

# OFFICE OF THE EXECUTING COMMITTEE

Constituted by the Hon'ble National Green Tribunal in Original Application no.138 and 139 of 2016 in the matter of "Stench Grips Mansa's Sacred Ghaggar River (Suo-Moto Case) and Yogendera Kumar" and

**OA No. 06 of 2012 in the matter of Manoj Mishra vs Union of India & Ors regarding rejuvenation of river Yamuna**

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To

The Registrar General,  
National Green Tribunal,  
Faridkot House, Copernicus Marg,  
Near India Gate,  
New Delhi-110001

No CEC/2020/1059  
Dated: 21.9.2020

Subject:

**First Report of the Monitoring Committee (constituted by Hon'ble Green Tribunal in OA No 138 of 2016 and OA No 139 of 2016 in the Matter of Stench Grips Mansa's Sacred Ghaggar River and Yogendera Kumar) in compliance to order dated 6.7.2020 in OA No. 06 of 2012 in the matter of Manoj Mishra vs Union of India & Ors regarding rejuvenation of river Yamuna.**

....

It is submitted that the Hon'ble National Green Tribunal vide its order dated 6.7.2020 in OA No. 06 of 2012 in the matter of Manoj Mishra vs Union of India & Ors regarding rejuvenation of river Yamuna has passed the detailed order, the operating para no. 21, relating to the Monitoring Committee, of said order, is reproduced as under.

**"21. Accordingly, we direct that:**

- a. **DDA must forthwith comply with the earlier direction instead of finding lame excuses and taking stand of avoiding public duty.**
- b. **Let the concerned authorities in Delhi, Haryana and UP to take further action in terms of the recommendations of the Committee as well as earlier directions of this Tribunal dated 13.01.2015, as updated vide earlier orders dated 11.09.2019 and 05.03.2020. The compliance may be overseen by the Chief Secretaries concerned. The Committees headed by Justice Pritam Pal in Haryana and Justice SVS Rathore in UP may also oversee such compliances in their respective states and give their independent reports periodically."**

In compliance to order dated 6.7.2020 of the Hon'ble Tribunal as mentioned in para 21 above, the Monitoring Committee is submitting its first report to the Hon'ble Tribunal for consideration. The abovesaid report is being sent through email at [judicial-ngt@gov.in](mailto:judicial-ngt@gov.in).

DA/As above

**Sd/-**  
**( Justice Pritam Pal )**  
Former Judge,  
Punjab & Haryana High Court  
now as Chairman of the  
Monitoring Committee

# **First Report**

of the

## **Monitoring Committee**

**(constituted by Hon'ble Green Tribunal in OA No 138 of 2016 and OA No 139 of 2016 in the Matter of Stench Grips Mansa's Sacred Ghaggar River and Yogendera Kumar)**

**in compliance to order**

**dated 6.7.2020**

**in**

**OA No. 06 of 2012**

in the matter of

**Manoj Mishra vs Union of India & Ors**

**regarding rejuvenation of river Yamuna.**

**Submitted on :**

**21st September, 2020**

# Contents

<b>Point No.</b>	<b>Description</b>	<b>Page No.</b>
1.0	Constitution of the Executing/Monitoring Committee	1
2.0	About River Yamuna	2
3.0	Meeting of the Monitoring Committee with State level officers of State of Haryana on 28.7.2020 regarding rejuvenation of river Yamuna	3
4.0	Preparation of first report of the Monitoring Committee	3
4.1	Sources of pollution in river Yamuna	3
4.1.1	11 drains carrying treated/untreated sewage/industrial effluent and falling into river Yamuna	3-5
4.1.2	Industrial discharge leading to drains/river Yamuna	5
4.2	Details of the towns, population and sewage discharge	5
4.3	Water quality of river Yamuna at various locations	6-7
4.4	Status of existing sewage treatment plants in the catchment area of River Yamuna	7
4.5	Performance of existing sewage treatment plants	7-10
4.6	Status of new STPs under construction and proposal	10
4.6.1	Sewage Treatment Plants under construction	10
4.6.2	Proposed sewage treatment plants under planning	11-12
4.6.3	Status of upgradation of existing STPs	12-13
4.7	Status regarding laying of sewerage network in the towns.	13-14
4.7.1	Laying sewerage network and interception of sewage	14
4.8	Diversion of flow of sewage from unauthorized areas	15
4.9	Gap in treatment of sewage	15-16
4.10	Treatment of industrial effluent and disposal of treated effluent	16
4.11	Status of common effluent treatment plants (CETPs)	16
4.11.1	Common effluent treatment plants (CETPs) under planning	16-17
4.12	Sewage treatment plant for the villages	17-19
4.13	Groundwater quality in the catchment area of river Yamuna	19-24
4.14	Environmental Flow	24-25
4.15	Septage and faecal sludge management.	25
4.16	In-situ bio remediation in the drains	25-26
5.0	Conclusions and recommendations.	26-30

<b><u>Sr.No.</u></b>	<b><u>List of Annexures</u></b>	<b><u>Page No.</u></b>
1	Annexure-1	31-45

**First Report of the Monitoring Committee (constituted by Hon'ble Green Tribunal in OA No 138 of 2016 and OA No 139 of 2016 in the Matter of Stench Grips Mansa's Sacred Ghaggar River and Yogendera Kumar) in compliance to order dated 6.7.2020 in OA No. 06 of 2012 in the matter of Manoj Mishra vs Union of India & Ors regarding rejuvenation of river Yamuna.**

**1.0 Constitution of the Executing/Monitoring Committee**

The Hon'ble National Green Tribunal vide its order dated 7.8.2018 had constituted an Executing Committee under the Chairmanship of Justice Pritam Pal Former Judge, Punjab and Haryana High Court for executing the orders of the Hon'ble NGT in OA No. 138 of 2016 and OA No. 139 of 2016 in the matter of "Stench Grips Mansa's Sacred Ghaggar River (Suo-Moto Case)" and Yogender Kumar. Subsequently, the Hon'ble Tribunal vide its order dated 21.05.2019 and 01.10.2019, included the name of Dr. Babu Ram, former Member Secretary, Punjab Pollution Control Board and Ms. Urvashi Gulati, IAS, former Chief Secretary, Haryana, respectively, as Members of the Executing Committee.

The Hon'ble National Green Tribunal in its order dated 12.2.2020 in EA No. 35/2019 in OA No. 150 of 2014 in the matter of Ajay Sipahiya & Ors. V/s Union of India had directed the Executing Committee to monitor the compliance of Solid Waste Management Rules, 2016 in the State of Haryana and U.T Chandigarh.

The Executing / Monitoring Committee is submitting its reports in OA No. 138 of 2016 and 139 of 2016 in the matter of Stench Grips Mansa's Sacred Ghaggar River w.r.t State of Punjab, State of Haryana, State of Himachal Pradesh and Union Territory of Chandigarh and OA No 606 of 2018 in the matter of Compliance of Solid Waste Management Rules, 2016 w.r.t State of Haryana and Union Territory of Chandigarh from time to time as per the directions of Hon'ble Tribunal.

- 1) Now the Hon'ble National Green Tribunal vide its order dated 6.7.2020 in OA No. 06 of 2012 in the matter of Manoj Mishra Vs. Union of India & Others has passed the detailed order, the operating para no. 21 of which, relating to the present Monitoring Committee, is reproduced as under.

**"21. Accordingly, we direct that:**

- a. DDA must forthwith comply with the earlier direction instead of finding lame excuses and taking stand of avoiding public duty.**
- b. Let the concerned authorities in Delhi, Haryana and UP to take further action in terms of the recommendations of the Committee as well as earlier directions of this Tribunal dated 13.01.2015, as updated vide earlier orders dated 11.09.2019 and 05.03.2020. The compliance may be overseen by the Chief Secretaries concerned. The Committees headed by Justice Pritam Pal in Haryana and Justice SVS Rathore in UP may also oversee such compliances in their respective states and give their independent reports periodically."**

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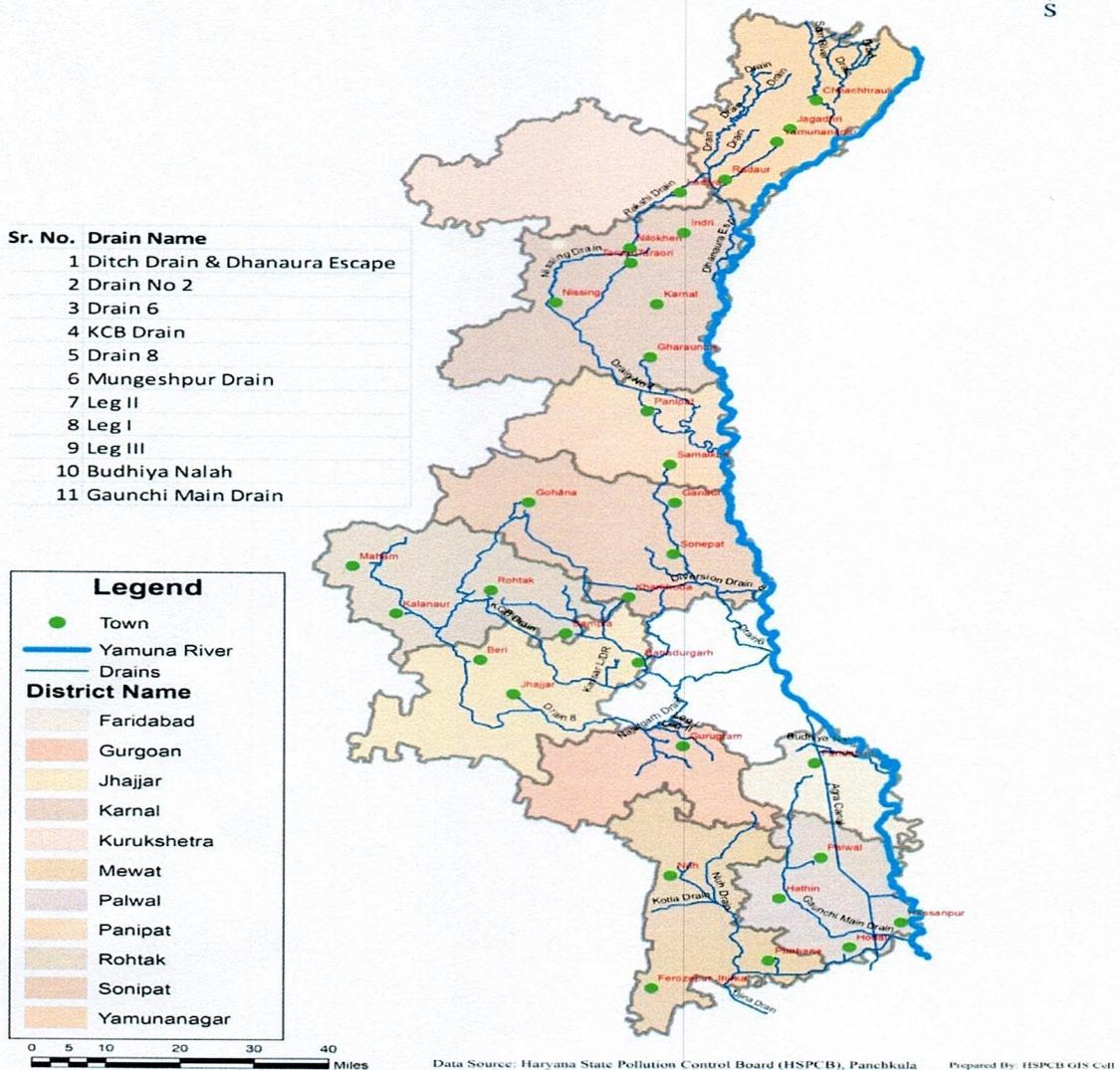
## 2.0 About River Yamuna

River Yamuna is the second-largest tributary river of the Ganga and the longest tributary in India. It originates from the Yamunotri Glacier at a height of 6,387 metres (20,955 ft) on the southwestern slopes of Banderpooch peaks of the Lower Himalaya in Uttarakhand and travels a total length of 1,376 kilometers. It merges into river Ganga at Triveni Sangam, Prayagraj.

It crosses several States namely Haryana and Uttar Pradesh, passing by Uttarakhand, it flows into the State of Himachal Pradesh. After passing Paonta Sahib, Yamuna flows along the boundary of Haryana and Uttar Pradesh and after exiting Haryana, it continues to flow till it merges with the river Ganga at Sangam at Prayagraj in Allahabad (Uttar Pradesh). At the Hathni Kund Barrage, its water is diverted into two canals namely the Western Yamuna Canal flowing towards Haryana and the Eastern Yamuna Canal towards Uttar Pradesh. With the passage of time, the development in terms of commercial activities, industries and growth in population have become the sources of contamination of water of river Yamuna. Map showing River Yamuna and drains carrying treated/untreated sewage of the towns and industries located in the catchment area of river Yamuna are shown in

**Figure-1.**

### Yamuna River Catchment Area With Drains and Towns



**Figure-1: River Yamuna catchment area with drains and Districts of Haryana**

### **3.0 Meeting of the Monitoring Committee with State level officers of State of Haryana on 28.7.2020 regarding rejuvenation of river Yamuna.**

The Monitoring Committee has held its meeting with State level officers of State of Haryana w.r.t rejuvenation of river Yamuna on 28.7.2020. The minutes of the meeting are annexed as per **Annexure-1**. In the said meeting, the following issues were discussed.

- Water quality of river Yamuna at various locations.
- Sources of pollution in river Yamuna and details of drains carrying sewage/industrial effluent in river Yamuna.
- Status of sewage treatment plants installed for treatment of sewage of the towns located on river Yamuna and their performance.
- Status of Sewage Treatment Plants which are under construction/planning.
- Status of sewage treatment plant which are under proposal.
- Status of STPs which require technological upgradation.
- Status of installation of effluent treatment plants by the industries and mode of disposal of treated effluent.
- Implementation of irrigation schemes to utilize treated sewage for irrigation and irrigation schemes which are under construction/planning.
- Non point sources and control of pollution of these sources.
- Status of installation of sewage treatment plant for the villages.
- Gaps in treatment of sewage of the towns located on river Yamuna.
- Ground water quality in the catchment area of river Yamuna.
- Environmental Flow
- Septage and faecal sludge management.
- Installation of CETPs and their performance.
- In-situ bio- remediation in the drains
- Status of laying of sewerage network and interception of sewage.

### **4.0 Preparation of first report of the Monitoring Committee**

Based on the discussion held on the points as mentioned in para 3.0 above, data presented by the various departments and analysis of data by the Monitoring Committee, 1<sup>st</sup> report of the Monitoring committee has been prepared, which is mentioned as under: -

#### **4.1 Sources of pollution in river Yamuna**

##### **4.1.1 11 drains carrying treated/untreated sewage/industrial effluent and falling into river Yamuna**

Sources of pollution due to discharge of treated/untreated sewage/industrial effluent through 11 drains into river Yamuna and water quality of these drains are mentioned in Table-1.

**Table-1: Water quality of 11 drains falling into river Yamuna.**

S.no.	Name of Drain	Flow (m <sup>3</sup> /day)	DO (mg/l)	BOD (mg/l)	TSS (mg/l)	T.Coli (MPN/100 ml)
1.	Dhanaura Escape before meeting River Yamuna, Village Jarauli, Karnal	-	-	20	45	-
2	Drain No.2 before meeting river Yamuna at vill. Khojkipur	-	4.9	60	211	1133333
3	Drain no. 6 before entry in Delhi	-	-	70	146	4260000
4	Entry point of Mungeshpur drain in Delhi Territory, back side of Sainik School, Bypass, Bahadurgarh, Distt. Jhajjar	-	-	211	36	-
5	Entry point of KCB drain in Delhi Territory, Near MCD Toll Tax point, VPO-Lowa Siddhipur, Distt. Jhajjar	-	4.4	50	146	183333
6	Entry point of Drain No. 8 in Delhi Territory, Near Dhansa Store of Executive Engineer, Irrigation & Flood Control Deptt. of Delhi Govt., VPO-Lohat, Distt. Jhajjar	-	8.4	33	66	104000
7	Leg I Drain, before meeting Najafgarh Drain Gurgaon	-	-	45	136	-
8	Leg II Drain, before meeting Najafgarh Drain Gurgaon	-	-	57	163	-
9	Leg III (Badshpur) Drain before meeting Najafgarh Drain Gurgaon	-	-	53	177	-
10	Budhiya Nala before meeting river Yamuna, at Vill. Manjhawali, Faridabad	-	3.4	66	151	35500
11	Gaunchi Drain before River Yamuna, Palwal	-	-	24	69	25000

The analysis data w.r.t various pollutants carried out by the drains and falling into river Yamuna indicates that the value of BOD, TSS and F.Coli are much higher than the permissible limits at almost all the points. It implies that the drains falling into river Yamuna are carrying untreated/partial and industrial effluent. Moreover, it has been

observed that none of the STPs located in the catchment area of river Yamuna has the facility of disinfecting the Coliform parameters.

#### 4.1.2 Industrial discharge leading to drains/river Yamuna

Haryana State Pollution Control Board has identified 1419 industries located in the catchment area of river Yamuna. The quantity of trade effluent discharged by these industries is 56.9 MLD and the sewage quantity is 12.7 MLD. The total discharge of 69.6 MLD from industries is leading to river Yamuna after treatment in the existing STPs.

#### 4.2 Details of the towns, population and sewage discharge

The details of the towns, their population and quantity of sewage discharged are mentioned in Table 2 given below:

**Table 2: Towns and quantity of sewage discharged.**

S.No.	Name of Town	Population	Sewage generated (MLD)
1	Jagadhri	152995	16.52
2	Yamunanagar	265912	28.72
3	Radaur	16770	1.81
4	Chhachhrauli	12902	1.39
5	Ladwa	35387	3.82
6	Nilokheri	21276	2.3
7	Taraori	30771	3.32
8	Indri	21422	2.31
9	Karnal	287000	35.588
10	Nissing	20682	2.23
11	Gharaunda	44851	4.83
12	Panipat	744400	80.4
13	Samalkha	50973	5.51
14	Gohana	80494	8.69
15	Ganaur	45216	4.88
16	Sonepat	448890	35.92
17	Kharkhoda	30687	3.31
18	Maham	24990	2.7
19	Rohtak	574503	62.05
20	Kalanaur	27516	2.97
21	Sampla	25087	2.71
22	Beri	19658	2.12
23	Bahadurgarh	250379	27.01
24	Jhajjar	59779	6.46
25	Taoru	27000	3
26	Gurugram	1900000	430
27	Nuh	21620	2.33
28	Ferozepur jhirka	32908	3.55
29	Punahana	32889	3.55
30	Faridabad	2000000	216
31	Palwal	167545	18.09
32	Hathin	17017	1.84
33	Hassan Pur	14685	1.59
34	Hodal	63682	6.88
<b>Total</b>		<b>5669896</b>	<b>1034.4</b>

The data indicates that 34 towns are located in the catchment area of river Yamuna. The total quantity of sewage discharged by these towns is 1034.4 MLD.

### 4.3 Water quality of river Yamuna at various locations

Haryana State Pollution Control Board is monitoring the water quality of river Yamuna from time to time and the Monitoring data is mentioned in **Table 3** given below:

**Table 3: Water Quality of River Yamuna at various locations**

S.no.	Location of Point in river Yamuna	BOD (mg/l)	TSS (mg/l)	DO (mg/l)	T.Coli (MPN/100 ml)
1.	River Yamuna before meeting Maskara Nallah,up stream, Kalanaur	2	4	-	-
2	River Yamuna after meeting Maskara Nallah, Down Stream, Kalanaur	6	9	-	-
3	River Yamuna before meeting Dhanaura Escape upstream, Karnal	2	8	-	-
4	River Yamuna after meeting Dhanaura Escape downstream, Karnal	6	13	-	-
5	River Yamuna before meeting the discharge of Drain No. 2 at Vill. Sanjoli	2	22	-	-
6	River Yamuna after meeting the discharge of Drain No. 2 near Vill. Khojkipur. (NWMP-10004)	3	59	8.3	140650
7	River Yamuna before meeting Diversion Drain no. 8	2	11	8.6	650000
8	River Yamuna after meeting Diversion Drain No. 8 at Palla (NWMP-10005)	2	-	8.3	230000
9	Yamuna River at Basantpur	34	86	4.4	37000
10	Yamuna River upstream before Budhiya Nalah at Vill. Manjhawali, Faridabad	44	68	5	33500
11	Yamuna River downstream after meeting Budhiya Nalah at Vill. Manjhawali, Faridabad	45	100	3.3	31000
12	River Yamuna U/S before Gaunchi Drain	19	20	-	39000
13	River Yamuna D/S after Gaunchi Drain	15	22	-	29333

The water quality data of river Yamuna indicate that before meeting Maskara Nallah, the value of BOD and TSS were almost within the norms w.r.t BOD and TSS parameters but DO and T.Coli parameters have not been analyzed. The water quality starts deteriorating after meeting Maskara Nallah and the values of these parameters remain almost same after meeting of Dhanora escape but the values of DO and T.Coli were not monitored.

At Basantpur, the water quality of river Yamuna was found contaminated due to high value of BOD (34mg/l), TSS (86mg/l) and T.Coli (37000 MPN/100 ml) and low value of DO (4.4 mg/l). The values of BOD (44 mg/l) and TSS (68 mg/l) are in increasing trend before mixing of Budhiya Nallah and after mixing Budhiya Nallah, the quality of water of river Yamuna becomes more deteriorated in terms of high values of BOD (45 mg/l), TSS (100 mg/l), T.Coli (31000 MPN/100 ml) and lower value of DO (3.3 mg/l).

These values have been slightly reduced before mixing of Gaunchi drain with river Yamuna. However, the values of T.Coli has been found varying between 31000-650000 MPN/100 ml which is very high as compared to normal value of T.Coli as 500 MPN/100 ml for B Class Water quality.

#### 4.4 Status of existing sewage treatment plants in the catchment area of River Yamuna

58 Sewage treatment plants in 34 towns have been installed, the brief of which is mentioned as per **Table-4** given below:

**Table-4: Status of existing sewage treatment plants**

Sr No.	Department	Total No. of STPs	Capacity (MLD)
1	PHED	42	447.9
2	HSVP	5	58.3
3	ULBD	6	158
4	GMDA	5	388
	<b>Total</b>	<b>58</b>	<b>1052.2</b>

#### 4.5 Performance of existing sewage treatment plants

HSPCB is monitoring the performance of existing STPs from time to time. The analysis results are mentioned in Table 5.

**Table 5: Performance of STPs**

Sr. No.	Name of the town/city	Deptt.	Capacity of STP (MLD)	Latest Compliance Status	Action Taken Report
1	Yamuna Nagar	PHED	25	Under Stabilization	
2	Radur Road, Yamuna Nagar	PHED	20	Trial run	
3	Parwaloo, Jagadhri	PHED	24	Complying	
4	Chhachhrauli	PHED	3	Complying	
5	Radaur	PHED	3.5	Complying	
6	Baddimajra, Yamuna Nagar	PHED	10	Under trial run	
7	Gharaunda	PHED	7	Complying	
8	Indri	PHED	1.5	Non complying and under upgradation	
9	Nilokheri	PHED	6	Complying	

10	Nissing	PHED	4	Complying	
11	Tarori	PHED	5.5	Complying	
12	Sewah, Panipat	PHED	35	Complying	
13	Jattal Road, Panipat	PHED	10	Complying	
14	Samalkha	PHED	5	Complying	
15	Sewah, Panipat	PHED	25	Complying	
16	Jattal Road, Panipat	PHED	20	Complying	
17	Kharkhoda	PHED	4.5	Complying	PHED has engaged Jamia Milia Islamia University to conduct efficacy study of STPs.
18	Ganaur	PHED	7	Complying	
19	Gohana	PHED	3	Complying	
20	Gohana	PHED	8.3	Complying	
21	Jhajjar	PHED	5.5	Complying	
22	Jhajjar	PHED	5	Complying	
23	Beri	PHED	2		Oxidation pond has been inspected on 03.08.2019 for inspection 2 MLD STP Beri, but sample could not be collected as there was no discharge available at final outlet of oxidation pond.
24	Bahadurgarh	PHED	18	Complying	PHED has engaged Jamia Milia Islamia University to conduct efficacy study of STPs.
25	Bahadurgarh	PHED	36	Complying	
26	PGI Rohtak	PHED	19.5	Complying	
27	Sonaria, Rohtak	PHED	40	Non complying	Operational deficiencies such as cleaning of sludge line, gas holder, fitting of additional mechanical degritter, additional sludge remover with new pump and repair of piping system has been done. STP is under stabilisation and time for better results be allowed upto 30.06.2020. PHED has engaged Jamia Milia Islamia University to conduct efficacy study of STPs.
28	Kalanaur	PHED	3.5	Non complying (by pass)	Operational deficiencies removed and STP is running satisfactorily. PHED has engaged Jamia Milia Islamia University to conduct efficacy study of STPs.
29	Meham	PHED	5	Complying	PHED has engaged Jamia Milia Islamia University to conduct efficacy study of STPs.
30	Singhpura, Rohtak	PHED	10	STP has been inspected on 20.11.2019 and found under maintenance, the effluent is being treated through 14 MLD STP.	PHED has engaged Jamia Milia Islamia University to conduct efficacy study of STPs.
31	Singhpura, Rohtak	PHED	14	Complying	PHED has engaged Jamia Milia Islamia University to conduct efficacy study of STPs.

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32	Sampla	PHED	4	Complying	PHED has engaged Jamia Milia Islamia University to conduct efficacy study of STPs.
33	Tarou	PHED	4.5	Complying	PHED has engaged Jamia Milia Islamia University to conduct efficacy study of STPs.
34	Punhana	PHED	4.5	Complying	PHED has engaged Jamia Milia Islamia University to conduct efficacy study of STPs.
35	Nuh	PHED	3.6	Complying	PHED has engaged Jamia Milia Islamia University to conduct efficacy study of STPs.
36	Ferozpur Jhirka	PHED	5	Complying	
37	Hassanpur	PHED	3	Complying	
38	Hathin	PHED	4.5	Complying	PHED has engaged Jamia Milia Islamia University to conduct efficacy study of STPs.
39	Hodal	PHED	9	Complying	
40	Palwal	PHED	9	Complying	
41	Indri Road, Ladwa	PHED	7	Complying	
42	Sec-19, Panipat	HSVP	30	Complying	
43	Sec-6, Panipat	HSVP	0.8	Complying	
44	Rajiv Gandhi Edu. City, Phase-I, Sonapat	HSVP	7.5	Complying	
45	Sec-36, Bahadurgarh	HSVP	10	Complying	
46	Sec-25, Rohtak	HSVP	10	Complying	
47	Dhanwapur, Gurgaon	GMDA	68	Complying	
48	Dhanwapur, Gurgaon	GMDA	100	Complying	
49	Behrampur	GMDA	50	Complying	
50	Behrampur, Gurgaon	GMDA	120	Complying	
51	Dhanwapur, Gurgaon	GMDA	50	Complying	
52	Badshahpur, Faridabad	ULB	45	Complying	The STP has been made functional recently after rectification of deficiencies. Latest sample has to be collected.
53	Near Sector-4, Karnal	ULBD	40	Non Complying (Under upgradation)	
54	Gogharipur Road, Karnal	ULBD	10	Complying	
55	Kaithal Road, Karnal	ULBD	8	Non Complying (Under upgradation)	
56	RK Puram, Karnal	PHED	8	Complying	Completed on 31.10.2019 and is under trial run. The STP is being handed over to MC, Karnal.
57	Rathdana Road, Sonapat	ULBD	30	Non-complying (Sample could not be collected as effluent is not reaching to STP. The	The STP has been made functional recently after rectification of deficiencies. Latest sample has to be collected.

*Be*

				sample of bypass has been collected and show cause for prosecution issued.)	
58	Kakroi Road, Sonapat	ULBD	25	Non-Complying	
		PHED	25		

The performance study of 58 STPs indicates that out of these 58 STPs, 45 STPs are complying with the norms but these STPs may not be meeting with norms of F.Coli parameters because Haryana State Pollution Control Board has recently prescribed the norms of F.Coli Parameters only after the directions of the Hon'ble NGT.

#### 4.6 Status of new STPs under construction and proposal

##### 4.6.1 Sewage Treatment Plants under construction

23 new STPs were proposed to be constructed in the catchment of river Yamuna with the treatment capacity of 227 MLD. Out of these 23 STPs, 5 new STPs of 50 MLD treatment capacity have been constructed so far. 19 STPs of capacity 181 MLD are under construction. However, in case of 1 STP at Peer Bodhi, Rohtak, the work could not be started by ULBD due to land issues.

The details of the 19 STPs, which are under construction, are mentioned as per **Table-6**.

**Table-6: Details of 19 STPs which are under construction**

Sr. No.	Name of the Town	Capacity (MLD)	Department	Date of start of construction	% work done as on 31.08.2020
1	Baddimajra, Yamuna Nagar	10	PHED		95%
2	Shiv Colony, Karnal	8	ULBD	24/10/2017	60%
3	Phooshgarh, Karnal	20	ULBD	24/10/2017	60%
4	Transport Nagar, Karnal	50	ULBD	28/03/2018	Completed
5	Garhi Bohar, Rohak	12	ULBD	05.01.2020	21%
6	Singhpura, Rohtak	10	ULBD	16.03.2019	85%
7	Peer Bodhi, Rohak	15	ULBD	N. S.	0
8	Sarai Alawardi	1	ULBD	01.06.2018	95%
9	Gadoli Kalan	1	ULBD	01.06.2018	90%
10	Baliawas (against Gwalpahadi)	1	ULBD	01.06.2018	85%
11	Jajzgarh (against Khiwari, Gurugram)	10	ULBD		2%
12	Mohmadpur Jharsa	2	ULBD	01-06-2018	80%
13	Darbaripur	1	ULBD	01-06-2018	85%
14	Bandwari(Shifted from Sihi/Khedki Daula)	1	ULBD	01-06-2018	8%
15	Sector-21, Faridabad	10	ULBD	13.02.2019 / Likely date to restart construction 15.07.2020	3%
16	Faridabad	7.5	HSVP	Under construction	82%
17	Kithwari (against Ferozpur, Palwal)	10	ULBD	10-09-2018	31%
18	Jodhpur Road, Palwal	15	ULBD	10-09-2018	41%
19	Ferozpur, Palwal	2.5	ULBD	10-09-2018	40%

#### 4.6.2 Proposed sewage treatment plants under planning.

11 STPs of capacity 385.5 MLD have been proposed, the details of which are mentioned in Table-7 given below.

**Table 7: Details of 11 proposed STPs**

Sr. No.	Name of Town	Capacity in MLD	Departments	Date of start of construction	% work done as on 31.08.2020
1	Jhazgarh	20	GMDA	01.09.2020	Work allotted
2	Dhanwapur	100	GMDA	01.09.2020	DNIT under finalization
3	Sonepat(Aterna)	15	HSVP	09.12.2019	Work started. 10% work completed.
4	Rohtak	10	HSVP	10.01.2020	Hydraulic Design & Drawing approved on dated 06.03.2020. No progress achieved due to non availability of labour due to complete Lockdown w.e.f 23.03.2020 to 04.05.2020 and partial Lockdown in May and June 2020 due to COVID 19. Sufficient number of labour personal still not available. At present, sewage of this area is being treated in existing 10 MLD STP in Sector-25 Rohtak. However, the existing STP is nearing its ultimate capacity and need has arisen for construction of this new STP. It is clarified that no untreated sewage is being disposed off by HSVP at Rohtak.

Ru

5	Faridabad	30	HSVP	15.06.2020	Work allotted recently. Hydraulic Design & Drawings approved on 30.07.2020. The colonizer of this area are treating the sewage effluent in their STPs and after treating the sewage, the same is being used by them for gardening purpose.
6	Dhankot, Gurugram	0.5	Gram Panchayat Department	1.9.2020	Work allotted
7	Bajghera	2	Gram Panchayat Department	01.09.2020	Work allotted
8	Manesar and Naharpur Kasan, Gurugram	25	GMDA(Depost work of PHED)	01.09.2020	DNIT under finalization
9	Mirjapur, Faridabad	80	ULBD	July, 2020	Tenders invited
10	Partapgarh, Faridabad	100	ULBD	July, 2020	Tenders invited
11	Murthal	3	ULBD	15.06.2020	Work allotted
<b>Total Capacity</b>		<b>385.5</b>			

#### 4.6.3 Status of upgradation of existing STPs

The status of STPs which require technologically upgradation is mentioned in Table 8 given below:

**Table 8 : Status of 09 STPs which require technological upgradation.**

Sr.No.	Name of town	Deptt.	Capacity (MLD)	Target date of completion as per action plan	Status as on 31.08.2020
1	Yamuna Nagar	PHED	25	31.5.2020	Upgradation work completed
2	Yamuna Nagar	PHED	10	30.6.2020	In progress
3	Radaur	PHED	3.5	30.9.2019 upgradation completed	Upgradation work completed
4	Chachrauli	PHED	3	30.6.2019 upgradation completed	Upgradation work completed
5	Nissing	PHED	4	31.3.2020	STP has been completed.
6	Indri	PHED	4	31.12.2020	In progress
7	Beri	PHED	3	31.6.2021	Process i.e. inviting of tender, allotment, approval of hydraulic and structural design and drawing will take around 4 months. The work will be completed upto 31.12.2021.

8	Karnal	PHED	8	30.9.2019 upgradation completed	Upgradation work completed
9	Sector-25, Rohtak	HSVP	10	31.12.2020	In progress
		Total	70.5 MLD		

#### 4.7 Status regarding laying of sewerage network in the towns.

In 34 towns located in the catchment area of river Yamuna, sewerage work is under progress and the status of the same is mentioned in Table 9 given below.

**Table 9: Status of sewerage network in 34 towns.**

Sr. No.	Name of town	Deptt.	Target date	Length of sewer to be laid( in mtr.)	Quantity of effluent to be diverted (in MLD)	Total Progress achieved till date (in meters)	Balance length to be laid (in mtr)	% Work done as on 31.8.2020
1	Jagadhri	ULB	30.11.2020	109320	38.24	52550	56770	57%
2	Yamuna Nagar	Sewerage already laid						
3	Radaur	PHED	Sewerage in approved area 100 % laid	2000	0.55	2000	0	Completed
4	Chhachhrauli	Sewerage already laid						
5	Ladwa	PHED	Sewerage in approved area 100 % laid	4400	1.5	4400	0	Completed
6	Nilokheri	PHED	31.12.2020	3640	1.2	1430	2210	Completed
7	Taraori	PHED	30.09.2020	4700	1.2	2720	1980	Completed
8	Indri	PHED	Sewerage in approved area 100 % laid	7350	1	7350	0	Completed
9	Karnal	ULBD	30.06.2020	152000	28	122142	29858	84%
10	Nissing	PHED	30.06.2020	3850	0.8	3000	850	Completed
11	Gharaunda	PHED	31.12.2020	23340	2	8500	14840	Completed
12	Panipat	ULB	31.07.2021	211548	40	82000	129548	45%
13	Samalkha	PHED	31.12.2020	3700	3.2	1806	1894	Completed
14	Gohana	PHED	31.12.2020	18000	1	18050	0	Completed
15	Gannaur	PHED	Sewerage in approved area 100 % laid					
16	Sonepat	ULB	31.12.2020	63500	20	39350	24150	69%
17	Kharkhoda	PHED	Sewerage in approved area 100 % laid					
18	Meham	PHED	Sewerage in approved area 100 % laid		0.8	4905	0	Completed
19	Rohtak	ULB	30.09.2020	174690	25	75173	99517	52%
20	Kalanaur	PHED	31.03.2020	17000	1.5	17000	0	Completed
21	Sampla	PHED	Sewerage in approved area 100% laid	3720	1	3720	0	Completed
22	Beri	PHED	31.12.2021.	8720	1.75	Work Just allotted, work Yet to start	8720	23%
23	Bahadurgarh	ULB	31.08.2020	25000	15	19600	5400	Completed
24	Jhajjar	PHED	Sewerage in approved area 100 % laid	3595	1	3595	0	Completed

Sr. No.	Name of town	Deptt.	Target date	Length of sewer to be laid( in mtr.)	Quantity of effluent to be diverted (in MLD)	Total Progress achieved till date (in meters)	Balance length to be laid (in mtr)	% Work done as on 31.8.2020
25	Taoru	PHED	Sewerage in approved area 100 % laid	10070	1.5	10070	0	Completed
26	Gurugram	30.06.2021	Sewerage in approved area 100 % laid					
27	Nuh	PHED	30.06.2021 Sewerage in approved area 100 % laid	4857	1	4857	0	Completed
28	Ferozpur Jhirka	PHED	31.12.2020	4000	1.5	1950	2050	75%
29	Punhana	PHED	30.04.2020	25839	1.8	21400	4439	83%
30	Faridabad	ULBD	31.12.2020	450000	101	318000	132000	76%
31	Hathin	PHED	Sewerage in approved area 100 % laid	1887	0.8	1887	0	Completed
32	Hassanpur	PHED	31.03.2020	4000	0.6	3700	300	Completed
33	Palwal	ULB	31.12.2020	148700	40	76310	72390	Completed
34	Hodal	PHED	31.12.2020	26820	2.2	26570	250	Completed
		<b>Total</b>		<b>1516246</b>	<b>335.14</b>	<b>934035 m</b>	<b>587166 m</b>	

The data depicts that sewerage network of 1516.246 Kms in 34 towns was to be laid, out of which 934.035 Kms sewer line in these towns has been completed. The remaining sewer line of 587.166 Kms is under progress and likely to be completed by 31.12.2020.

#### 4.7.1 Laying sewerage network and interception of sewage

For interception of sewage, 91.7 MLD of effluent was proposed to be tapped/diverted at 128 locations, out of which 12.51 MLD effluent has been diverted at 38 locations. The work is under progress at 37 locations, whereas, no work has been started at 53 locations. Therefore, 79.235 MLD sewerage is yet to be diverted from 90 locations.

Similarly, quantity of sewage diverted from Leg-1, Leg- II and Leg -III drains was mentioned as under.

##### Leg-I

Out of total discharge 22.80 MLD to be diverted, 14.2 MLD sewage has been diverted and the remaining 8.6 MLD sewage from 6 points shall be diverted soon

##### Leg-II

Out of total sewage discharge 35.64 MLD to be diverted, 27.84 MLD sewage has been diverted and the remaining 7.6 MLD sewage from 5 points shall be diverted soon

##### Leg-III

Out of total sewage discharge 80.25 MLD to be diverted, 45.35 MLD sewage has been diverted and the remaining 34.90 MLD sewage from 38 points shall be diverted in a time bound manner.

#### 4.8 Diversion of flow of sewage from unauthorized areas

242 MLD of effluent was proposed to be tapped/ diverted from unauthorized area in the nearby STPs. Out of which 108.28 MLD effluents has been diverted so far. The balance quantum of 133.8 MLD effluents will be diverted by 31.12.2020 except at 49 locations in Gurugram where 51.30 MLD is yet to be diverted. The same is likely to be completed by 31.12.2021.

#### 4.9 Gap in treatment of sewage

In 34 towns, 58 STPs of capacity 1052.2 MLD have been installed. The present sewage discharge of these towns is 1034.4 MLD. There is proposal to enhance of capacity of STPs to 1617.1 MLD. 19 STPs of capacity 181 MLD are under construction. There is further proposal to construct 11 new STPs of capacity 385.5 MLD thereby after enhancement, the total capacity of STPs shall be 1617.1 MLD. There is a gap of 181.42 MLD. The details of gap in treatment of sewage are mentioned in Table 10 given below:

**Table 10: Gap in treatment of sewage.**

S.n o.	Name of Town	Sewage generated	Name of department	No. & Treatment capacity(in MLD)						Total capacity	Treat ment capac ity requir ed upto 2020 (MLD)	Gap in treat ment upto 2020 (MLD )
				Existing		Under Construction		Proposed				
				No.	Cap.	No.	Cap.	No.	Cap.			
1	Jagadhri	16.52	PHED	1	24					24	16.52	0
2	Yamunan agar	28.72	PHED	3	55	1	10	Replacement		65	28.72	0
3	Radaur	1.81	PHED	1	3.5					3.5	1.81	0
4	Chhachhr auli	1.39	PHED	1	3					3	1.39	0
5	Ladwa	3.82	PHED	1	7					7	3.82	0
6	Nilokheri	2.3	PHED	1	6					6	2.3	0
7	Taraori	3.32	PHED	1	5.5					5.5	3.32	0
8	Indri	2.31	PHED	1	1.5	1	4	Replacement of total STP with increased capacity new STP (4 MLD)		4	2.31	0.8
9	Karnal	35.588	MC Karnal	4	66	3	78			144	40	0
10	Nissing	2.23	PHED	1	4					4	2.23	0
11	Gharaunda	4.83	PHED	1	7					7	4.83	0
12	Panipat	80.4	PHED HSAVP	6	120.8					120.8	80.4	0
13	Samalkha	5.51	PHED	1	5					5	5.51	0.5
14	Gohana	8.69	PHED	2	11.3					11.3	8.69	0
15	Ganaur	4.88	PHED	1	7					7	4.88	0
16	Sonepat	35.92 MLD	ULBD/HSVP	3	62.5			2	18	80.5	36	-
17	Kharkhoda	3.31	PHED	1	4.5					4.5	3.31	0
18	Maham	2.7	PHED	1	5					5	2.7	0
19	Rohtak	62.05	PHED/HSVP/ULBD	5	93.5	3	37	1	10	140.5	62.05	0
20	Kalanaur	2.97	PHED	1	3.5					3.5	2.97	0
21	Sampla	2.71	PHED	1	4					4	2.71	0
22	Beri	2.12	PHED	1	2					2	2.12	0.12
23	Bahadurg arh	27.01	PHED HSAVP	3	64					64	27.01	0
24	Jhajjar	6.46	PHED	2	10.5					10.5	6.46	0
25	Taoru	3	PHED	1	4.5	0	0	0	0	4.5	4.5	0

26	Gurugram	430	GMDA	5	388	0	0	5	147.5	535.5	430	0
			MCG	0	0	6	7	0	0	7		
			Colonizers (DLF)	28	40							
27	Nuh	2.33	PHED	1	3.6					3.6	2.33	0
28	Ferozpur jhirka	3.55	PHED	1	5					5	4.44	0
29	Punahana	3.55	PHED	1	4.5					4.5	4.44	0
30	Faridabad	216 MLD	MCF/HSVP	1	45	2	17.5	3	210	272.5	216	171
31	Palwal	18.09	PHED	1	9	3	27.5		replacement		18.09	9
32	Hathin	1.84	PHED	1	4.5						1.84	0
33	Hassan Pur	1.59	PHED	1	3						1.59	0
34	Hodal	6.88	PHED	1	9						6.88	0
<b>Total</b>		<b>1034.4</b>		<b>58</b> (Excluding private colonizer STPs)	<b>1052.2</b> (Excluding private colonizer STPs)	<b>19</b>	<b>181.5</b>	<b>11</b>	<b>385.5</b>	<b>1617.2</b>	<b>999.5</b>	<b>181.42</b>

#### 4.10 Treatment of industrial effluent and disposal of treated effluent

Total effluent discharge of 1419 industries, situated in the catchment of river Yamuna, is 69.6 MLD which is further treated in Municipal STPs. This total discharge comprises of 56.9 MLD trade effluent and 12.7 MLD domestic effluent from these industrial units.

These industries have installed their ETPs and treated effluent is discharged into STPs and further leading to drains and ultimately into River Yamuna.

#### 4.11 Status of common effluent treatment plants (CETPs)

14 CETPs of capacity 161.5 MLD have been installed, the details of these CETPs has been mentioned in Table 11 given below.

**Table 11: Status of Existing CETPs**

Sr. No.	Department	No. Of CETPs	Capacity (MLD)
1	HSVP	2	42
2	HSI IDC	10	118.7
3	Private Party	2	0.8
4	<b>Total</b>	<b>14</b>	<b>161.5</b>

#### 4.11.1 Common effluent treatment plants (CETPs) under planning

10 new CETPs of capacity 159.25 MLD is under planning The details of these CETPs is mentioned in Table 12 given below.

**Table 12: Status of 10 new CETPs which are under planning.**

Sr. No.	Name of CETP	Capacity in MLD	Deptt.	Road map and timelines for future course of action and timelines (Latest status as on 31.8.2020)
1.	IE Manakpura, Yamuna Nagar	3	HSI IDC	i) EC recently received. But, construction not started due to lockdown. ii) Construction of CETP is likely to be started in June, 2020 and to be completed by December, 2021.

2.	IE Bahadurgarh	10	HSI IDC	Construction will be started after receipt of EC
3.	Partapgarh, Faridabad	50	HSI IDC	As soon as the land is finalized and funding is decided, tenders will be invited immediately and thereafter it will take 18 months to construct.
4.	Mirzapur, Faridabad	25	HSI IDC	As soon as the land is finalized and funding is decided, tenders will be invited immediately and thereafter it will take 18 months to construct.
5.	Badshahpur, Faridabad	15	HSI IDC	As soon as the land is finalized and funding is decided, tenders will be invited immediately and thereafter it will take 18 months to construct.
6.	Sector-34, Gurugram	20	HSI IDC	Land issue is sub judice.
7.	Sector- 18, Gurugram	1.5	HSI IDC	As soon as the land availability and funding source are decided, tenders will be invited and it will take 18 months to construct. v) PPR for construction of 1.5 MLD CETP prepared.
8.	IDC, Gurugram	0.75	HSI IDC	i) As soon as the land availability and funding source are decided, tenders will be invited and it will take 18 months to construct. ii) PPR for construction of 0.75 MLD CETP prepared.
9.	Industrial Area, Sector-37, Gurugram	9	HSI IDC	i) As soon as the land and funding source are decided, tenders will be invited. ii) Expected to be completed by Dec, 2022.
	<b>Total</b>	<b>134.25</b>		

#### 4.12 Sewage treatment plant for the villages.

The Department of Panchayats has identified 277 villages, having total discharge of 90.219 MLD, located in catchment area of river Yamuna. Out of these 277 villages, the construction work of STPs in 50 villages has been started. The construction status of STPs in these 50 villages is mentioned in Table 13 given below:

**Table 13: Construction status of sewage treatment plants in 50 villages.**

Sr. No.	Name of Village	Quantum of flow (in MLD)	Name of Block	Progress upto June, 2020	Remarks
1)	Jhar Chandana	0.079	Saraswati Nagar	100%	Work completed. Waste water of four houses was going in the drain, which has been diverted by GP into the pond by constructing nala. Work done by GP own funds.
2)	Baindi Khajuri	0.100	Radaur	100%	Work completed.
3)	Kartarpur	0.080	Radaur	100%	-do-
4)	Fatehgarh	0.050	Radaur	100%	-do-
5)	Jaidhar	0.150	Partap Nagar	100%	-do-
6)	Nayagaon	0.200	Jagadhri	100%	-do-
7)	Kheri Darshan Singh	0.105	Saraswati Nagar	60%	Work is being executed by the funds received from Saraswati Heritage Board. Work in progress
8)	Pabni Kalan	0.214	Bilaspur	70%	In Progress. Held up due to non receipt of 2nd installment
9)	Dubhetta	0.140	Ganaur	In Progress	Work Start Departmentally and in progress
10)	Mehmudpur Majra	0.080	Ganaur	In Progress	Work Start Departmentally and in progress

11)	Bidhal	0.230	Gohana	8%	Work Start Departmentally and in progress
12)	Nayat	0.130	Gohana	In Progress	Work Start Departmentally and in progress
13)	Bhawar Kaliraman	0.514	Kathura	In Progress	Work Start Departmentally and in progress
14)	Chinoli	0.020	Kharkhoda	In Progress	Work Start Departmentally and in progress
15)	Jharoti	0.020	Kharkhoda	In Progress	Work Start Departmentally and in progress
16)	Mundlana	0.100	Mundlana	In Progress	Work Start Departmentally and in progress
17)	Badsahpur Machri	0.800	Sonipat	In Progress	Work Start Departmentally and in progress
18)	Ahemadpur Majra	0.104	Mundlana	In Progress	Work Start Departmentally and in progress
19)	Bohla	0.136	Sonipat	25%	Work Start Departmentally and in progress
20)	Samalkha	0.070	Gharaunda	5%	In Progress
21)	Malikpur	0.120	Gharaunda	2%	In Progress Water stopped from drain
22)	Shekhupura Khalsa	0.150	Gharaunda	0%	Not Started (No Suitable Land available for pond) (DPR for installation of mini STP being expored)
23)	Phurlak	0.310	Gharaunda	25%	In Progress
24)	Kohand	1.500	Gharaunda	0%	Not Started Village Covered under Maha Gram Scheme and taken by PHED
25)	Khora Kheri	0.050	Gharaunda	0%	No Land Available, (DPR for installation of mini STP being expored)
26)	Dhanora Jagir	0.060	Indri	2%	In Progress
27)	Gorgarh	0.120	Indri	25%	In Progress
28)	Pakhana	0.006	Nilokheri	5%	In Progress Work allotted to contractor on 03.03.2020
29)	Sultanpur	0.001	Nilokheri	75%	In Progress under SBM-G
30)	Barota	0.480	Nissing	50%	In Progress (Work is to be done departmently)
31)	Behlolpur	0.200	Nissing	60%	In Progress
32)	Hemda	0.500	Nissing	15%	In Progress
33)	Katlaheri	0.500	Nissing	10%	In Progress (Work is to be done departmently)
34)	Prem Khera	0.050	Nissing	100%	Completed under SBM-G
35)	Ujha	0.00	Bapoli	100%	No waste water of village is being discharged into drain. The water has been stopped by Gram Panchayat.
36)	Bandh	0.26	Israna	100%	No waste water of village is being discharged into drain. The water has been stopped by Gram Panchayat.
37)	Bijawa	0.17	Israna	55%	<b>Work in progress</b> The Five Pond System for the treatment of waste water is being taken up by Gram Panchayat under MGNREGA. The water discharging into drain will be diverted.
38)	Bohli	0.19	Madlauda	100%	No waste water of village is being discharged into drain. The water has been stopped by Gram Panchayat.
39)	Rair Kalan	0.23	Madlauda	100%	No waste water of village is being discharged into drain. The water has been stopped by Gram Panchayat.
40)	Waiseri	0.01	Madlauda	100%	No waste water of village is being discharged into drain. The water has been stopped by Gram Panchayat.
41)	Rajapur	0.28	Panipat	100%	The waste water goes into drain but mostly Water is being used in agriculture purpose by villagers. There is no land for three/five pond system tretment project. The whole water has finished/dries in 5-6 acre jungle before dropping the main drain.

42)	Kurar	0.45	Sanoli Khurd	30%	<b>Work in progress</b> The work of 3 pond system is in progress under MGNREGA. After treatment the water will be used in agriculture purpose.
43)	Khoh	0.130		100%	Work completed (connected to CETP Manesar)
44)	Baskusla	0.180		100%	-do-
45)	KASAN	0.930		100%	-do-
46)	Manesar	10.090		100%	-do-
47)	Bashariya	0.090		100%	-do-
48)	Dhana	0.080		100%	-do-
49)	Bamdoli	0.080		70%	Work in progress
50)	Dharampur	0.300		100%	Work Completed

The data indicate that out of 50 villages, STPs in 19 villages has been completed to 100%, whereas, in 7 villages, work of STPs has completed more than 50%. The work of remaining 24 villages is below 50% and the same shall be completed by 31.12.2020.

#### 4.13 Groundwater quality in the catchment area of river Yamuna

Haryana State Pollution Control Board is monitoring the ground water of groundwater sources located in catchment area of River Yamuna. The monitoring data is mentioned in Table 14 given below:

**Table:14 Water quality of ground water sources located in the catchment area of river Yamuna**

Sr. No.	pH (6.5 to 8.5 limit)	TDS (500 - 2000 limit)	TSS	Total Hardness (200-600)	Fluoride (1.0 limits)	Chloride (250 limits)	Sulphate (200-400)	Calcium (75 limits) (200)	Magnesium (30) (100)	Iron (0.3 limits)	Remarks
<b>Yamuna Nagar</b>											
1	Tubewell at MSW Site, Ambala Road, Jagadhri, Yamuna Nagar Latitude 30.18485 and Longitude 77.25713										
	7.28	236	Not Analysed	180	Not Analysed	16	14	49.6	13.608		Complying
2	Ground water sample Tubewell at Bus Stand, Yamuna Nagar										
	7.29	560		286		44	36	77.6	22.356		Complying
3	Ground water sample Handpump at Bus Stand, Jagadhri										
	7.6	790	BDL(DL-5)	306		76	30	86.4	21.87		Complying
<b>Karnal</b>											
1	Tubewell at MSW Site, Meeruth Road, Karnal Latitude 29.64330 and Longitude 77.04775										
	8.69	398	BDL(DL-5)	256		32.0	Not Analysed	70.4	19.44		Complying
2	Tubewell of Shiv Mandir, Village Jadauli, Karnal Latitude 29.7287 and Longitude 77.12164										Complying
	8.7	388	BDL(DL-5)	122		28.0		33.6	9.234		Complying
3	Tubewell of HSIIDC, Sec-3, Karnal										
	7.98	390	BDL(DL-5)	254		30.0		69.6	19.44		Complying

4	Ground Water of Old Bus Stand, Karnal										
	8.12	410	BDL(DL-5)	236		30.0		64.8	17.982		Complying
5	Ground Water of New Bus Stand, Karnal										
	8.1	390	BDL(DL-5)	224		28		63.2	16.038		Complying
Panipat											
1	4853 Outlet of Tubewell of M/s Submersible Tubewell of 25 MLD STP, Village Sewah, Panipat Latitude N 29 33.63" and Longitude E76 99.33"										
	7.86		BDL (DL=5)	248	0.12	68		69.6	17.982	0.455	Complying
4	4852 Outlet of Tubewell of M/s Tubewell of Punjab Himachal Vaishno Dhaba, G.T. Road, Panipat Latitude N 29 28.00"and Longitude E77 00.09"										
	7.88		BDL (DL=5)	224	0.1	130		63.2	16.038	0.18	Complying
5	4855 Outlet of Tubewell of M/s Submersible Tubewell of 05 MLD STP, Samalkha, Panipat Latitude 29 23.33"and Longitude E 77 00.59"										
	8.04			414	0.07	114		115.2	30.618	0.023	Complying
6	4856 Outlet of Tubewell of M/s Submersible Tubewell of Assam Oil Petrol Pump, Near Rohtak Road Bypass, Panipat Latitude 29 32.97" and Longitude E76 98.53"										
	8.23		BDL	272	0.16	62		76	19.926	0.33	Complying
7	4854 Outlet of Tubewell of M/s Submersible Tubewell of 20 MLD STP, Village Jattal Road, Panipat										
	7.78		BDL (DL=5)	446	0.09	120		124	33.048	0.103	Complying
8	Outlet of Tubewell of M/s Submersible Tubewell of Yamuna Filling Station (HP), Industrial Area, Panipat										
	8		BDL (DL=5)	534	0.18	210		148	37.908	0.079	Complying
9	Outlet of Tubewell of M/s Submersible Tubewell of 30 MLD STP, Barsat Road, Panipat (HR)										
	7.69		BDL	270	0.14	132		71.2	22.356	0.213	Complying
Sonepat											
1	Near Bahalgarh Road, Village Liwaspur, Distt. Sonepat										
	7.06	1720	11	368	0.23	532	--	103.2	26.73		Complying
2	Middle point of village Jat Joshi, Distt. Sonepat										
	6.76	1650	13	576	0.36	514	--	160.8	42.282		Complying
3	Middle point of village Liwaspur, Distt. Sonepat										
	6.91	1860	13	568	0.27	516	--	158.4	41.796		Complying
4	Tubewell of office building, HSIDC, Barhi, Sonepat										
	7.95	734	BDL (DL=5)	72	0.09	116	--	19.2	5.832		Complying

5	Tubewell No. 10, Sector-56, Kundli, Sonapat HSIDC,											
	8.04	620	BDL (DL=5)	56	0.07	40	--	15.2	4.374			Complying
6	Near Western Yamuna Canal Village-Rohat, District-Sonepat											
	6.84	1620	BDL (DL=5)	446	0.21	294	--	125.6	32.076			Non-Complying
7	Ground water sampling of Vill. Nathupur, Sonipat											
	6.97	1070	8	398	0.18	264	--	107.2	31.59			Non-Complying
8	Ground water sampling of Vill. Akbarpur Barota, Sonipat											
	7.77	947	BDL (DL=5)	460		288	--	128	34.02			Non-Complying
9	4831 Borewell in front of CETP HSIIDC Rai, Sonapat											
	8.03	740	BDL (DL=5)	68	0.14	40	8.23	18.4	5.346			Complying
10	4832 Borewell near CETP, Murthal, Sonapat.											
	7.97	720	BDL(DL=5)	64	--	40	7.40	17.6	4.86			Complying
11	4833 Borewell in the premises of DCRUST, Murthal, Sonapat.											
	6.17	732	BDL(DL=5)	60	0.12	40	8.64	16.8	4.374			Complying
12	4834 Borewell of Star Complex Building Near Civil Hospital, Delhi Road, Sonapat											
	8.07	720	BDL (DL=5)	72	0.05	44	7.41	20	5.346			Complying
13	4835 Borewell in the premises of STP PHED, Kharkhoda, Sonapat											
	8.12	690	BDL (DL=5)	86	0.09	30	5.35	22.4	7.29			Complying
Bahadurgarh												
1	Handpump opposite M/s Somany Ceramics Ltd. Sector-16, HSIIDC, Bahadurgarh											
	8.6	3500	28	390	ND	126	6	280	110	ND		Non-Complying
2	Borewell of M/s Hotel Teej, Near BCCI Office, MIE-A, Bahadurgarh											
	8.4	6650	22	430	ND	320	4	310	120	ND		Non-Complying
3	Handpump near M/s Thakkar Chemical, Delhi-Rohtak Road, Vill-Jakhoda, Bahadurgarh											
	6.9	839	18	215	ND	24	2	185	30	ND		Complying
4	Borewell of M/s Rohit Steels at HSIIDC Kutana, Rohtak											
	8.6	2980	13	390	ND	210	4	300	90	0.2		Non-Complying
5	4830 Hand Pump near JLN canal near Tilyar Lake at Rohtak											
	8.6	1781	20	380	ND	176	6	320	60	ND		Non-Complying
6	4828 Hand Pump in front of Mini Secretariat, Jhajjar											
	8.7	1781	13	370	ND	210	2	290	80	ND		Non-Complying
7	4829 Handpump near water works of PHED, Delhi-Rohtak Road, Sampla, Distt. Rohtak											

	8.6	840	10	350	ND	98	16	270	80	0.1	Non-Complying
<b>Gurgaon North</b>											
1	Sansad Sahid B.S. Adana Petrol Pump, Opp. Bandhwari Municipal Solid, Plant										
	7.3	530	7	85	ND	65	24	21.6	13.2	ND	Complying
2	Teen Murti Hanuman Mandir, Gurgaon Faridabad Road, Near Toll Plaza, Village Bandhwari, Gurgaon										
	7	615	5	110	ND	95	22	19.8	14.6	ND	Complying
3	Submersible Pump of House of Sh. Anant Lal, village Bhandwari, Gurgaon										
	7.1	965	5	125	ND	70	22	25.1	15.9	ND	Complying
4	Mandir, village Bhandwari, Gurgaon										Complying
	7.2	790	3	105	ND	85	18	22.3	12.7	ND	Complying
5	Tubewell in HUDA Premises, Dhanwapur Gurgaon										
	7.2	860	4	115	ND	85	28	23.2	14.6	ND	Complying
6	Water sample from Baba Prakashpuri Mandir Rajendra Park Gurgaon										
	7.1	820	5	120	ND	90	16	19.1	16.4	ND	Complying
7	Lala Ram House Near School Bandhwari Village Bandhwari Distt. Gurugram										
	7.1	920	6	130	ND	105	32	27.3	18.9	ND	Complying
8	Chanderpal House Near School Bandhari Village Bandhwari Distt. Gurugram										
	6.9	835	4	150	ND	120	34.2	31.1	20.8	ND	Complying
<b>Gurgaon South</b>											
1	4845 Borewell of HSIIDC Park, Sector-1, IMT Manesar, Gurgaon										
	7.7	920	ND	200	0.75	110	32	48	19.4	0.08	Complying
2	4846 Tubewell No. 6 of HSIIDC, Near Plot No. 237, Sector-8, IMT Manesar, Gurgaon										
	7.4	1210	6	280	1	170	32	68	26.7	0.18	Non-Complying
3	4847 Drinking Water Sample of Tubewell No. 4, Haileymandi, Tehsil-Pataudi, (PWD- Public Health Department), Gurgaon										
	7.7	1440	7	130	0.6	200	38	32	12.1	0.2	Complying
4	4848 HSIIDC Tubewell, Near Plot No. 7, Sector-37, Gurgaon										
	7.5	920		180	1.1	70	52	44	17		Complying
5	Tubewell Grain Market Municipal Council, Farrukhnagar, Gurugram										
	7.8	1180	11	210	ND	130	ND	30	6	ND	Complying
6	4850 Borewell of Water Work, Sector-35, HSIIDC, NH-8, Gurugaon										
	7.2	520		110	0.25	90	18	28	9.7		Complying
7	4849 Borewell of Entry Gate of Ansal Pioneer Industrial Park, Pathreeri, Bilaspur, Gurgaon										
	7	560	3	90	0.8	560	33	560	9.7		Non-Complying
8	4851 Borewell of PHED, Pataudi Gurgaon										
	7	930	5	180	0	80	40	44	17	0.2	Complying

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9	4861 Near HSVP Water Works, Basai, Gurugram										
	7.1	1115	4	195	0.6	165	52	51.3	27.1		Complying
<b>Nuh</b>											
1	Tubewell of Sumer Singh, Near Ponder Miner, Village-Mindkola, District-Nuh										
	7.3	1170	6	290	0.4	150	41	60	34.2	ND	Complying
<b>Palwal</b>											
1	Tubewell of Suresh S/o Natthi at Vill-Dudhola, Palwal										
	7.1	2210	12	790	0.6	630	204	156	78	0.1	Non-Complying
2	Tubewell of Jawahar Singh, Pratap Singh Advocate at Vill-Harphali, Palwal										
	7.9	1040	ND	350		188	150	70.1	42.7	ND	Complying
3	4839 Tubewell at Prithla, Palwal in front of M/s Namo Alloy, Palwal										
	7.3	1520	12	510	0.4	280	185	68	82	0.1	Non-Complying
4	4840 Tubewell of Hathin, Palwal near fire station, Palwal										
	7.3	1080		380	0.3	210	154	84.1	41.4		Complying
5	4841 Tubewell at Vill-Garhi, Hodal, Palwal near MCF dumping station, Palwal										
	7.4	1100	10	370	0.2	190	130	80.1	43.9	ND	Complying
6	Thermal Power, near MCF Dumping Station, Palwal										
	7.6	1580	14	540	0.4	290	170	112	63	0.2	Non-Complying
7	Tubewell Near Sandeep Axle at Vill- Mohla										
	7.5	1310	10	445	0.3	340	108	88.9	54.4	ND	Non-Complying
<b>Ballabgarh</b>											
1	Govt. Tubewell, Sec-59, Pragati Vihar										
	7.8	1610	12	540		310	180	116	60	ND	Non-Complying
2	Tubewell of Paramvir Dagar Near Power House Sec-58, Faridabad										
	7.7	1430	10	500		290	170	124	46	ND	Non-Complying
3	Tubewell Power House Colony, Sec-23, Faridabad										
	7.4	1490	12	520		280	170	112	58	0.1	Non-Complying
4	Tubewell at Govt. High School Sihi sec-7 near sec-6, Faridabad										
	7.8	1540	10	540		270	160	116	61	ND	Non-Complying
5	4842 Tubewell Near Police Station Sector-24, Faridabad										
	7.2	1010	ND	350		200	100	76	39	ND	Complying
<b>Faridabad</b>											
1	Bore well of Gujrat Enviro Protection & Infra Pvt. Ltd. (GEPIL), Pali, Faridabad										
	6.8	620	8	230	0.6	130	6.8	46.8	24.4	0.2	Complying
2	Public Health, Tubewell No.-1, Village - Mangar, Faridabad										
	6.8	580	10	204	0.5	128	11.2	48	17.5	0.1	Complying

3	MCF, Tubewell - Pali, Village- Faridabad										
	7.1	290	ND	110	0.4	64	5.8	30	15	ND	Complying
4	Public Health Depts, Tubewell No. 2, Village - Mangar, Faridabad										
	7.1	320	ND	120	0.4	60	6.5	28	12.2	0.1	Complying
5	Public Health Depts, Tubewell No. 3, Village - Mangar, Faridabad										
	6.7	600	8	210	0.6	125	5.4	46.4	24.4	ND	Complying
6	M/s Public Health Tubewell No. 2, Vill- Mohabtabad, Faridabad.										
	7	260	ND	90	0.5	60	5.2	35.4	20.5	ND	Complying
7	M/s Public Health Tubewell No. 1, Vill- Mohabtabad, Faridabad.										
	7	270	ND	90	0.4	75	4.2	24	12.3	0.1	Complying

#### 4.14 Environmental Flow.

- National Institute of Hydrology has prepared its report and submitted that environmental flow in river Yamuna may be maintained by releasing 22.81 to 44.45 cumec of water from Hathinkund Barrage during January to June and 24.32 to 43.46 cumecs of water during October to December, which cannot be maintained due to water scarcity in the State.
- State of Haryana has agreed to maintain minimum flow of 10 cumec to maintain E-Flow in the river Yamuna.
- E-Flow of 10 cumecs can be progressively increased on the construction of upstream storage dams, which may be probably constructed by 2025, till then 10 cumec E-Flow shall be maintained in river Yamuna.

Therefore, E-flow may be maintained by providing storage ponds/retaining structures, check dams etc. so as to store the excess rain water during rainy season and the same can be discharged in the river Yamuna in a regulated manner for whole of the year to maintain E-flow in the river.

#### The Monitoring Committee recommends as under:

- The Department of Irrigation, State of Haryana shall ensure that 10 cumec of water is released from Hathinkund Barrage for whole of the year to maintain environmental flow in the river Yamuna.**
- The State of Haryana shall construct proposed storage dams to store the excess flow of rain water during rainy season and maintain the regulated flow in river Yamuna for whole of the year, by the year 2025 and thereafter the present quantity of 10 cumec of water, being released in river Yamuna, may be increased substantially.**
- The Department of Irrigation shall construct small storage ponds/retaining structures in the catchment area of river Yamuna to retain the excess rainwater during rainy season and**

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it may be discharged in a regulated way during non-monsoon period to maintain environmental flow in the river.

#### 4.15 Septage and faecal sludge management.

31 ULBs, falling in the catchment of River Yamuna, has notified their policy for septage management. The details regarding month wise quantum of sewage disposed of through tankers are given in **Table 15**.

**Table15: Septage management in 31 ULBs:**

Sr. No.	Name of MC	Septage Management Notified or not	No. of private Tankers	No. of tankers of MC	No. of tankers with GPS	Month wise quantum of sewage disposed of STP through tankers.				
						(In MLD )				
						Jan, 20	Feb, 20	Mar, 20	Apr, 20	May, 20
1	Karnal	Yes	8	0	0	0.0048	4.3	3.9	4.2	4
2	Yamuna Nagar	Yes	6	0	0	0.03	0.32	0.215	0	0
3	Rohtak	Yes	13	0	0	0.01	10	10	10	4
4	Gurugram	Yes	20	5	0	2.3	2.6	2.8	0.58	0.35
5	Faridabad	Yes	0	15	0	0.02	0.03	0.02	0.005	0.0045
6	Gohana	Yes	4	0	0	0.016	0.019	10	0	0.01
7	Palwal	Yes	7	0	0	0.016	0.017	0.017	0.018	0.01
8	Sohna	Yes	5	0	0	0.02	0.25	0.022	0.035	0.02
9	Bahadurgarh	Yes	17	0	0	0.08	0.08	0.09	0.002	0.02
10	Hodal	Yes	1	0	0	0	0	0	0	0
11	Pataudi	Yes	1	0	0	2.8	1.6	0.8	0	0
12	Beri	Yes	1	0	1	0.001	0.012	0.011	0	0.005
13	Aasand	Yes	5	0	0	3.5	3.2	0.0032	0.0028	0.0025
14	Gharaunda	Yes	2	0	0	3	3.2	0.0035	0	0
15	Nilokheri	Yes	3	0	0	0.0025	0.003	0.0022	0	0
16	Nissing	Yes	1	0	0	0.0022	0.0028	0	0.0018	0.001
17	Jhajjar	Yes	6	0	6	0.05	0.06	0.055	0.01	0.01
18	Kalanaur	Yes	4	0	0	0.02	0.0035	0.00114	0.09	0.03
19	Meham	Yes	5	0	0	0.02	0.02	0.02	0.02	0.01
20	Sampla	Yes	4	0	0	0	0	0	0	0
21	Gannaur	Yes	3	0	0	0.23	0.25	0.34	0.3	0.28
22	Faruk Nagar	Yes	3	0	0	0.04	0.05	0.04	0.02	0.01
23	Hathin	Yes	0	0	0	0	0	0	0	0
24	Radaur	Yes	2	0	0	0.01	0	0	0.01	0
25	HallyMandi	Yes	1	0	1	0.06	0.08	0.04	0.02	0.01
26	Indri	Yes	1	0	0	0.002	0.0026	0	0	0
27	Panipat	Yes	24	0	0	4.562	4.962	4.824	4.565	4.42
28	Samalkha	Yes	2	0	0	3.5	2.9	0.0033	0.0028	0.0018
29	Taraori	Yes	2	0	0	0.0027	0.0025	0	0	0
30	Sonepat	Yes	8	3	0	0.83	0.77	0.72	0.67	0.6
31	Kharkhoda	Yes	7	0	0	0.0027	0.0025	0.003	0.0035	0.003
	<b>Total</b>		<b>166</b>	<b>23</b>	<b>8</b>	<b>21.13</b>	<b>34.74</b>	<b>33.93</b>	<b>20.56</b>	<b>13.80</b>

#### 4.16 In-situ bio remediation in the drains

The Hon'ble National Green Tribunal in its order dated 6.12.2019 in OA No. 673 of 2018 has directed to ensure 100% treatment of sewage at least through in-situ bio-

remediation in the drains carrying untreated sewage which are not connected to any STPs by 31.3.2020, failing which penalty of Rs. 5 lakh per month per drain shall be imposed.

Therefore, meeting of the stakeholder departments was held on 4.11.2019, wherein, the agencies for executing the bio-remediation works in a particular drains were identified. In the meeting, two departments for each drain were made responsible to provide in-situ remediation in the drains.

The details of in-situ remediation to be provided in the drains are as under.

Sr. No.	Name of Drain	Main Stakeholder Departments	Name of ULB	Nodal Department for execution of works
1.	Dhanura Escapes (Ditch Drain)	PHED, ULBD	Yamunanagar	PHED
2.	Drain no. 2	ULBD, HSVP	Panipat	ULBD
3.	Drain no. 6	ULBD, HSIIDC	Sonipat	HSIIDC
4.	Mungeshpur	ULBD, PHED	Bahadurgarh	ULBD
5.	KCB Drain	HSIIDC, ULBD	Bahadurgarh	HSIIDC
6.	Drain no. 8	Not required being nil flow		
7.	Leg I	MCG, GMDA	Gurugram	MCG
8.	Leg II	MCG, GMDA	Gurugram	MCG
9.	Leg III	MCG, GMDA	Gurugram	GMDA
10.	BudhiyaNalah	ULBD, HSIIDC	Faridabad	ULBD
11.	Guanchi	ULBD, PHED (For discharge of village Hodal and Hathin).	Faridabad	ULBD

However, the Monitoring Committee recommends that all the concerned departments shall install in-situ remediation techniques in the drains carrying untreated sewage and not connected to any STP immediately and a report in this regard be submitted.

## 5.0 Conclusions and recommendations.

1. Haryana State Pollution Control Board is monitoring the water quality of river Yamuna at 13 locations (Table 3) and parameters namely pH, BOD, COD, TSS, O &G, Ammonical Nitrogen (NH<sub>3</sub>-N), DO and F.Coli and Total Coli are monitored. As per the water quality data, it has been observed that the quality of water monitored at Point No.9, 10 and 11 contains high level of BOD ranging between 34-45 mg/l and F.Coli parameter in some of the river water samples are more than 31000 MPN/100 ml. As such, the water quality of river Yamuna has been contaminated due to discharge of untreated sewage of the towns in the river.

**In order to improve the water quality of river Yamuna, Monitoring Committee recommends as under.**

- **All the concerned departments like Public Health Engineering Department (PHED), Haryana Shahri Vikas Pradikaran (HSVP), Gurugram Metropolitan Development Authority (GMDA), Urban Local Body Department (ULBD) and HSIIDC shall take immediate steps to upgrade the existing sewage**

**treatment plants, install new STPs, enhance the capacity of existing STPs by 31.3.2021**

2. Haryana State Pollution Control Board has analyzed the water quality of 11 major drains (Table 1) carrying treated/untreated and industrial effluent and falling into river Yamuna at various locations. As per the analysis results, the values of BOD and T.Coli in drain No.2, Drain No.6, Entry point of Mungeshpur Drain, entry point of KCB drain, Leg1 drain, Leg2 drain, Leg3 drain and Budiya Nallah were found varying between 45- 211 mg/l and 35500-4260000 MPN/100 ml which are much higher than the permissible limits.

**Therefore, the Monitoring Committee observed the water quality in these 11 drains can be improved only after upgrading the existing STPs technologically, providing disinfecting mechanism in all the STPs to control Faecal Total Coliform, installation of new STPs, capacity enhancement of existing STPs, diversion of effluent from unauthorized areas into STPs in time bound manner and operating the existing STPs and CETPs effectively.**

3. 34 towns are located in the catchment area of river Yamuna and in order to treat the sewage of these 34 towns, presently, 58 STPs have been installed. Haryana State Pollution Control Board is monitoring the performance of STPs regularly (Table 5). **Out of 58 STPs, 45 STPs are complying with the norms w.r.t BOD, TSS and DO parameters. However, none of the STP is meeting with faecal Coliform parameter.**

**Therefore, it is recommended that up gradation work of the existing STPs to bring all the parameters within the norms, should be completed by 31.3.2021.**

4. Technological upgradation of 9 STPs of capacity 70.5 MLD (Table 9) has been started, out of which upgradation of 5 STPs has been completed and work of up gradation in 4 STPs is in progress. **The upgradation of remaining STPs should be completed by 31.12.2020.**
5. **19 new sewage treatment plants of capacity 181 MLD (Table 6), which are under construction, should be completed by 31.3.2021.**
6. **11 new STPs of capacity 385.5 MLD (Table 7), which are under planning, should also be completed by 30.6.2020.**
7. Sewerage network of length 1516.246 kms was to be laid in 34 towns (Table 9), out of which 934.035 kms sewer line has been completed. **The remaining sewer line of length 587.166 kms, which is in progress, should be completed by 31.12.2020.**
8. In 34 towns, 58 STPs of capacity 1052.2 MLD have been installed. The present quantity of sewage of these towns is 1034.4 MLD. 19 STPs of capacity 181 MLD are under construction. There is further proposal to construct 11 new STPs of capacity 385.5 MLD. There is a gap of 181.42 MLD (Table 10), which shall be completed after increasing the capacity of STPs for the towns Indri: 0.8 MLD, Samalkha: 0.5 MLD, Beri: 0.12 MLD, Palwal: 9 MLD and Faridabad: 171 MLD. After enhancement of capacity of STPs, construction of new STPs, the total capacity of STPs shall be 1618.7 MLD.

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9. HSPCB has identified 1419 industries, situated in the catchment area of river Yamuna, having discharge of effluent as 69.6 MLD for which the industries have installed their individual ETPs besides the installation of 14 CETPs of capacity 161.5 MLD (Table 11) to treat industrial effluent. Further, there is proposal to install 10 new CETPs of capacity 159.25 MLD (Table 12).

**The Monitoring Committee recommends that HSPCB shall continue to make surprise inspection of the industries to ensure that their ETPs are always in operation and are meeting with the prescribed norms. The performance of existing CETPs should also be monitored as per the frequency of monitoring prescribed by HSPCB/CPCB.**

**HSPCB shall pursue the Government/Private agencies responsible for installation of CETPs to complete and commission 10 new CETPs in a time bound manner.**

10. The Department of Panchayat, Government of Haryana has identified 277 villages, located in the catchment area of river Ghaggar, have total discharge of 90.219 MLD. Out of these 277 villages, the construction work of STPs in 50 villages has been started (Table 13). The construction status of these STPs in 50 villages indicates that STPs in 19 villages have been completed to 100%, whereas, in case of 7 villages, the work of STPs has been completed more than 50%. The work of remaining 24 villages is likely to be completed by 31.12.2020.

**The Monitoring Committee recommends as under:**

- i. **The Department of Panchayat shall ensure that STPs for the 24 villages, which are under construction, should be completed by 31.12.2020.**
  - ii. **Sewage treatment plants for the remaining 227 villages should be completed by 30.06.2020.**
  - iii. **The Department of irrigation shall prepare irrigation schemes to utilize the treated sewage of 277 villages for irrigation.**
11. The groundwater quality monitoring data analyzed by HSPCB (Table 14) for the towns Yamuna Nagar, Karnal, Panipat, Sonipat, Bhadurgarh, Gurugram North, Gurugram South, Nuh, Palwal, Ballabgarh and Faridabad, located in the catchment area of river Yamuna, indicate that water quality of the groundwater sources installed at some locations was found non-compliance w.r.t Chloride, Calcium and TDS parameters.

**Therefore, the Monitoring Committee recommends as under.**

- i) **HSPCB shall identify all the points where the ground water quality has been found contaminated due to high values of Chloride, Calcium and TDS parameters, within 15 days. These contaminated groundwater sources should be sealed and display boards mentioning "water is not fit for drinking" may be erected at the said locations.**

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12. In order to maintain environmental flow in river Yamuna, the Monitoring Committee recommends as under:

- i) **The Department of Irrigation, State of Haryana shall ensure that 10 cumec of water is released from Hathinkund Barrage for whole of the year to maintain Environmental Flow in the river Yamuna.**
- ii) **The State of Haryana shall construct proposed storage dams to store excess flow of rain water during rainy season and maintain the regulated flow in river Yamuna for whole of the year upto the year 2025 and thereafter the present quantity of 10 cumec of water, being released in river Yamuna, may be increased substantially.**
- iii) **The Department of Irrigation shall construct small storage ponds/water retaining structures in the catchment area of river Yamuna to retain the excess rainwater during rainy season and it may be discharged in a regulated way during non-monsoon period to maintain environmental flow in the river.**

13. 31 Urban Local Bodies, falling in the catchment area of river Yamuna, has notified their policy for septage management. The data w.r.t. generation of septage and faecal sludge and their transportation through tankers to the STPs indicate that from January 2020 to May, 2020 about 14-35 MLD of sewage has been discharged into STPs (Table 15). In order to carry the septage/faecal sludge, 166 private tankers and 23 tankers of Municipal Councils, have been deployed.

**The Monitoring Committee recommends as under:**

- **The Department of Science & Technology shall constitute Committee of the officers from the Department of Urban Local Bodies, HSVP, PHED and Development of Panchayats to conduct study w.r.t quantify of septage and faecal sludge generated from various areas, capacity of STPs in the nearby vicinity, quantity of sewage to be treated in the STPs, concentration of BOD and faecal coliform in the septage/faecal sludge and quantity of septage/faecal sludge to be treated at the STPs. A document for guidance may be prepared and be circulated among all the operators of STPs of the towns located in the catchment area of river Yamuna. The said study may be completed within 2 months.**

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14. For interception of sewage, 91.7 MLD of effluent was proposed to be tapped/diverted at 128 locations, out of which 12.51 MLD effluent has been diverted at 38 locations. The work is under progress at 37 locations, whereas, no work has been started at 53 locations. Therefore, 79.235 MLD sewage is yet to be diverted from 90 locations.

Similarly, quantity of sewage diverted from Leg-1, Leg- II and Leg -III drains was mentioned as under.

**Leg-I**

Out of total discharge 22.80 MLD to be diverted, 14.2 MLD sewage has been diverted and the remaining 8.6 MLD sewage from 6 points is yet to be diverted.

**Leg-II**

Out of total sewage discharge 35.64 MLD to be diverted, 27.84 MLD sewage has been diverted and the remaining 7.6 MLD sewage from 5 is yet to be diverted.

**Leg-III**

Out of total sewage discharge 80.25 MLD to be diverted, 45.35 MLD sewage has been diverted and the remaining 34.90 MLD sewage from 38 points is yet to be diverted.

**The Monitoring Committee recommends as under:**

- **79.235 MLD effluent from the remaining 90 locations shall be diverted to the nearby STPs by 31.12.2020.**
  - **8.6 MLD sewage from 6 points in Leg-I drain, 7.6 MLD sewage from 5 points in Leg-II drain and 34.90 MLD sewage from 38 points in Leg- III drain should be diverted to nearby sewerage system leading to STPs by 31.03.2021.**
15. All the concerned departments shall install insitu remediation technology in the drains carrying untreated sewage and not connected to any STP immediately and a report in this regard be submitted.

Sd/-  
**Dr Babu Ram**

Sd/-  
**Ms. Urvashi Gulati**

Sd/-  
**Justice Pritam Pal,**  
Former Judge Punjab and Haryana High Court  
and now as Chairman of the  
Monitoring Committee

**Note:** The Chairman and Members of the Executing Committee have given their concurrence on the contents of the above report.

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21/5/2020

# Annexure-1

**Minutes of the meeting regarding rejuvenation of river Yamuna w.r.t. compliance of order dated 6.7.2020 in OA No. 06 of 2012 in the matter of Manoj Mishra Vs. Union of India & Others held under the Chairmanship of Justice Pritam Pal, former Judge, Punjab & Haryana High Court now as chairman of the Monitoring Committee (constituted by Hon'ble National Green Tribunal, in OA No.606 of 2018 in the matter of Compliance of Solid Waste Management Rules, 2016) on 28.7.2020 at 11.00 AM (through video conferencing)**

The following were present during meeting:

1) **Members of the Monitoring Committee**

Sr. No.	Name and Designation in the Deptt.	Name & Designation in the Committee
1.	Justice Pritam Pal, Former Judge, Punjab and Haryana High Court	Chairman
2.	Ms. Urvashi Gulati, IAS, Former Chief Secretary, Haryana	Member
3.	Dr. Babu Ram, Former Member Secretary, PPCB	Technical Expert

**The list of the other officers, present in the meeting, is as per Annexure-1**

The Chairman of the Monitoring Committee apprised the officers of various departments, present in the meeting, about the orders of Hon'ble National Green Tribunal in various cases connected to the matter, which are briefly mentioned as under:

- 1) The Hon'ble National Green Tribunal vide order dated 10.01.2020 in OA No.606 of 2018 in the matter of compliance of Solid Waste Management Rules, 2016 in Para No.36 has directed that most of the statutory timelines have expired and directions of Hon'ble Supreme Court and the Tribunal to comply Solid Waste Management rules, 2016 remain unexecuted and accordingly, compensation scale is laid down for continued failure after 31.03.2020. The compliance of the rules requires taking of several steps mentioned in Rule 22 (S. No.1 to 10). Any such continued failure will result into liability of every Local Body to pay compensation at the rate of Rs. 10 lakh per month per Local Body for population of above 10 lakh, Rs. 5 Lakh per month per Local Body for population between 5 lakh and 10 lakh and Rs. 1 lakh per other Local Bodies from 1.04.2020 till compliance. If the Local Body is unable to bear financial burden, the liability will of the State Govt. with liberty to take remedial action against erring Local bodies. Apart from compensation, adverse entries must be made in the ACRs of the CEO of the said Local Bodies and other senior functionaries in Department of Urban Development etc. who are responsible for compliance of order of this Tribunal. The Hon'ble Tribunal has also directed in para No 31 (ii) that the date of commencement of setting up of STPs is 31.3.2020, failing which compensation amounting to Rs 5 lakh/month/STP by the concerned local bodies/States in terms of order dated 28.8.2019 in OA No. 593/2017 and 6.12.2019 in OA No. 673/2018 w.e.f 1.4.2020 shall be imposed.
- 2) The Hon'ble Tribunal in its order dated 6.12.2019 in OA No. 673 of 2018 (mentioned in order dated 6.12.2019 uploaded on 12.12.2019 in OA No. 916 of 2018) had issued direction that 100% treatment of sewage may be ensured as directed by the Tribunal

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vide order dated 28.08.2019 in O.A No. 593/2017 by 31.03.2020 at least to the extent of in-situ remediation and before the said date, commencement of setting up of STPs and the work of connecting all the drains and other sources of generation of sewage to the STPs must be ensured. If this is not done, the local bodies and the concerned departments of States/UT's will be liable to pay compensation as directed vide order dated 22.08.2019 in case of river Ganga i.e. Rs. 5 lakh per month per drain for default in in-situ remediation and Rs. 5 lakh per STP for default in commencement of setting up of the STP. The timeline for completing all steps of action plans including completion of setting up STPs and their commissioning till 31.03.2021 in terms of order dated 08.04.2019 in the present case will remain as already directed.

3) It was further informed that the Hon'ble Tribunal vide its order dated 21.05.2020 in OA No. 593 of 2017 at Para 8 [47(i) & ii)] has directed as under:

- i) 100% treatment of sewage may be ensured as directed by this Tribunal vide order dated 28.08.2019 in O.A. No. 593/2017 by 31.03.2020 at least to the extent of in-situ remediation and before the said date, commencement of setting up of STPs and the work of connecting all the drains and other sources of generation of sewage to the STPs must be ensured. If this is not done, the local bodies and the concerned departments of the States/UTs will be liable to pay compensation as already directed vide order dated 22.08.2019 in the case of river Ganga i.e. Rs. 5 lakhs per month per drain, for default in in-situ remediation and Rs. 5 lakhs per STP for default in commencement of setting up of the STP
- ii) Timeline for completing all steps of action plans including completion of setting up STPs and their commissioning till 31.03.2021 in terms of order dated 08.04.2019 in the present case will remain as already directed. In default, compensation will be liable to be paid at the scale laid down in the order of this Tribunal dated 22.08.2019 in the case of river Ganga i.e. Rs. 10 lakhs per month per STP.

Further, in para 13 of order dated 21.05.2020 in OA No. 593 of 2017 has directed that as regards non-compliant STPs, further action may be completed by the State PCBs/PCCs and it may be ensured that there is 100% treatment of sewage and till STPs are set up, at least in-situ remediation takes place. However, on account of Corona pandemic which has affected several on-going activities, the timeline of levy of compensation in terms of order dated 28.08.2019 in O.A. No. 593/2017 read with order dated 06.12.2019 in O.A. No. 673/2018, of 01.04.2020 may be read as 01.07.2020 and 01.04.2021 may be read as 01.07.2021. Further reports may be taken by the CPCB from all the State PCBs/PCCs as per the system evolved by the CPCB from time to time.

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- 4) The Hon'ble Tribunal vide its order dated 1.6.2020 in OA No. 325 of 2015 in the matter of Lt. Col. Sarvadaman Singh Oberoi vs Union of India & Ors, has directed in para No.6 that harvesting surplus water during excessive rains from any areas of catchment needs to be optimized by enhancing the capacity of the existing ponds/water bodies, creation of water harvesting structures in the sub-watersheds to the extent possible, apart from setting up of additional water bodies/water harvesting structures wherever viable,

utilizing available funds including under MGNREGA and involving the community at large at every level. Gram Panchayats can certainly play a significant role in the matter. Once adequate capacity enhancement of water bodies takes place, excess flood/rain water can be channelized by using appropriate water harvesting techniques. This action needs to be coordinated by the District Magistrates in coordination with the Department of Irrigation and Flood Control or other concerned Departments such as Department of Rural Development/Urban Development/Local Bodies/Forests/Revenue etc. The District Magistrate may as far as possible hold a meeting of all the stakeholders for the purpose as per the District Environment Plan or Watershed Plan within one month from today. The District Magistrates may also ensure that as far as possible at least one pond/water body must be restored in every village, apart from creation of any new pond/water body.

- 5) The Hon'ble National Green Tribunal vide its order dated 6.7.2020 in OA No. 06 of 2012 in the matter of Manoj Mishra Vs. Union of India & Others has passed the detailed order, the operating para no. 21 of which relating to the present Monitoring Committee is reproduced as under: -

"21. Accordingly, we direct that:

- a. DDA must forthwith comply with the earlier direction instead of finding lame excuses and taking stand of avoiding public duty.
- b. Let the concerned authorities in Delhi, Haryana and UP to take further action in terms of the recommendations of the Committee as well as earlier directions of this Tribunal dated 13.01.2015, as updated vide earlier orders dated 11.09.2019 and 05.03.2020. The compliance may be overseen by the Chief Secretaries concerned. The Committees headed by Justice Pritam Pal in Haryana and Justice SVS Rathore in UP may also oversee such compliances in their respective states and give their independent reports periodically."

Therefore, in order to implement the directions of the Hon'ble Tribunal, as mentioned above, the Monitoring Committee has held its meeting with State level officers of State of Haryana on 28.7.2020 regarding rejuvenation of river Yamuna.

Thereafter, point-wise agenda of the meeting was taken up for discussion as under:

1. **Water quality of river Yamuna at various locations.**

It was apprised that Haryana State Pollution Control Board is monitoring the water quality of river Yamuna at 13 locations and parameters namely pH, BOD, COD, TSS, O & G, ammonical nitrogen(NH<sub>3</sub>-N), DO and F.Coli and Total Coli are monitored. As per the water quality data provided by the Board, it has been observed that the quality of water monitored at Point No.9, 10 and 11 contains high level of BOD ranging between 33.75-44.5 mg/l and F.Coli parameter in some of the river water samples are more than 25000 MPN/100 ml. As such, the water quality of river Yamuna has been contaminated due to discharge of untreated sewage of the towns in the river.

The concerned department informed that poor water quality of river Yamuna before and after meeting of Budiya Nallah is due to the discharge of untreated

sewage of Faridabad area and there is proposal to install 02 STPs of capacity 180 MLD and after the commissioning of the STPs, the water quality of river Yamuna shall be improved. Also, the faecal coliform in the sewage shall be controlled by imparting treatment through disinfectant mechanism on all STPs located on river Yamuna.

**After detailed deliberation, the Chairman of the Monitoring Committee directed as under: -**

- **All the concerned departments like PHED, HSVP, GMDA, ULBD and HSIEDC shall take immediate steps to rectify the deficiencies in STPs/CETPs within 1 month.**
- **HSPCB shall analyze the water quality of river Yamuna at the same locations in the first week of September, 2020 and submit the analysis results to the Monitoring Committee.**

2. **Sources of pollution in river Yamuna and details of drains carrying sewage/industrial effluent in river Yamuna.**

The Monitoring Committee was informed that in river Yamuna, 11 major drains are falling at different locations. Haryana State Pollution Control Board has analyzed the water quality of these drains recently and as per the analysis results, the values of BOD and F.Coli in drain No.2, Drain No.6, Entry point of Mungeshpur Drain, entry point of KCB drain, Leg1 drain, Leg2 drain, Leg3 drain and Budiya Nallah were found varying between 45- 210 mg/l and 6150-1750000 MPN/100 ml which are much higher than the permissible level.

It was further informed that the water quality of these 11 drains w.r.t. various parameters shall be improved after making necessary rectification on the deficiencies observed in these STPs.

**After detailed deliberation, the Chairman of the Monitoring Committee directed as under: -**

- **All the concerned departments like PHED, HSVP, GMDA, ULBD and HSIEDC shall take immediate steps to rectify the deficiencies in STPs/CETPs within 1 month.**
- **HSPCB shall analyze the water quality of 11 drains ultimately leading to river Yamuna in the first week of September, 2020 and submit the analysis results to the Monitoring Committee.**

3. **Status of Sewage Treatment Plants installed for treatment of sewage of the towns located on river Yamuna and their performance.**

It was submitted that total 58 STPs are existing in the catchment area of river Yamuna, out of which 50 STPs are found complying, 7 are non-complying and 1 STP is non-functional. As per the status report submitted to the Monitoring Committee, 50 STPs have been mentioned as complying w.r.t. all the parameters whereas as per the data, presently, no treatment system has been provided

onmost of the STPs to bring F.Coli parameter within the norms. Moreover, no data has been made available w.r.t. parameter BOD, COD, TSS and F.Coli parameters. With respect to STPs 40 MLD and 8 MLD installed at Karnal and 30 MLD and 25 MLD installed at Sonipat, which have been found non-complying, the officer of Department of Urban Local Bodies claimed that necessary upgradation in the system shall be made and these STPs shall be made fully functional by 31.12.2020.

PHED informed that 1.5 MLD at Indri (Karnal) and 40 MLD at Sonaria (Rohtak) shall be made functional after removing deficiencies in these STPs by 31.12.2020. It was further stated that STPs of capacity 171 MLD to treat sewage of Faridabad area, the work shall be allotted by 15.8.2020 and shall be completed within 1 year.

**After detailed deliberation, the Chairman of the Monitoring Committee directed as under: -**

- i) **The Department of Urban Local Bodies shall remove all the deficiencies in STPs of Karnal (capacity: 40 MLD and 8 MLD) and Sonipat (capacity: 30 MLD and 25 MLD) by 31.12.2020.**
- ii) **PHED was directed to remove all the deficiencies in STPs of Indri, Sonaria (capacity: 1.5 MLD and 40 MLD) by 31.12.2020.**
- iii) **The Department of Urban Local Bodies shall install and commission 02 STPs of capacity 80 MLD and 100 MLD to treat sewage of Faridabad area by 30.6.2021,**
- iv) **All the above Departments shall submit an interim report to the Monitoring Committee by 31.10.2020.**

4.

**Status of Sewage Treatment Plants which are under construction/planning.**

It was reported that 23 new STPs of capacity 227 MLD have been proposed to be constructed in the catchment of river Yamuna. Out of these 23 STPs, 05 STPs of capacity 50 MLD have all ready been completed. The work in progress w.r.t 18 STPs of capacity 177 MLD, out of which work of 01 STP of capacity 10 MLD to be installed at Faridabad has been delayed. All the 17 STPs shall be completed by 31.12.2020 and 01 STP of capacity 10 MLD of Faridabad area shall be completed by 31.7.2021.

**After detailed deliberation, the Chairman of the Monitoring Committee directed as under: -**

- i) **Urban Local Body Department shall complete and commission 16 STPs (capacity: 169.5 MLD) and 01 STP (capacity: 10 MLD) by 31.12.2020 and 30.6.2021, respectively.**
- ii) **HSVP shall complete 01 STP of capacity 7.5 MLD for Faridabad town by 30.9.2020.**

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**Status of sewage treatment plant which are under proposal.**

It was informed that 11 new STPs of capacity 387 MLD are under proposal. The status of these STP was submitted as under:

- 01 STP of capacity 100 MLD to be installed at Dhanwapur by GMDA is at DNIT stage
- 02 STPs of capacity 20 MLD and 25 MLD to be installed by GMDA at Jhazgarh and Manesar and 02 STPs of capacity 2 MLD and 2 MLD at Dhankot and Bajghera to be installed by Gram Panchayat department and 02 STPs of capacity 80 MLD and 100 MLD, to be installed at Mirzapur and Partapgarh by the department of Urban Local Bodies in Faridabad, are tendering stage.
- In the case of 04 STPs of capacity 15 MLD, 3 MLD, 10 MLD and 30 MLD, to be setup in Sonipat, Murthal, Rohtak and Faridabad, respectively, by HSVP, work has been allotted.

**After detailed deliberation, the Chairman of the Monitoring Committee directed as under: -**

- i) **HSVP shall install and commission 04 STPs of capacity 15 MLD, 3 MLD, 10 MLD and 30 MLD to be set up at Sonipat, Murthal, Rohtak and Faridabad, respectively, by 30.6.2021.**
- ii) **GMDA shall complete 03 STPs of capacity 20 MLD, 100 MLD and 25 MLD at Jhazgarh, Dhanwapur and Manesar, respectively, by 30.6.2021.**
- iv) **Gram Panchayat Department shall complete 2 MLD and 2 MLD STPs to be installed at Dhankot and Bajghera by 30.6.2021.**
- v) **Urban Local Department shall complete 02 STPs of capacity 80 MLD and 100 MLD to be set up at Mirzapur and Partapgarh, respectively, in Faridabad by 30.6.2021.**

5.

**Status of STPs which required technologically up-gradation.**

It was submitted that there is proposal to upgrade 09 STPs of capacity 70.5 MLD. The data indicate that upgradation work 3 STPs of capacity 25 MLD, 3.5 MLD and 3 MLD for Yamuna Nagar, Radaur and Chachrauli has been completed, whereas, upgradation work is in progress w.r.t. 06 STPs for Yamunanagar (10MLD), Nissing (4 MLD), Indri (4 MLD), Beri (3 MLD), Karnal (8 MLD) and Sector 25, Rohtak (10 MLD).

**After detailed deliberation, the Chairman of the Monitoring Committee directed as under: -**

- i) **Upgradation of all the 6 STPs :Yamunanagar (10MLD), Nissing (4 MLD), Indri (4 MLD), Beri (3 MLD), Karnal (8 MLD) and Sector 25, Rohtak (10 MLD) shall be completed by the concerned departments by 31.12.2020.**
- ii) **The concerned departments namely Public Health Engineering Department and HSVP shall ensure that these STPs should also be upgraded by adding disinfectant treatment mechanism to control fecal coliform parameter.**

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iii) **HSPCB shall collect the effluent samples at the inlet and outlet of STPs in the 2<sup>nd</sup> week of January, 2021.**

6. **Status of installation of effluent treatment plants by the industries and mode of disposal of treated effluent.**

The Monitoring Committee was apprised that 2597 water polluting industries exist in the catchment area of river Yamuna and all these industries have installed their individual ETPs to treat the industrial effluent.

The Monitoring Committee observed that no data has been made available w.r.t. category of the industries (Red, Orange and Green category) and further sub category of industries in Red category industries and cluster of industries which have joined common effluent treatment plants.

**After detailed discussion, the Chairman of the Monitoring Committee directed as under: -**

- i) **HSPCB shall segregate the list of the 2597 water polluting industries and categorize these industries into Red, Orange and Green within 2 days.**
- ii) **The Red category industries may be further sub-categorized and cluster of particular type of industries, their discharge and characteristics of effluent.**
- iii) **HSPCB shall submit the analysis results of all the CETPs collected in the month of June, 2020 within 3 days otherwise the concerned Regional office of the Board may be directed to carry out analysis of un-treated and treated effluent of the CETP within 7 days and submit the analysis results to the Monitoring Committee within 21 days.**

**6-A Inspection of industries of Faridabad and Panipat area**

With regard to action to be taken on the directions of the Executing Committee during its visit to Faridabad area on 3<sup>rd</sup> and 4<sup>th</sup> March, 2020, it was submitted that inspection of illegal dyeing units was conducted by the joint team constituted by District Magistrate, Faridabad and based on the report, electric connection of 5 units have been disconnected, 12 units have been closed, environmental compensation amounting to Rs.1.81 crores has been imposed on 10 units.

Regarding control of pollution in Panipat area, it was reported that HSPCB has issued closure order to 139 industrial units, closure notices to 19 units and show cause notices to 24 industries. Besides, environmental compensation amounting to Rs. 1.21 crores has been imposed and Rs.37.87 lakh has been recovered. Also, in the special drive with regard to inspection of dyeing and bleaching industries of Panipat area, out 127 units inspected during the drive, 62 units were found dismantled, 48 industrial units were resealed and electric connection of 17 newly identified units have been disconnected.

**The Monitoring Committee noted the compliance and action of HSPCB.**

7. **Implementation of irrigation schemes to utilize treated sewage for irrigation and irrigation schemes which are under construction/planning.**

It was submitted that the Department of Irrigation, State of Haryana has prepared consolidated projects for river Ghaggar and Yamuna to utilize the treated sewage of 207 STPs with an estimate cost of Rs.1098.25 crores.

**Presently, as per the policy decision of the State Government, Thermal Power Plants within 50 Kms radius are required to utilize treated sewage of STPs, which has been assessed as 145 MLD.**

Further, out of 207 STPs, 35 STPs have been selected to utilize their treated sewage (338.85 MLD) for irrigation through micro irrigation schemes and the project shall be completed within 2 years. Further, the consolidated project for the remaining STPs shall be completed within 5 years.

It was suggested in the meeting that the treated sewage may be utilized for other activities like construction activities, watering of parks/gardens/horticulture area, cleaning of roads, flushing of toilets and washing of vehicles.

**After detailed discussion, it was directed as under.**

- i) **For utilization of treated sewage (338.85 MLD) of 35 STPs for which irrigation schemes have been prepared, priority may be given to the STPs of the towns which are located on river Yamuna and these irrigation schemes may be completed by 30.6.2021 by the Department of Irrigation.**
- ii) **Irrigation schemes to utilize the treated sewage of 58 STPs for the towns, located in the catchment area of river Yamuna, shall be prepared by the Department by 30.9.2020.**
- ii) **Irrigation network to utilize the treated sewage of the STPs should be laid simultaneously with the construction of STPs so that irrigation schemes may be commissioned simultaneously with the commissioning of the STPs.**

8. **Non point sources and control of pollution of these sources.**

No data has been provided w.r.t Non point sources in river Yamuna.

The Chairman of the Monitoring Committee observed that identification of Non-point sources into river Yamuna is an imperative task as the number of illegal discharges, containing toxic or highly organic effluent, are discharged by the miscreants. Such Non point sources may include discharge of sludge/effluent of illegal established industries, deposition of solid waste in the river or drains etc.

**The detailed discussion on the issue was held and it was directed as under: -**

**The Department of Science & Technology, Haryana shall constitute Committee under the chairmanship of the Deputy Commissioners of the concerned Districts and other members of the Committee shall be from the Department of PHED, ULB, HSPCB, HSVP, GMDA and Police**

**Department and these committees shall identify various sources of Non- point sources into river Yamuna in the jurisdiction of various Districts and submit the consolidated report to the Monitoring Committee within 2 months. HSPCB shall coordinate the matter.**

9. **Status of installation of sewage treatment plant for the villages.**

It was reported that 277 villages have been identified in the catchment area of river Yamuna. The discharge of sewage/sullage from these villages is 90 MLD. The work of diversion/treatment of sewage has been completed in 22 villages. The data provided by the Panchayats Department indicate that in most of the villages, the work of STPs has not been started so far. Moreover, no project cost of the STPs for the villages has been mentioned.

**After discussion on the issue, the Chairman of the Monitoring Committee directed as under:**

- i) **Construction work of STPs in the villages may be started in phased manner and ensure that STPs for 277 villages should be completed by 31.3.2021.**
- ii) **The treated sewage of the villages may be utilized for irrigation of agriculture purposes.**

10. **Gaps in treatment of sewage of the town located on river Yamuna.**

The data w.r.t 34 towns located on river Yamuna has been provided, which include: total quantity of sewage generation in the town (80 % of the consumption of water), number of STPs and their capacity installed to treat the sewage of the towns, STPs under construction and proposed, total capacity of STPs and gap in treatment of sewage.

The perusal of the data indicates that there is gap in treatment of sewage in the towns Indri (0.8 MLD), Samalkha (0.5 MLD), Beri (0.1 MLD), Faridabad (171 MLD) and Palwal (9 MLD) and the total gap in treatment of sewage has been mentioned as 181.4 MLD.

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Public Health Engineer Department, Haryana vide its statement dated 28.7.2020 (received through mail) has claimed that there is no gap in treatment of sewage w.r.t Beri and Samlkhatowns, whereas gap in treatment of sewage in the case of Indri and Palwal towns is 0.08 MLD and 3.82 MLD, respectively, instead of 0.8 MLD and 9 MLD as mentioned in the data provided to the Monitoring Committee. After considering the statement of Public Health Engineer Department, the net gap in the treatment of sewage remains 175 MLD, out of which major gap in treatment of sewage is of Faridabad (171 MLD).

It was further submitted as under:

- Construction work of STPs of capacity 80 MLD and 100 MLD to treat sewage of Faridabad shall be allotted to the agency by 15.8.2020 and completed by 30.6.2021.

- In order to treat the gap in sewage of Indri town (0.08 MLD), new STP of capacity 4 MLD shall be completed by 31.12.2020 and for Palwal town having gap sewage discharge of 3.82 MLD, STP shall be installed by department of Urban Local Bodies by 31.12.2020.
- After the completion of these STPs(80 MLD, 100 MLD, 0.08 MLD and 3.82 MLD), there shall be no gap in the treatment of sewage in the town.

**After detailed deliberation on the issue, the Chairman of the Monitoring Committee directed as under:**

- The Department of Urban Local Bodies shall allot construction work of 02 STPs of capacity 80 MLD and 100 MLD of Faridabad to treat gap in sewage of 171 MLD by 15.8.2020 and these STPs shall be completed by 30.6.2021.**
- In order to treat 0.08 MLD gap in sewage quantity of Indri town, 4 MLD capacity STP shall be completed by the Public Health Engineering Department by 31.12.2020.**
- For treatment of 3.82 MLD gap in sewage of Palwal town, 27.5 MLD STP shall be completed by the Public Health Engineering Department by 31.12.2020.**

11.

**Ground water quality in the catchment area of river Yamuna.**

The groundwater quality monitoring data analyzed by HSPCB for the towns Yamuna Nagar, Karnal, Panipat, Sonipat, Bahadurgarh, Gurugram North, Gurugram South, Nuh, Palwal, Ballabgarh and Faridabad, located in the catchment area of river Yamuna, indicate that water quality of the groundwater sources installed at the following points were found non-compliance w.r.t Chloride, Calcium and TDS parameters.

- ✓ Near Western Yamuna canal near village Rohat, District Sonipat (**Chloride : 294 mg/l**)
- ✓ Groundwater of Village Nathupur (**Chloride : 264 mg/l**).
- ✓ Village Akbarpur Barouta, Sonipat (**Chloride : 288mg/l**).
- ✓ Hand pump opposite so many ceramics Ltd. sector-16, HSIIDC, Bahadurgarh (**TDS : 3500 mg/l and Calcium : 280 mg/l**).
- ✓ Tubewell of Hotel Teej near BCCI office, Bahadurgarh (**TDS : 6650 mg/l and Chloride : 320 mg/l**).
- ✓ Tubewell of Rohit steels, HSIIDC, Kutana, Rohtak (**TDS: 2980 mg/l, Calcium: 300 mg/l**).
- ✓ Hand pump near JLN canal, Rohtak (**Calcium : 320 mg/l**)
- ✓ Hand pump In front of Mini secretariat, Jhaggar (**Calcium : 290 mg/l**).
- ✓ Hand pump near water works of PHED, Sampla, District Rohtak (**Calcium : 270 mg/l**).
- ✓ Tubewell at entry gate of Ansal Pioneer Industrial park, Bilaspur, Gurugram (**Chloride : 560 mg/l, Calcium : 560 mg/l**).

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- ✓ Tubewell of Suresh S/o Shri Nathi at village Dudhola, Palwal (**TDS : 2210 mg/l, Chloride : 630 mg/l**).
- ✓ Tube at Prithla, Palwal (**Chloride: 280 mg/l**).
- ✓ Thermal power Plant, Palwal (**Chloride: 290 mg/l**).
- ✓ Tubewell near Sandeep Axel at village Mohla(**Chloride: 340 mg/l**).
- ✓ Government tubewell sector-59, PragtiVihar, Balhabgarh(**Chloride: 310 mg/l**).
- ✓ Tubewell of ParmvirDagar near Power house, sector-58, Faridabad (**Chloride : 290 mg/l**).
- ✓ Tubewell Power house colony, sector-23, Faridabad (**Chloride : 280 mg/l**).
- ✓ Tubewell at Government High School, Sihi, sector-7, Faridabad (**Chloride : 270 mg/l**).

**After detailed discussion, the Chairman of the Monitoring Committee directed as under:**

- i) **HSPCB shall identify all the above points and seal these ground water sources within 15 days and display board mentioning "water is not fit for drinking" may be erected at the said locations.**
- ii) **HSPCB shall analyze the ground water samples of ground water sources located in the catchment area of river Yamuna with the frequency as fixed by the Hon'ble NGT.**

12.

#### **Environmental Flow**

It was submitted as under:

- National Institute of Hydrology has prepared its report and submitted that environmental flow in river Yamuna may be maintained by releasing 22.81 to 44.45 cumec of water from Hathinkund Barrage during January to June and 24.32 to 43.46 cumecs of water during October to December, which cannot be maintained due to water scarcity in the State.
- State of Haryana has agreed to maintain minimum flow of 10 cumec to maintain E-Flow in the river Yamuna.
- E-Flow of 10 cumecs can be progressively increased on the construction of upstream storage dams, which may be probably constructed by 2025, till then 10 cumec E-Flow shall be maintained in river Yamuna.

It was suggested in the meeting that e-flow can be maintained by providing storage ponds/retaining structures, check dams etc. so as to store the excess rain water during rainy season and the same can be discharged in the river Yamuna in a regulated manner for whole of the year to maintain e-flow in the river.

**After detailed discussion, the Chairman of the Monitoring Committee directed as under:**

- i) **The Department of Irrigation, State of Haryana shall ensure that 10 cumec of water is released from Hathinkund Barrage for**

whole of the year to maintain environmental flow in the river Yamuna.

- ii) The State of Haryana shall construct proposed storage dams to store the excess flow of rain water during rainy season and maintain the regulated flow in river Yamuna for whole of the year, by the year 2025 and thereafter the present quantity of 10 cumec of water, being released in river Yamuna, may be increased substantially.
- iii) The Department of Irrigation shall construct small storage ponds/retaining structures in the catchment area of river Yamuna to retain the excess rainwater during rainy season and it may be discharged in a regulated way during non-monsoon period to maintain environmental flow in the river.

13. **Seepage and faecal sludge management.**

It was reported that 31 Urban Local Bodies, falling in the catchment area of river Yamuna, has notified their policy for septage management. The data providing to the Monitoring Committee w.r.t. generation of septage and faecal sludge and their transportation through tankers to the STPs indicate that from January 2020 to May, 2020 about 14-35 MLD of sewage has been discharged into STPs. In order to carry the septage/faecal sludge, 166 private tankers and 23 tankers of Municipal Councils, have been deployed.

The matter has been discussed in detail and it has been directed as under:

*The Department of Science & Technology shall constitute Committee of the officers from the Department of Urban Local Bodies, HSVP, PHED and Development of Panchayats to conduct study w.r.t quantify the discharge of septage and faecal sludge generated from various areas, capacity of STPs in the nearby vicinity, quantity of sewage to be treated in the STPs, concentration of BOD and faecal coliform in the septage/faecal sludge and quantity of septage/faecal sludge to be treated at the STPs. A document for guidance may be prepared and be circulated among all the operators of STPs of the towns located in the catchment area of river Yamuna. The said study may be completed within 2 months.*

14. **Installation of CETPs and their operation.**

It was reported that 14 CETPs are located in the catchment area of river Yamuna, out of which 03 STPs have been found non-complying w.r.t. various parameters. The capacity of these 14 STPs is 161.5 MLD. The details of these CETPs are as under: -

- HSVP has set up 2 CETPs of capacity 42 MLD.
- HSIIDC has installed 10 CETPs of capacity 118.7 MLD.

- Private agencies have set up 02 CETPs of capacity 0.8 MLD.
- Out of these 14 CETPs, 2 CETPs of HSVP, 01 of HSIIDC are not complying with the prescribed standards.

After detailed discussion, the Chairman of the Monitoring Committee directed as under:

**HSPCB shall submit the details of the CETPs installed by each Departments w.r.t. category and number of industries in each cluster joining to CETPs, mode of disposal of treated effluent of CETPs, quantity and management of the sludge of CETPs and analysis results of last monitoring of CETPs within 15 days to the Monitoring Committee.**

#### 15. In-situ bio- remediation in the drains

It was informed that the Hon'ble National Green Tribunal in its order dated 6.12.2019 in OA No. 673 of 2018 has directed to ensure 100% treatment of sewage at least through in-situ bio-remediation in the drains carrying untreated sewage which are not connected to any STPs by 31.3.2020, failing which penalty of Rs. 5 lakh per month per drain shall be imposed.

It was submitted that meeting of the stakeholder departments was held on 4.11.2019, wherein the agencies for executing the bio-remediation works in a specific drains were identified. In the meeting, two departments for each drain were made responsible to provide in-situ remediation in the drains.

The details of in-situ remediation to be provided in the drains are as under: -

Sr. No.	Name of Drain	Main Stakeholder Departments	Name of ULB	Nodal Department for execution of works
1.	Dhanura Escapes (Ditch Drain)	PHED, ULBD	Yamunanagar	PHED
2.	Drain no. 2	ULBD, HSVP	Panipat	ULBD
3.	Drain no. 6	ULBD, HSIIDC	Sonipat	HSIIDC
4.	Mungeshpur	ULBD, PHED	Bahadurgarh	ULBD
5.	KCB Drain	HSIIDC, ULBD	Bahadurgarh	HSIIDC
6.	Drain no. 8	Not required being nil flow		
7.	Leg I	MCG, GMDA	Gurugram	MCG
8.	Leg II	MCG, GMDA	Gurugram	MCG
9.	Leg III	MCG, GMDA	Gurugram	GMDA
10.	Budhiya Nalah	ULBD, HSIIDC	Faridabad	ULBD
11.	Guanchi	ULBD, PHED (For discharge of village Hodal and Hathin).	Faridabad	ULBD

Detailed discussion on the issue was held and it was directed that all the concerned departments shall install in-situ remediation techniques in the drains carrying untreated sewage and not connected to any STP immediately and a report in this regard be submitted to the Monitoring Committee.

#### 16 Status of laying of sewerage network and interception of sewage.

It was reported that in 34 towns, 1544 Kms of sewer line was proposed to be laid, out of which 983 Kms length of sewer line has been laid so far, completing sewerage system in 20 towns. Sewer line in remaining 14 towns is being laid and shall be completed by 31.12.2020. Sewerage system for the towns (Berry and Panipat) shall be delayed and shall be laid by 31.3.2021.

For interception of sewage, 91.7 MLD of effluent was proposed to be tapped/diverted at 128 locations, out of which 12.51 MLD effluent has been diverted at 38 locations. The work is under progress at 37 locations, whereas, no work has been started at 53 locations. Therefore, 79.235 MLD sewerage is yet to be diverted from 90 locations.

Similarly, quantity of sewage diverted from Leg-1, Leg- II and Leg -III drains was mentioned as under.

**Leg-I**

Out of total discharge 22.80 MLD to be diverted, 14.2 MLD sewage has been diverted and the remaining 8.6 MLD sewage from 6 points shall be diverted soon

**Leg-II**

Out of total sewage discharge 35.64 MLD to be diverted, 27.84 MLD sewage has been diverted and the remaining 7.6 MLD sewage from 5 points shall be diverted soon

**Leg-III**

Out of total sewage discharge 80.25 MLD to be diverted, 45.35 MLD sewage has been diverted and the remaining 34.90 MLD sewage from 38 points shall be diverted in a time bound manner.

**After detailed discussion, the Chairman of the Monitoring Committee directed as under.**

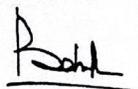
- **79.235 MLD effluent from the remaining 90 locations shall be diverted to the nearby STPs by 31.12.2020.**
- **8.6 MLD sewage from 6 points in Leg-I drain, 7.6 MLD sewage from 5 points in Leg-II drain and 34.90 MLD sewage from 38 points in Leg- III drain shall diverted to nearby sewerage system leading to STPs by 31.03.2021.**

Sd/-  
Dr Babu Ram

Sd/-  
Ms. Urvashi Gulati

Sd/-  
**Justice Pritam Pal,**  
Former Judge Punjab and Haryana  
High Court and now as Chairman of  
the Monitoring Committee

**Note: The Members of the Monitoring Committee have given their concurrence on the Minutes of the meeting.**

  
30/12/2020

List of participants for Video Conferencing held at 1100 Hrs on 28.07.2020 under the Chairmanship of Justice Pritam Pal to review the progress of Yamuna Action Plan in OA No. 673/2018 and OA No. 6/2012

Sr. No.	Name and Designation
1.	Sh. VS Kundu, IAS, CEO, GMDA, Gurugram.
2.	Smt. Dheera Khandelwal, IAS, Environment Department, Haryana, Chandigarh.
3.	Sh. AK Singh, IAS, PS, Town & Country Planning Department, Haryana and Industries & Commerce Department, Haryana, Chandigarh.
4.	Sh. Sudhir Rajpal, IAS, PS, D & P Department, Haryana, Chandigarh.
5.	Sh. Ashok Kheterpal, Chairman, HSPCB, Panchkula
6.	Sh. S. Narayanan, IFS, Member Secretary, HSPCB, Panchkula.
7.	Sh. Manpal Singh, EIC, PHED, Panchkula.
8.	Sh. Pardeep Kumar, Chief Engineer, GMDA, Gurugram.
9.	Sh. PK Garg, GM, HSIIDC, Panchkula.
10.	Sh. Shankar Jindal, Chief Engineer, D & P, Haryana, Chandigarh.
11.	Sh. DR Bhaskar, Chief Engineer, Urban Local Bodies Department, Panchkula.
12.	Sh. Naresh Pawar, Chief Engineer, HSVP, Panchkula.
13.	Sh. VK Kalra, Chief Engineer, HSVP, Panchkula
14.	Sh. KK Verma, Chief Engineer, PHED, Panchkula.
15.	Sh. Rajesh Bansal, Supdt. Engineer, GMDA, Gurugram.
16.	Sh. JP Singh, SEE, HSPCB, Panchkula.
17.	Sh. Ranbir Singh, XEN, ULBD, Panchkula.
18.	Dr. Kirti Grow, Scientist B, HSPCB, Panchkula