody, parking, Eco-trail, Chatris and plantation works. Site is sludgy due to the rise in water level of River Yamuna.

Status of 'Restoration and Rejuvenation of River Yamuna floodplains' as on 29th February, 2024

7.	Yamuna Vanasthal- (Wazirabad Barrage to ISRT Bridge- Eastern Bank, around Garhi/Mandu Village & Lis major Village)	236.5 Ha / 13.11a / 20Nos.	7/6	30/04/2024	Present progress is 88% (Civil), 80% (Hort.) Work completed are as under (for 236.5 Ha): 1. Excavation of 6 water bodies and about 84% of pedestrian pathway works are complete. 2. Spreading of morum was underway. 3. Removal of garbage/ rubble deposited during flood is complete. 4. The repair of pathway is in progress. 5. The work of entrance gate is in progress. Work was delayed due to flooding & study site and CIRAP imposed by CAQM Court Cases: 1) W.P.(C) 7542/ 2017; NDOIL- 22/04/2024, 2) W.P.(C) 7135/2019, NDOIL- 02/05/2024
8.	Mayur Nature Park- (NH-24 to DND Flyway- Eastern Bank) PART A: Under the jurisdiction of DDA PART B: Under the jurisdiction of UP Irrigation Deptt.	Total Area- 397.75 Ha PART A: 235 Ha PART B: 162.75 Ha	---	31/03/2026	i. The land demarcation completed. ii. LM Department informed that approximately 119 Ha of land has been de-notified out of the total 235 Ha. iii. Accordingly, the revised landscape proposal is ready. The work of UP Irrigation land of 162.75 Ha is to be taken up on deposit work basis. Case no: W.P.(C) 10900/2019, NDOIL-04.03.2024 Case no: W.P.(C) 10918/2019, NDOIL - 04.03.2024 Case no: W.P.(C) 2504/23, NDOIL-07.05.2024 Case no: W.P.(C) 7563/23, NDOIL-24.05.2024
9.	Eco-Tourism Area- (Geeta Colony Bridge to TTO Barrage- Western Bank) Ilindan Sarovar- (NH-24 to DND Flyway- Eastern Bank) Part Area-II-Ilindan Cut Wetlands I&II PART A: Under the jurisdiction of DDA. PART B-Under the jurisdiction of UP Irrigation Deptt. (Deposit work)	30 Ha/0.00 Ha Total Site Area- 53.6 Ha PART A: 15 Ha PART B: 30 Ha	---	Yet to be planned	Area falls outside the 1 in 25 year floodplain. Proposal will be taken up once the 'O-II' is finalized after notification of MPD-2041. TPA No : 196/2023, NDOIL- DISPOSED OFF
10.				15/10/2024	Proposal under progress.

Status of 'Restoration and Rejuvenation of River Yamuna Floodplains' as on 29th February, 2024

Total	DDA- 1366.75 Ha / 18.9 Ha/ 120 Nos. UP Irrig.- 299.75Ha - 1666.5 Ha	28/25	(a) Completed DDA - 283 Ha (b) In progress DDA - 640.75 Ha UP Irrig. - 107 Ha. (c) In planning DDA- 443Ha UP- 192.75 Ha - 635.75 Ha
Protection and management of Flood Plain Zone(FPZ)			Protection of flood plain of Yamuna River & prevention of encroachment: 1. Demarcation of 1 in 25 years floodplains and fixing up of bollards and fencing: The demarcation of 1 in 25 years flood plain of River Yamuna from Wazirabad to Jaipur on both banks has been done by installation of bollards duly marked with GPS Co-ordinates. The Flood plains stretch have been demarcated by providing 591 bollards (250 mm dia, 1 m high with 1x1x1 footing); 375 nos. Flag post & 27 nos. sign boards. 2. Engagement of Private Security to stop illegal Dumping: Private security has been engaged by DDA to stop illegal dumping. 125 Security Guards have been deployed by DDA round the clock in three shifts at vulnerable points, with 4 patrolling vehicles in the Yamuna Flood Plain area from Wazirabad Barrage to Okhla Barrage to check illegal dumping of Malbon and to prevent encroachment. 3. Installation of Electronic Surveillance System: 93 nos cameras have been installed at 27 no locations from Wazirabad Barrage to Okhla Barrage to check illegal dumping of malba into flood plains area. 4. Removal of Encroachment from Flood Plain: Regular demolition programmes are being organized to remove the encroachments in time bound manner.

Reuse of Treated Wastewater

S.No.	Particular	Quantum in MGD																																
1	Quantum of Available Treated STP Water	566 (February, 2024)																																
2	Mandatory Return Flow in River Yamuna	267 (As per MOU of 1994)																																
3	Present Use of Treated STP Water	About 125 MGD [90 MGD for Horticulture in various parks in Delhi including Millennium Park in I.P Estate, Japanese Garden in Rohini and various parks in NDMC area and DTC Depots, PPCL etc. + 35 MGD in Development / Rejuvenation of Lakes / Water Bodies (Pappankalan, Nilothi & Najafgarh, Sanjay Van)]																																
4	Proposed Use of Treated STP Water	Presently, 100 MGD Treated Effluent is generated from Coronation Pillar Ph I & II STPs. Following is the breakup of use of 100 MGD Treated Effluent : 21.5 MGD is currently used by IFCD for horticulture / farming purposes. Regarding balance 88.5 MGD plans as follows: a. 28.5 MGD to be used in marshy land of Coronation Pillar STP, b. 30 MGD to be used in Jahangir puri drain for ground water recharge and c. 20 MGD to be used in Bhalswa Lake & DDA Golf Course. Regarding the proposed usage of 88.5 MGD Treated Effluent in principle approval from Hon'ble (Minister) received and estimates are to be prepared.																																
5	Balance Available Treated STP Water	74 MGD DJB has following projects for use of remaining treated STP Water for Development / Rejuvenation of Lakes : <table><tr><th>Project</th><th>Treated Water Use (in MGD)</th><th>Progress Cumulative</th><th>Timelines</th></tr><tr><td>Sanjay Lake Kondli</td><td>10</td><td>99%</td><td>March, 2024, (Timeline was September, 2023)</td></tr><tr><td>Smriti Van / Lake and nearby areas from Kondli STP.</td><td>10</td><td>99%</td><td>March, 2024, (Timeline was March, 2023)</td></tr><tr><td>Rohini Lake No.1</td><td>15</td><td>98%</td><td>December, 2023 (Timeline was August, 2023)</td></tr><tr><td>NTPC Eco Park</td><td>5</td><td>50%</td><td>March, 2024, (Timeline was July, 2023)</td></tr><tr><td>Okhla</td><td>20</td><td>tender received and are under Financial concurrence</td><td>June, 2024,</td></tr><tr><td>Rohini Lake No.-2</td><td>15</td><td>96%</td><td>March, 2024</td></tr><tr><td>Total</td><td>65</td><td></td><td></td></tr></table>	Project	Treated Water Use (in MGD)	Progress Cumulative	Timelines	Sanjay Lake Kondli	10	99%	March, 2024, (Timeline was September, 2023)	Smriti Van / Lake and nearby areas from Kondli STP.	10	99%	March, 2024, (Timeline was March, 2023)	Rohini Lake No.1	15	98%	December, 2023 (Timeline was August, 2023)	NTPC Eco Park	5	50%	March, 2024, (Timeline was July, 2023)	Okhla	20	tender received and are under Financial concurrence	June, 2024,	Rohini Lake No.-2	15	96%	March, 2024	Total	65		
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DJB has approved the policy of supplying treated effluent for irrigation purposes, for supply to farmhouses for horticulture and recharging of ground water schemes are in progress supply to farmhouses from Mehrauli, Kapashera, Narela and Okhla STPs. Further schemes of recharging ground water are also in progress from Yamuna Vihar, Pappankalan, Najafgarh, Keshopur, Rithala, Kondli, Okhla, Coronation Pillar STPs

Number of Tankers Deployed:

S.No.	Agency	No. of Tankers Engaged
1	DTC	03
2	PWD	141
3	EDMC	29
4	DDA	11
5	Private Agencies	158
6	SDMC	29
7	Forest Department	05
8	CPWD	03
9	NHAI	02
10	M/s L&T	06
11	NBCC	04
12	DJB internal Horticulture use	32
13	IL & FS	01
14	NDMC	01
15	North West MCD	04
16	MCD South	05
	TOTAL	434