

**ACTION PLAN FOR
RIVER YAMUNA
NOVEMBER 2018**

Government of Haryana



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1. INTRODUCTION

The River Yamuna

The **Yamuna** also known as the **Jumna** or **Jamuna** is the second largest tributary river of the Ganga and the longest tributary in India. Originating 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, it travels a total length of 1,376 kilometres (855 mi) and has a drainage system of 366,223 square kilometres (141,399 sq mi), 40.2% of the entire Ganges Basin. It merges with the Ganges at Triveni Sangam, Allahabad,

It crosses several states: Haryana and Uttar Pradesh, passing by Uttarakhand and later Delhi, and meeting its tributaries on the way, including Tons, its largest tributary, Chambal, its longest tributary which has its own large basin, followed by Sindh, the Betwa, and Ken. The Yamuna does not pass across Himachal Pradesh, but receives water from that state via the Tons. It helps create the highly fertile alluvial Yamuna-Ganges Doab region between itself and the Ganges in the Indo-Gangetic plain. Nearly 57 million people depend on the Yamuna's waters. With an annual flow of about 10,000 cubic billion metres (cbm; 8.1 billion acre-ft) and usage of 4,400 cbm (of which irrigation constitutes 96 per cent), the river accounts for more than 70 per cent of Delhi's water supply.

Religious Sanctity of River Yamuna

Like the Ganges, the Yamuna is highly venerated in Hinduism and worshipped as the goddess Yamuna. In Hindu mythology she is the daughter of the Sun God, Surya, and the sister of Yama, the God of Death, hence also known as Yami. According to popular legends, bathing in its sacred waters frees one from the torments of death.

The Course of River Yamuna

In Haryana, popular cities of Yamuna Nagar, Panipat and Sonapat lie on its banks. On the basis of hydrological and ecological conditions, the river has been classified into five segments, viz., Himalayan Segment, Upper Segment, Delhi Segment, Eutrophicated Segment and Diluted Segment (Misra 2010). The Upper Segment consisting of 224 Km includes the Haryana part of the river and it enters into Delhi after crossing Sonapat. In Delhi, it runs for around 22 Km and then re enters into Haryana and leaves out for Uttar Pradesh through the Eutrophicated Segment and finally joins in Ganga after traversing about 950 Km.

The Yamuna sub-basin extends over an area of 3,63,082 sq. Km and its drainage comprises the parts of the States of Himachal Pradesh, Haryana, Rajasthan, Madhya Pradesh and Uttar Pradesh and the entire Union Territory of Delhi. The distribution of the basin area in each of these States is as below.

S No.	State	Catchment area (in Sq. Km)	% of basin in the State
1	Uttaranchal	3771	1.1
2	Uttar Pradesh	70437	20.4
3	Himachal Pradesh	5799	1.7
4	Haryana	21465	6.1
5	Delhi	1485	0.4
6	Rajasthan	102883	29.7
7	Madhya Pradesh	140208	40.6

(Source : CPCB 2006)

Yamuna River in Haryana



River Yamuna and its course in Haryana

In Haryana, the river emerges from the hills near village Kalesar where its water is tapped at Hathnikund Barrage for irrigating vast areas in Haryana and Uttar Pradesh. During its course in Haryana, it passes through the districts of Yamuna Nagar, Karnal, Panipat, Sonapat, Faridabad and Palwal. At Hathnikund, heavy silt laden water is received from river Yamuna and no flood or erosion occurs at the entry point as the water of river Yamuna is being tapped against the irrigation and drinking requirements. The Western Yamuna Canal (WJC) originates from the right bank of Yamuna River at Hathnikund / Tajewala barrage and the carrying capacity of main canal is 509 cubic meter / sec and irrigates an area of about 4,86,000 ha annually in Haryana. This irrigation system is more than 100 years (CPCB 2006). At the Hathni Kund Barrage, its waters are diverted into two large canals: the Western Yamuna Canal flowing towards Haryana and the Eastern Yamuna Canal towards Uttar Pradesh. Beyond that point the Yamuna is joined only by the Somb, a seasonal rivulet from Haryana, and by the highly polluted Hindon River near Noida, so that it continues only as a trickling sewage-bearing drain before joining the Chambal at Pachnada in the Etawah District of Uttar Pradesh.^[4] The water of Yamuna is of "reasonably good quality" through its length from Yamunotri in the Himalayas to Wazirabad barrage in Delhi, about 375 kilometres (233 mi); below this, the discharge of wastewater through 15 drains between Wazirabad barrage and Okhla barrage renders the river severely polluted. There is a heavy fluctuation in the river from Hathnikund Barrage to Wasirabad Barrage mainly in non-monsoon season. Major towns falling on the bank of river Yamuna in Haryana are Kalesar, Raiyanwala, Tajewala, Khizrabad, Karkauli, Chhachhrauli, Jagadhri, Indri, Karnal, Basdhara, Panipat, Sonapat, Kehera Kaipur, Jaitpur, Faridabad and Palwal.

Average flow	Dry Months (Feb-Jun)	Normal Months (Jul-Sep)	Lean Months (Oct-Jan)
(In cs per month)			
2007-08	3388	16344	4847
2008-09	4609	27010	5127
2009-10	3245	14040	2835
2010-11	7145	60259	2866
2011-12	4801	38222	4887
2012-13	4408	22283	3563
2013-14	5685	29163	15577
2014-15	3477	18608	6109
2015-16	3203	18307	6347
2016-17	3352	22123	2984
2017-18	-	-	3731

Flow of the river during different periods of the year are as above

(Source Irrigation Department, Haryana)

Main Sources of Pollution in River Yamuna

The River Yamuna as well as the major drain outfalls into the river are being monitored regularly by the Central Pollution Control Board (CPCB), Central Water Commission (CWC), Delhi Pollution Control Committee (DPCC), State Pollution Control Boards (SPCB) at different locations (Sharma and Kansal 2011). The Biochemical Oxygen Demand (BOD) level does not conform to the prescribed norms in many points and the river shows fluctuations in dissolved oxygen (DO) levels from 'Nil' to 'above saturation' levels, thereby indicating the presence of organic pollution load and prevalence of eutrophic conditions. The entire stretch of Yamuna is witnessed with significant level of contamination of bacteria and amongst the heavy metals, Cadmium, Nickel and Lead are scantily present whereas Zinc and Iron are generally present. During dry seasons, micro pollutants are observed which are declining over a period of years (Ibid).

According to CPCB (2006), the domestic pollution contributes to 85% of the total pollution in River Yamuna which is caused by urban centres, which include the cities of Panipat, Sonapat, Delhi, Ghaziabad, Mathura, Agra, Etawah and Allahabad. While the impact of this domestic pollution on the river depends upon the efficiency of its collection and type and length of its transportation system, which contribute to the level of pollution load as the water consists mainly of organic matter and microbes, a reasonable amount of total salts, chlorides, nutrients, detergents, oil and grease is also contributed by the domestic sources. Waste from unsewered areas, where the water directly joins the river without any treatment also contributes significantly to the pollution load of the river. As far as the industrial pollution is concerned, there are large clusters of industries belonging to the categories of pulp and paper, sugar, distilleries, textiles, leather, chemical, pharmaceuticals, oil refineries, thermal power plants, food, etc., located at Kota, Gwalior, Indore, Nagda, Khetri, Yamuna Nagar, Panipat, Sonapat, Delhi, Baghpat, Ghaziabad, Gautam Budha Nagar, Faridabad, Mathura and other places (CPCB 2006). Though there is a strict provision of environmental compliance system, the contribution of these industries to the pollution load of the river deserves attention – due to non-compliance of standards of discharge by industries as well as illegal establishment of certain industries. Around 132 large and medium categories falling under highly polluting industrial category have been issued directions to install online monitoring devices in Haryana out of which around 100 have already installed.

Major drains of River Yamuna in Haryana, their status and action plan for their treatment

There are six major drains, i.e., Dhanaura escape, Main Drain No. 2, Drain No 6, a bunch of three drains outfalling into Najajgarh drain, Buriya Nallah drain and Gaunchi drain, falling out in River Yamuna in the State of Haryana. Another drain called Ali Link drain, which drains into Yamuna near village Meethapur in Faridabad in the jurisdiction of Haryana runs totally through Delhi and this is not counted as a drain of Haryana.

OA No. 06 of 2012

An application was filed in Hon'ble NGT by environmentalist Shri Manoj Mishra in the matter of prevention of pollution of Yamuna river, and in this case, a study was conducted

by Expert Committee of Scientists of MoEF and IIT Delhi, as per the directions of NGT. The reports filed by the Expert Committee in 2014 were made integral part of NGT's directions and the Tribunal envisaged this as 'Maily Se Nirmal Yamuna' Revitalization Project, 2017. The Yamuna river was to be made pollution free by December, 2017.

The State of Haryana was also issued directions alongwith other States vide Order dated 13.01.2015. Since, then various orders relevant to Haryana were passed on 02.03.2015, 08.05.2015, 11.06.2015, 28.07.2015, 02.02.2016, 24.07.2017, 08.08.2017, 16.02.2018, 25.07.2018 and 26.07.2018. The State of Haryana has been implementing the directions of the Tribunal by preparing an action plan to control pollution in river Yamuna, involving the stakeholder Departments. The timelines for various activities to control the pollution were submitted but the same could not be adhered to and as a result the pollution in river Yamuna could not be prevented. Vide order dated 26.07.2018, the Hon'ble NGT has passed stringent remarks regarding the failure of the administration in handling the situation and the repeated failure in carrying out the binding directions in various orders. Accordingly, the NGT has constituted a two members of Monitoring Committee comprising of Mrs. Shailaja Chandra, Former Chief Secretary, Delhi and Mr. BS Sajwan, former Expert Member, NGT. The NGT also directed the State to constitute a full time Monitoring Committee at State level and accordingly, the State of Haryana constituted to a full time Monitoring Committee comprising of Sh. PKMK Das, Sr. Scientist, HSPCB (now retired) and Sh. YK Garg, Superintending Engineer, PHED (Retd.). The Monitoring Committee has been given the mandate to take stock of all the actions taken so far and proposed action plan to control pollution in river Yamuna. The Monitoring Committee is also entrusted to ensure the requisite level of standards of water at the entry and exit points of river Yamuna as well as in the drains joining river Yamuna. The Monitoring Committee has been advised to submit its first interim report by 31.12.2018. The matter shall be heard in January, 2019 by the Hon'ble NGT.

The State of Haryana took a series of steps to religiously implement the directions of Hon'ble NGT. Chief Secretary of Haryana held a meeting with the Monitoring Committee of Yamuna, appointed by the Tribunal to discuss the issues and finalization of the strategy for implementation of the directions of the Tribunal. As advised by the Monitoring Committee, the State agreed to revisit the earlier plan and update the timelines for various intended activities and submit the final action plan by 30.11.2018. Accordingly a series of meetings were held at the level of Chief Secretary of Government of Haryana and other senior officials with the administrative Secretaries and senior officials of various stakeholder Departments including Irrigation, Public Health, Urban Local Bodies, Environment, State Pollution Control Board and Town and Country Planning. Accordingly, the following plan has been finalized at State level, including short and long term actions, with specific time frames, as identified by the agencies concerned.

2. Measurement of Flow Rate and Quality of Drains

The details of flow of water in the eleven drains outfalling in river Yamuna and the quality of water, as measured by Irrigation Department and HSPCB are given as below.

Statement of flow and quality of drains outfalling directly/indirectly into river Yamuna

Sr. No.	Name of drain	Flow (MLD) Sept., 2017	Flow (MLD) March, 2018	Flow (MLD) July, 2018	Flow (MLD) Aug, 2018	Flow (MLD) Sept. 2018	Flow (MLD) Oct. 2018	Catchment Area	BOD (mg/l) range in 2018
1	Dhanura Escape	98	110	53	186	123	101.2	Jagadhri & Yamuna Nagar	40-150
2	Drain No.2	62	113	245	118.73	121.25	2092	Nissing, Gharaunda, Assand & Panipat	50-360
3	Drain No.6	49	120	210	160	175	153	Samalkha Ganur & Sonapat	60-110
4	Mungeshpur	36.75	36.75	390	50	784	833	Bahadurgarh & Jhajjar towns	70-140
5	KCB Drain	135	135	339	0	2083	1837	Bahadurgarh & Jhajjar towns	40-110
6	Drain No.8	196	0	0	0	1323	2590	Sonapat, Rohtak, Sampla, Kalanur, Beri & Jhajjar	36-80
7	Leg I	11.15	-	12.5	24.5	34	23	Gurugram Sectors(22), Colonies (Udhyog Vihar), and local industries	80
8	Leg II	108	-	110	9.18	92	51	Gurugram Sectors, Colonies, and local industries	85
9	Leg III	334	-	336	165.27	411	409	Gurugram Sectors, Colonies, and local industries	85
10	Budhiya Nalah	50	122	55	60	55	46	Faridabad town	75-105
11	Guanchi	20	171	43.2	52	49	39	Palwal, Hatin, Hasanpur, Hodal, Taoru, Ferozpur. Jhirka, Punhana & Nuh	35-64

3. Identification of sources of pollution having out fall in drains.

Irrigation Department, after a detailed field survey, has identified the pollution sources which are releasing effluent into main drains and the list of such sources has been given in the table below. Irrigation Department has also been directed to make further surveys periodically to identify additional points which will be added to this existing list. The Special Environment Surveillance Task Force, constituted at District level has been directed to verify these points on ground and to submit a time bound action plan to control the pollution or altogether stop the discharge of the effluent from these points.

Yamuna Nagar

Sr. No	Point of pouring waste water in drain RD	Name of Drain	Source of untreated effluent and it relates to which department	Latitude	Longitude
1	Dhanoura Escape just Downstream its Head regulator	WJC MLL	Treated effluent of STP'S of industries of Yamuna Nagar & Jagadhri Town and domestic effluent by PHED Deptt.	29.9828	77.1175
2	3434/L		Gram Panchayat Dadupur	30.2085	77.3871
3	4016/L		-do-	30.2068	77.3867
4	9380/L		Gram Panchayat Kishanpura Majra	30.1932	77.3797
5	9380/R		Gram Panchayat Kharwan	30.1941	77.3786
6	15427/L		Gram Panchayat Fatehgarh	30.1775	77.3743
7	26600/R Inlet		Municipal Corporation Yamuna Nagar Buria+Dyalgarh	30.1488	77.3646
8	Bridge RD 32600/R U/S D/S		Gram Panchayat Amadalpur	30.1334	77.3688
9	39800/L Inlet		Municipal Corporation Yamuna Nagar Naya Gaon	30.127	77.3506
10	Bridge RD 45500/R MLL D/S		Municipal Corporation Yamuna Nagar Darwa Majri	30.1271	77.3338
11	Inlet RD 55700 Nallah		Municipal Corporation Yamuna Nagar Azad Nagar, Munda Majra Yamuna Nagar	30.1243	77.3044
12	55700/R Nallah		Municipal Corporation Yamuna Nagar Khalsa College Yamuna Nagar	30.1239	77.2988
13	56800/L		Disposal of Sewerage Plant, Yamuna Nagar	30.1226	77.3011
14	58231/R		Municipal Corporation Yamuna Nagar Sewerage Yamuna Nagar	30.1231	77.2969
15	60500/R		Municipal Corporation Yamuna Nagar Sewerage	30.1203	77.2935
16	62050/R		Municipal Corporation Yamuna Nagar Sewerage	30.1141	77.2896
17	68700/R		Municipal Corporation Yamuna	30.1126	77.271

Sr. No	Point of pouring waste water in drain RD	Name of Drain	Source of untreated effluent and it relates to which department	Latitude	Longitude
			Nagar Hamida		
18	124500/R		Municipal Committee Radaur Disposal sewerage of Radaur	30.0277	77.154
Karnal					
1	50/L	Dhanura Escape	Industrial area of Yamunanagar Town through Ditch Drain under the jurisdiction of HSPCB Distt. Yamuna Nagar	29 ⁰ 59'6"	77 ⁰ 07'17.7"
2	55780/R	Panipat Drain	STP & Old Industrial Area of Panipat City	29 ⁰ 24'08.14"	76 ⁰ 57'47.56"
3	51381/L	Panipat Drain	From Sump near Devi Mandir	29 ⁰ 23'56.38"	76 ⁰ 58'31.54"
4	40730/R	Panipat Drain	Direct fall of HUDA, Sector 11 &12	29 ⁰ 23'05.47"	76 ⁰ 59'15.39"
5	21000/L	Panipat Drain	STP Siwah	29 ⁰ 20'08.49"	76 ⁰ 59'33.98"
6	19700/L	Panipat Drain	Old STP Siwah	29 ⁰ 20'06.44"	76 ⁰ 59'35.53"
7	27200/L	Nohra Drain	STP Binjhol	29 ⁰ 22'11.86"	76 ⁰ 56'26.86"
Sonipat					
1	139000	Main Drain No.2	Untreated Sewage/Effluent of Panipat Drain	29 ⁰ 19'52.43"	77 ⁰ 03'02.78"
2	3750/L	Main Drain No.6	Tulip Grand, Sec. 35	28.922529	77.061709
3	4600/L		Galxy Leathers	28.92316	77.061368
4	15700/R		Hare Krishna Trading Co.	28.927115	77.05565
5	15750/R		Maha Shakti Trading Co.	28.950028	77.046231
6	15950/R		A.D. Over Seas	28.951576	77.04232
7	16000/R		Shri Ram Udyog (finolex pipe)	28.95156	77.04284
8	16100/R		Fortis International School	28.951733	77.042768
9	16300/R		Yogi Trading Company	28.95182	77.042701
10	16500/R		Public Health Engineering Department	28.953826	77.042397
11	16510		P.H.E Nala	28.953777	77.042468
12	17800		P.H.E Nala	28.95582	77.042903
13	27500/R		Public Health Engineering Department	28.974967	77.040083
14	27500R&L		Public Health Engineering Department	28.97494	77.040059

Sr. No	Point of pouring waste water in drain RD	Name of Drain	Source of untreated effluent and it relates to which department	Latitude	Longitude	
15	29000/R		Public Health Engineering Department	28.974993	77.037448	
16	33750/R		Sewer	28.991941	77.028755	
17	35015/R		Public Health Engineering Department	28.99351	77.028059	
18	35690/R&L		Public Health Engineering Department	28.996003	77.02524	
19	35750/R		Haryana Roadways	28.996868	77.024613	
20	35880/R		Haryana Roadways	28.997237	77.02345	
21	36380/R		Haryana Roadways	28.998467	77.02243	
22	36600/R		Public Health Engineering Department	28.99869	77.023065	
23	37000/R		P.H.E Nala	28.999148	77.022918	
24	37020/L		Public Health Engineering Department	28.999453	77.023023	
25..	37100		P.H.E Tube Well	28.999258	77.023	
26	37500/R		Public Health Engineering Department	29.000047	77.0230094	
27	37530/R		Public Health Engineering Department	29.000283	77.023173	
28	38000/R		Public Health Engineering Department	29.00191	77.0241	
29	38400		P.H.E Tube Well	29.0033	77.0247	
30	38500/L		Public Health Engineering Department	29.003766	77.025137	
31	138000/R		Putting untreated sewage effluent by Haryana Organic Pvt. Ltd.	29.217356	76.99598	
32	143500/R		Putting untreated sewage effluent by Mr. Jai Bhagwan.	29.222887	77.004998	
33	84700/L		Putting untreated sewage effluent by Senior Manager, HSIIDC, Barhi, Sonipat.	29.0979611	76.9957971	
34	142300/R		Putting untreated sewage effluent by VSP Enterprises Pvt. Ltd., Samalkha.	29.224175	77.002707	
Faridabad						
1	RD-17650/R		Sehatpur Drain	Putting untreated effluent by Private Persons.	28 ° 29'03"N	77 ° 19'17"E
2	RD-17000/L				28 ° 29'01"N	77 ° 19'20"E
3	RD-15200/R				28° 28' 51" N	77 ° 19' 45" E

Sr. No	Point of pouring waste water in drain RD	Name of Drain	Source of untreated effluent and it relates to which department	Latitude	Longitude
4	RD-13200/L			28 ° 28' 29" N	77 ° 20'10" E
5	RD-14800/R			28 ° 28' 43" N	77 ° 19' 58" E
6	RD-11000/L			28 ° 28' 19" N	77 ° 20' 17" E
7	RD-12000/R			28 ° 28' 24" N	77 ° 20' 11" E
8	RD-16400/R			28 ° 28' 55" N	77 ° 19' 42" E
9	RD-16800/R			28 ° 28' 58" N	77 ° 19' 37" E
10	RD-7000/R	Faridabad	Putting untreated effluent by Private Persons.	28 ° 26' 20" N	77 ° 19' 53" E
11	RD-8000/R			28 ° 26' 21" N	77 ° 20' 09" E
12	RD-8400/R			28 ° 26' 21" N	77 ° 20' 14" E
13	RD-8500/R			28 ° 26'22" N	77 ° 20' 12" E
14	RD-8700/R			28 ° 26' 22" N	77 ° 20' 19" E
15	RD-9200/R			28 ° 26'22" N	77 ° 20' 20" E
16	RD-47500/L			28 ° 27'22" N	77 ° 19' 19" E
17	RD-47000/L&R			28 ° 27' 20" N	77 ° 19' 35" E
18	RD-47300/R			28 ° 27'14" N	77 ° 19' 51" E
19	RD-47400/R	Buriya Nallah	Putting untreated effluent by Private Persons.	28 ° 27' 23" N	77 ° 19' 21" E
20	RD-46850/L			28 ° 27' 23" N	77 ° 19' 37" E
21	RD-45050/L			28 ° 27' 16" N	77 ° 19' 50" E
22	RD-45000/L			28 ° 27' 15" N	77 ° 19' 52" E
23	RD-112700	Gaunchi Main Drain	Treated effluent of Ashoka Distilers & Chemicals Pvt. Ltd.	28 ° 27' 21" N	77 ° 19' 30" E
Gohana (Sonipat)					
1	8700	Ishapur Kheri Link Drain	Sugar Mill Ahulana	29.112222 2	76.643055 5
2	1670	Drain No. 8	Public Health Department	29.13515	76.706562
3	5000	Bijawa, Chidana, Mudlana L/Dr	Riba Textile	29.208096 3	76.779789 7

Sr. No	Point of pouring waste water in drain RD	Name of Drain	Source of untreated effluent and it relates to which department	Latitude	Longitude
Rohtak					
1	35950	Rohtak Link Drain ourfall into KCB Drain at RD 139000	Treated effluent of STP'S of industries of Yamuna Nagar & Jagadhri Town and domestic effluent by PHED Deptt.	28.879459	76.29087
2	19000	Kanheli Link Drain outfall into Drain No. 8 at RD 138208	Untreated effluent of Municipal Corporation Rohtak and HUDA Rohtak fall at ending point of Kanheli Link Drain.	28.866243	76.591132
3	135000-L	Drain No. 8	Treated effluent of Municipal Corportai on Rohtak and HUDA Rohtak fall at RD 135000-L Drain No. 8.	28.881675	76.553931
Jhajjar					
1	Out fall drain No. 8. K.M. 29.945	STP Channel	TREATED WATER OF Gurugram by HUDA Department, Gurugram	28° 30' 17"	76° 46' 19"
2	Out fall drain No.8.K.M.18.450-L	Jhajjar outfall link drain	Jhajjar town treated water by P.H Department, Jhajjar	28°33'41"	76°42'22"
Bahadurgarh (Jhajjar)					
1	31800-R	Sarai Aurangabad Kassar link Drain out fall into K.C.B. drain at RD 8104-L	H.S.I.I.D. Bahadurgarh	28.689613 3	76.884111 2

4. Regular monitoring of industries by SESTF and action against violators

The State Government has already constituted Special Environment Surveillance Task Force (SESTF) at District level, with a nominee of Deputy Commissioner of the concerned District as Chairman and Nominees of Superintendent of Police and District Judge and Regional Officer of HSPCB as Members of the task force. This SESTF has been mandated to identify persons responsible for violation of law and norms relating to pollution in rivers and to conduct surprise inspections of polluting sources.

5. Prevention of pollution of river Yamuna due to mixing of water of drain no. 06 and Diversion Drain no. 08.

As per the discussion held by the State team headed by Chief Secretary with the Monitoring Committee Members on 23.10.2018, a decision was to be taken for completion of measures to plug breaches in bund separating drain 6 and drain 8 for which DJB has agreed to fund the State of Haryana. This was discussed at the meeting of Chief Secretary held on 22.11.2018 and the Irrigation Department was advised to consider the issue and prepare an action plan for strengthening the common wall between these two drains to prevent mixing of the water.

6. Dredging & de-silting of drains in the cities.

As per the directions of Hon'ble NGT, Urban Local Bodies Department and Irrigation Department have been directed to regularly conduct the exercise of de-silting and repairs of drains under their jurisdiction and the details on its compliance will be reviewed in its meeting and at State Level by the Chief Secretary. ULB Department has also been directed to prepare a detailed plan for the process along with the financial requirements and funding sources.

7. Providing Sewerage in un-sewered area of unapproved colonies

There are many unapproved areas in most of the towns where sewage has not been tapped. The task of tapping and treat the same before its outfall into the drain/ river, the ULBD was directed to provide a time bound plan and it has prepared the following plan with specific time frames for specific towns of Haryana, as below.

Sr. No.	Name of MC	Date of which compliance shall be made
1	Gurugram	31.3.2019
2	Rohtak	31.12.2019
3	Sonepat	31.12.2020
4	Yamuna Nagar	31.12.2019
5	karnal	31.12.2019
6	Panipat	31.12.2019
7	Gohana	31.12.2019
8	Bahadurgarh	31.12.2019
9	Palwal	31.12.2019
10	Hodal	31.12.2019

11	Sohna	31.12.2019
12	Taraori	31.12.2019
13	Nilokheri	31.12.2019
14	Gharaunda	31.12.2019
15	Assandh	31.12.2019
16	Indri	31.12.2019
17	Nissing	31.12.2019
18	Samalkha	31.12.2019
19	Meham	31.12.2019
20	kalanaur	31.12.2019
21	Sampla	31.12.2019
22	Gannaur	31.12.2019
23	Kharkhoda	31.12.2019
24	Jhajjar	31.12.2019
25	Beri	31.12.2019
26	Hathin	31.12.2019
27	Nuh	31.12.2019
28	Ferozpur Jhirkha	31.12.2019
29	Taoru	31.12.2019
30	Punhana	31.12.2019
31	Farukh Nagar	31.12.2019

8. Plan for laying of sewerage in approved colonies along river Yamuna

The sewerage network is being laid in the towns to carry the sewage to STPs for treatment. The status and the action plan alongwith target date is given in the table.

Plan of PHED and ULBD for laying of sewerage.

Sr. No.	Name of town	Deptt.	%age sewerage area	% age unsewered area		Latest status
				Approved	Unapproved	
1.	Assandh	PHED	85	5	10	Work will be completed by 30.04.2019.
2.	Bahadurgarh	ULB	88	12	-	Work will be completed by March 2020
3.	Beri	PHED	77	23	-	Existing sewer of Beri town is not functional. The work for laying balance sewer in approved area will be taken up when the existing system is made completely functional. The efforts for making existing sewer functional are in progress and shall be completed upto 31.12.2020.
4.	Gohana	PHED	87	08	5	The work will be completed by 30.04.2020.
5.	Indri	PHED	90	-	10	Work will be completed by 30.06.2019.
6.	Jagadhari	ULBD	70	05	25	Work will be completed by March 2020
7.	Nilokheri	PHED	80	-	20	Work will be completed by 30.06.2019.
8.	Palwal	ULBD	80	10	10	Work will be completed by March 2020
9.	Panipat	ULBD	80	20	--	Work will be completed by March 2020
10.	Rohtak	ULBD	80	12	8	Work will be completed by March 2020
11.	Ferojpur Jhirka	PHED	80	20	-	The work will be completed by 31.12.2020.
12.	Taoru	PHED	80	20	-	The work will be completed by 31.03.2020.
13.	Sonipat	ULBD	85	10	5	Work has been started and likely to be completed by Dec 2019
14.	Yamuna Nagar	ULB	85	05	10	Work will be completed by March 2020
15.	Nuh	PHED	88	12	-	The work will be completed by 31.03.2020.
16.	Punhana	PHED	82	18	-	The work will be completed by 30.04.2020.
17.	Gannaur	PHED	95	-	5	Work completed
18.	Gharaunda	PHED	80	-	20	Sewer already laid in approved areas.
19.	Hodal	PHED	83	07	10	Work will be completed by 31.12.2019.
20.	Jhajjar	PHED	80	20	-	The work will be completed by 31.03.2020.
21.	Kalanaur	PHED	87	08	5	The work is will be completed by 31.03.2020.
22.	Karnal	PHED	82	3	15	Work for laying of sewer lines in the balance area of Karnal Town will be completed by 31.12.2018.

Sr. No.	Name of town	Deptt.	%age sewered area	% age unsewered area		Latest status
				Approved	Unapproved	
23.	Kharkhoda	PHED	80	15	5	Work for laying of sewer lines in the balance area of Kharkhoda Town will be completed by 31.12.2020.
24.	Ladwa	PHED	74	08	18	Work is in progress and will be completed by 30.06.2019.
25.	Samalkha	PHED	88	12	-	Balance work will be completed by 31.03.2019
26.	Sampla	PHED	80	10	10	The work will be completed by 31.03.2020.
27.	Sohna	PHED	87	13	-	The work will be completed by 31.03.2020.
28.	Taraori	PHED	80	10	10	Work will be completed by 31.03.2019.
29.	Hathin	PHED	80	20	-	Work is in progress and will be completed by 31.03.2019.
30.	Hassanpur	PHED	80	20	-	The work be completed by 31.03.2020.

Plan of Municipal Corporation, Faridabad for laying of sewerage network

- I)** Along the River Yamuna, there are 3 villages namely: BasantPur, Ismail Pur, AgwanPur and some adjoining colonies under the jurisdiction of Municipal Corporation Faridabad. The work for providing sewerage system in this area has been allocated under AMRUT scheme and the likely date of its completion is 31st December 2020. Work orders have been given and survey work is under progress.
- ii)** The New Industrial town Faridabad came into existence in the year 1950 at the time of partition of India and Pakistan. The sewerage system of this area is existing ever since then and no up-gradation has taken place till date. Keeping in view the present demand, Hon'ble CM Haryana made an announcement for revamping of the sewerage system. Therefore, an EOI was invited for preparing DPR for this purpose. The tentative cost of this work is **INR 100 crores**.
- iii)** The trunk sewer line from Sector-18 disposal to Mirzapur STP was laid more than 40 years ago and its life span has been expired, hence its revamping or relaying is required for which a financial outlay of INR 55 crores is required . An EOI is being called for preparation of DPR and the likely date of completion of work is 31st December 2020 subject to allotment of funds.
- IV)** The work of providing sewerage system in un-sewered area of 66 approved colonies which were declared as civic amenities deficit area in the year 2014 is in progress under AMRUT scheme. The detail of the area is given below:-

List of Authorised Colonies under MCF Limits

Sr No	Name Of Colony	Total Area (Acres)	Proposed Landuse Zone in Development Plan	Name of Revenue Estate	Location of the Colony
NIT Zone					
1.	Ankhir Village EXT.	13.7	Open Space (Regional - Recreational)	Ankhir	Recreational Zone
2.	DabuaColony Extension-II	106.5	Residential	Dabua	Sector-49
3.	DabuaColony Extension-1 A&B	34.4	Residential	Gajipur	Sector-49
4.	Extended Abadi Of village Badkhal Part-I Extended Abadi Of village Badkhal Part-II	82.2 5.8	Open Space (Regional - Recreational)	Badkhal	Recreational Zone
5.	Extended Abadi Of Village Saran	7.85	Residential	Saran	Sector-50
6.	Gazipur Colony	36.8	Residential	Gajipur	Sector-49
7.	Nangla Enclave Part-II	122.8	Residential	NanglaGujran	Sector-52
8.	Navada Extension	4.9	Residential	Navada	Sector-49
9.	S.G.M Nagar Block-P	15	Residential	Badkhal	Sector-21D
10.	S.G.M Nagar F,G,H Block	31.6	Residential	Fatehpur Chandela, Badkhal	Sector-48
OLD Faridabad ZONE					
11.	Ajronda Extended Abadi	3.1	Residential	Ajronda	Sector-15A
12.	Anangpur Dairy	15	Residential	Anangpur	Sector-37
13.	Bharat Colony	209	Residential	Baselwa, Wazirpur	Sector-87
14.	Bhoor Colony extension	18	Residential	Faridabad	Sector-18
15.	Baselwa Colony Extension.	14.6	Residential	Faridabad	Sector-18
16.	Budena Extended Aabadi	21.3	Residential	Budena	Sector-86
17.	Chhajjan Nagar Part –I Chhajjan Nagar Part-II ChhajjanNagarPart-III	30.1 1.7 2.5	Residential	Palla	Sector-91
18.	Deepawali Enclave	19.2	Residential	Ismilpur	Sector-91
19.	Hari Nagar Colony	6.7	Residential	Baselva	Sector-87
20.	Indra Complex Extension Muvai Road Part- I Part-II Part- III Part- IV Part - V	2 11.5 7.8 0.5 12.3		Muvai, Faridabad, Baselwa	Sector-87
21.	MewlaMaharajpur Extension	12.1	Residential	Mewla Maharaj - pur	Sector-46
22.	New Saiyadwara	3.3	Residential	Faridabad	Sector-18
23	Nikhil Enclave	17	Residential	Ismailpur, Agvanpur	Sector-91

Sr No	Name Of Colony	Total Area (Acres)	Proposed Landuse Zone in Development Plan	Name of Revenue Estate	Location of the Colony
24	Numberdar Colony	25.7	Residential	Sehatpur	Sector-91
25	Om Enclave	38.8	Residential	Ismilpur	Sector-91
26	PanchsheelEnclave	46	Residential	Ismilpur	Sector-91
27	Pathwari Colony	5.8	Residential	Faridabad	Sector-18
28	Power House Colony	7.5	Residential	Palla	Sector-34
29	Puran Enclave	0.4	Residential	Faridabad	Sector-18
30.	Rao Sultan Singh Colony	2.4	Residential	Sarai Khwaza Palla	Sector-36
31.	Saraswati Colony Part-I Saraswati Colony Part-II	49.7 5.45	Residential	Sehatpur	Sector-91
32	Shiv Colony	56.5	Residential	Palla	Sector-91
33.	Shiv Durga Vihar	86.3	Residential	Lakkarpur	Sector-39
34.	Shyam Colony	48.54	Residential	Sehatpur	Sector-91
35	Surpanch Colony	1.9	Commercial/ Institutional	Ajronda	Sector-20 A
36	Surya Colony	42.5	Residential	Sehatpur	Sector-91
37.	Suryavihar	84.4	Residential	Sehatpur Agwanpur	Sector-91
38.	Yadav Colony	11.2	Residential	Sarai Khawaja, Palla	Sector-35
39.	Chetram Colony	0.76	Residential	Lakkarpur	Sector-39
40.	Sant Nagar	28.9	Institutional	Daultabad, Fatehpur - Chandila	Sector-20A
	Ballabgarh ZONE				
41.	Krishna Colony	6.7	Residential	RanheraKh era	Sector-56A
42.	Adarsh Nagar- I	18.81	Residential	Uncha Gaon	Sector-63
43.	Adarsh Nagar- II Part – I Part-II Part-III	32.56 2.26 1.1	Residential	Uncha Gaon	Sector-63
44.	Bhagat Singh Colony	11.317	Residential	Sihi	Sector-4
45.	Navlu Colony	0.150	Commercial	Ballabgarh	Sector-26
46.	Sanjay Colony Extn.	1.725	Industrial	Jharsetaly	Sector-59
47.	Bhikam ColonyExtn.	7.736	Residential	Ballabgarh	Sector-1
48.	Bhatia colony Extn.	5.455	Residential	Ballabgarh	Sector-1
49.	Ajji Colony	3.513	Residential	RanehraKh era	Sector-1
50	Arya Nagar extn	22.484	Residential	Unchagaon	Sector-63
51	Jain Colony	3.728	Residential	Ballabgarh	Sector-1
52	Mukesh Colony Extn.	1.946	Residential	Ballabgarh	Sector-1
53	Vijay Nagar	13.020	Residential		Sector-63
54	Jiwan Nagar	61.218	Residential	Gaunchhi	Sector-53
55	Hari Vihar	66.411	Residential	Ballabgarh	Sector-63
56	Kundan Colony Extn.	3.005	Residential	Unchagaon	Sector-63
57	Mahavir Colony	5.694	Residential	Unchagaon	Sector-63
58	Raja Nahar Singh Colony	32.054	Residential	Sihi	Sector-4
59	Shiv Colony Extn.	0.279	Residential	Ballabgarh	Sector-4

Sr No	Name Of Colony	Total Area (Acres)	Proposed Landuse Zone in Development Plan	Name of Revenue Estate	Location of the Colony
60	Shyam Colony Extn.	6.937	Residential	Ballabgarh	Sector-1
61.	Subhash Nagar	16.594	Residential	Ballabgarh	Sector-1
62.	Subedar Colony	18.884	Residential	Unchagaon	Sector-63
63.	Tirkha Colony	23.886	Residential	Sihi	Sector-2
64.	Rajiv Colony	79.164	Residential / Industrial	Jharsaintly, Gaunchhi, RanehraKh era	Sector-59
65.	Extended Abadi Gaunchhi	3.03	Residential	Gaunchhi	Sector-54
66	RAO Raghuvir colony	4.032	Residential	Ballabgarh	Sector-63
	Total	1862.179			

9. Plan for Leg-I, Leg-II and Leg-III (Badshahpur Drain) of Gurugram.

The Leg-1, Leg-II and Leg-III (Badshahpur Drain) drains carry the effluent of Gurugram and have out fall in Nazafgarh Drain which ultimately joins river Yamuna in territory of Delhi. The sources of pollution having out fall in the drains have been indentified and the time bound action plan for each point is given in the table.

ACTION PLAN FOR CONTROLLING AND TREATMENT OF DISCHARGE IN LEG NO. I

Sr. No.	Location where waste water falls into Leg No.-I	Discharge in MLD	Connection	Name of Deptt.	Proposed action plan with date	Action Plan
1	At Cyber Park near Underpass towards Sikanderpur	2.00	1 No. connection of 900mm	GMDA	30.11.18	Connection disconnected and discharge is diverted.
2	Near Rapid Metro Pillar 92 Near NH-8 Culvert	2.70	2 Nos. connection of 900mm and 300mm i/d	GMDA	30.11.18	Connection disconnected and discharge is diverted.
3	Near Furniture Market, Mehrauli Road, Sikanderpur	1.50	2 Nos. connection of 900mm and 300mm i/d	GMDA	30.11.18	Connection disconnected and discharge is diverted.
4	At Sikanderpur Village	0.30	1 No. connection of 300mm i/d	MCG	31.05.19	Chief Engineer MCG submitted that the diversion of sewerage from SWD to Sewerage System will be completed by 31 st January 2019
5	Near Railway Culvert No. 47, Palam Vihar	2.40	1 No. connection of size 900mm x 1200mm	MCG	31.05.19	EEWSS-II MCG submitted that estimate for laying of sewer line amounting to Rs 225.85 lacs has been submitted for approval and work will be started post tendering process& work is likely to be completed by 31.05.2019.
6	Near New Cambridge Public School, Choma Road, New Palam Vihar	2.00	1 No. connection of size 600mm x 900mm	MCG	31.05.19	
7	Near Mother Dairy, Palam Vihar	0.70	1 No. connection of size 600mm x 900mm	MCG	31.05.19	

Sr. No.	Location where waste water falls into Leg No.-I	Discharge in MLD	Connection	Name of Deptt.	Proposed action plan with date	Action Plan
8	M/s Sea Hawk, Udyog Vihar, Sec-18	0.50	1 No. connection of 100mm i/d	MCG	Achieved	EEWSS-II submitted that both the connections in sector 18 have been disconnected.
9	Nagarro Building, Plot No. 36, Udyog Vihar, Sec-18	0.70	1 No. connection of 200mm i/d	MCG	Achieved	
10	Green Belt near NH-8 Udyog Vihar	1.50	1 No. connection of 300mm i/d	HSI IDC	Achieved	With respect to Udyog Vihar area under the jurisdiction of HSI IDC, AGM, HSI IDC submitted that the discharge from the industries is connected to the HUDA master sewer line. In addition, these two connections identified during the joint survey have been disconnected and compliance has been made.
11	Rao market Udyog Vihar, Sec-18	0.50	1 No. connection of 100mm i/d	HSI IDC	Achieved	
12	Locations under Box Type Storm Water Drain	2.00	Untraced connections		Efforts are being made by all departments to trace the connections	
	Total	16.80				

ACTION PLAN FOR CONTROLLING AND TREATMENT OF DISCHARGE IN LEG NO. II

Sr. No.	Location where waste water falls into leg No.II	Discharge (MLD)	Connection	Name of Deptt.	Proposed action plan with date	Action Plan
1	DLF phase-IV in-front of H. No. 6510	1.50	1 No. connection	GMDA	30.11.18	Connection disconnected and discharge is diverted.
2	Sukhrali & MDI	2.00	1 No. connection of 450 mm i/d	MCG	31.05.19	EEWSS-II MCG reported that Post identification of these points, an estimate amounting to Rs 148.38 lacs for making the connections into the master sewer line has been submitted for approval and work will be started post tendering
3	M. R Motor at Mata Road	0.50	2 Nos. connection of 150 mm i/d	MCG	31.05.19	
4	Plot No.999, Mata Road Near Kataria Chowk	0.50	2 Nos. connection of 100 mm & 150 mm i/d	MCG	31.05.19	
5	Invitation Garden at	0.25	1 No. connection of	MCG	31.05.19	

Sr. No.	Location where waste water falls into leg No.II	Discharge (MLD)	Connection	Name of Deptt.	Proposed action plan with date	Action Plan
	Mata Road		200 mm i/d			process. Chairman emphasised that work be carried out on urgent basis and timelines against this connections be fixed judiciously and work be completed by 31st May 2 019. Chief engineer MCG directed EEWSS-II to invite tenders of the said work in such a way that multiple agencies are engaged to complete the work at the earliest.
6	Near Mata Temple near Village Gurugram	0.25	1 No.	MCG	31.05.19	
7	Satija Steel near petrol pump	0.01	1 No. connection of 150 mm i/d	MCG	31.05.19	
8	Akshi Sweets near petrol pump	0.01	1 No. connection of 150 mm i/d	MCG	31.05.19	
9	Near GAV Academy Gate (Sheetla Colon)	2.00	1 No. Connection	MCG	31.05.19	
10	Pet Zone Mata road	0.10	2 Nos. connection of 100 mm i/d	MCG	31.05.19	
11	Prince Vatika Mata Road	0.10	1 No. connection of 100 mm i/d	MCG	31.05.19	
12	Dream Garden	0.10	2 Nos. connection of 100 mm i/d	MCG	31.05.19	
13	Shop No.28 at Mata Road	0.01	1 No. connection of 200 mm i/d	MCG	31.05.19	
14	Shop No. 18 & 19	0.01	1 No. connection of 200 mm i/d	MCG	31.05.19	
15	Near Sector-5 Chowk	1.00	1 No. connection of 200 mm i/d	MCG	31.05.19	
16	Near Sheetla Clinic	2.00	1 No. connection of 300 mm i/d	MCG	31.05.19	
17	Tee Junction carrier and master SWD opposite Petrol Pump	2.00	Carrier Drain	MCG	31.05.19	
18	Bhimgarh Kheri	1.20	2 Nos. connection of 250 mm i/d	MCG	31.05.19	
19	Palam Vihar C-2 Block	3.00	1 No. connection	MCG	31.05.19	
20	Near Palam Vihar	0.5	1 No. connection of 200 mm i/d	MCG	31.05.19	

Sr. No.	Location where waste water falls into leg No.II	Discharge (MLD)	Connection	Name of Deptt.	Proposed action plan with date	Action Plan
21	Sarai Alawardi	0.6	1 No. connection of 300 mm i/d	MCG	30.06.19	Chief engineer MCG informed that the work of construction of 1MLD STP at Sarai Alawardi is in progress and will be completed on top priority by 30 th June 2019
22	Dharampur Village	0.5	1 No. connection	Panchayat Deptt		Chief engineer GMDA shall call the representative from Panchayat Raj Deptt. during the next scheduled meeting of Coordination Committee on sewerage system and review the action plan with respect to this point
23	Locations under Box Type Storm Water Drain	5.00	Untraced connections		Efforts are being made by all departments to trace the connections	
Total		23.14				

ACTION PLAN FOR CONTROLLING AND TREATMENT OF DISCHARGE IN LEG NO. III

Sr. No.	Location where waste water falls into leg No. III	Discharge (MLD)	Connection	Name of Deptt.	Proposed action plan with date	Action Plan
1	Vatika Chowk, Badshahpur	7.50	-	MCG	31.12.2018	Chief Engineer, Municipal Corporation, Gurugram informed that work for trenchless connection of 900 mm dia to master sewer line has been awarded and permission is being sought from NHA to make the connection. Chief engineer GMDA assured their assistance for pursuing the matter with NHA. The work is likely to be completed by February, 2019.
2	Village Tikri		1 no.	MCG/GMDA		Connection disconnected and discharge is diverted.
3	Industrial	0	-	RO		AGM HSIIDC pointed out that

Sr. No.	Location where waste water falls into leg No. III	Discharge (MLD)	Connection	Name of Deptt.	Proposed action plan with date	Action Plan
	discharge of Industries (Setup through C L U) Sector-34 and adjoining area (RO, HSPCB)			HSPCB		HSI IDC has no role in the development as well as maintenance of Sec 34. The concerned regional officer HSPCB has been directed to conduct a survey and collect samples from the industries and confirm within 15 days whether the industries in the area are complying with the norms or not. Chief Engineer MCG informed that the sector has now been taken over by MCG and requisite action will be taken jointly by MCG and HSPCB based on the report submitted by RO HSPCB by 31.12.2018.
4	Naharpur Roopa & unapproved area Rajiv Colony, Nitin Vihar, Khandsa Enclave etc.	4.00	-	MCG	31.03.2018	Chief Engineer MCG informed to the participants that work has been awarded for making the connection into the master sewer line and permission has been sought from NHAI to make the connection at Hero Honda Chowk. EEWSS, III&IV MCG has been directed to pursue the matter with NHAI and get the connection done at the earliest by 30 November 2018.
5	Discharge through RCC Drain of MCG Coming from Anaj Mandi to culvert at NH-8/ Mohammadpur Jharsa / Narsinghpur	2.00	-	MCG	30.09.2018	EEWSS-I, MCG submitted that the estimate for construction of 2MLD STP AT Mohammadpur has been accorded administrative approval by the Government, however, land for the same has not been transferred by HSI IDC. AGM HSI IDC informed the participants that proposal for transfer of land has been sent to the Government for approval. Target date of completion has been fixed at 31 st March 2020. Chief engineer MCG directed that tender be floated for the said work in anticipation of the approval of transfer of land from HSI IDC.
6	RCC Drain of MCG Village Khandsa	2.00	-	MCG	30.09.2018	EEWSS-I MCG submitted that the estimate for construction of 2MLD STP at Khandsa has been accorded administrative approval by the government,

Sr. No.	Location where waste water falls into leg No. III	Discharge (MLD)	Connection	Name of Deptt.	Proposed action plan with date	Action Plan
						however, land for the same has not been transferred by HSIIDC. AGM HSIIDC informed the participants that proposal for transfer of land has been sent to the government for approval. Target date of completion has been fixed at 31 st March, 2020. Chief Engineer MCG directed that tender be floated for the said work in anticipation of the approval of transfer of land from HSIIDC.
7	Industrial discharge of Industries (setup through CLU) flowing through kachcha drain merging into RCC Box drain near Plot No.756, Sector-37(RO, HSPCB)	0	-	RO HSPCB		Regional officer HSPCB informed the committee that there are 54 plating units in sector 37 and 113 other industrial units. A 90 KLD plant has been set up by Association of all the plating units, however, the efficiency of the unit is to be ascertained. Chairman, HSPCB directed the Regional Officer to collect the samples from the plant and to submit a report regarding the efficiency of the plant. Regional Officer, HSPCB (South) has also been directed to check the discharge from the other 113 industrial units for compliance as per NGT norms and the report be submitted regarding the same by 20th November 2018. Regional Officer HSPCB Ballabgarh also pointed out that the discharge from the commercial units in sector 29 be also got checked and HSVP shall take requisite action against the commercial units not complying with the norms as Sector 29 is still being maintained by HSVP.
8	Discharge coming from Village Gadauli through drain of MCG	1.35	-	MCG	30.06.2018	EEWSS-I MCG informed the committee that work of construction of 1 MLD STP at Gadauli Kalan is in progress under AMRUT scheme. Chairman emphasised on the fact that the work be expedited on ground so that compliance can be made at the earliest. The work is likely to be

Sr. No.	Location where waste water falls into leg No. III	Discharge (MLD)	Connection	Name of Deptt.	Proposed action plan with date	Action Plan
						completed by 30.04.2019.
9	Discharge from Village Dhankot	0.50	-	Rural Development and Panchayat Department	--	As no representative from the Department was present in the meeting, Chief Engineer GMDA has been requested to get in touch with Panchayati Raj Deptt. and invited in coordination committee meeting of GMDA to resolve the issue.
New Points						
10	Culvert of SPR Sector-57 (CGHS-1 Society)	2.00	1 No. connection of Carrier Drain	GMDA	31.03.19	Work allotted and likely to be completed by 31.03.2019.
11	Village Ghata	4.00	1 No. connection	MCG	30.06.19	EEWSS III&IV MCG informed that the work of construction of 2MLD STP at Ghata is in progress and will be completed on top priority by 30th June 2019
12	Wazirabad	2.00	1 No. connection of 300 mm i/d	MCG	30.06.19	EEWSS III&IV informed the committee that there is no discharge of sewerage into SWD at the location. Chief engineer GMDA opined that a joint inspection be again conducted on 21 st November 2018 to re-verify the same
13	Fazilpur Jharsa	1.50	1 No. connection of Carrier drain	MCG	21.11.18	
14	Village Islampur	4.00	3 Nos. connection of 200 mm 600mm, 300mm & 300mm i/d	MCG	30.04.19	EEWSS III&IV submitted that an estimate amounting to Rs. 52 lacs has been prepared for diversion of Sewer to the master line and work will be completed by 30 th April 2019
15	Sector- 33 & 34	4.00	5 Nos. connection of 150 mm i/d	MCG		Sh. Arun Garg, AGM, HSIIDC has reported that a CETP along-with sewerage system in Sec-33 & 34 has been proposed by HSIIDC but there is a court case on the land where CETP has been proposed. The diversion of sewage into sewerage system can be possible after decision

Sr. No.	Location where waste water falls into leg No. III	Discharge (MLD)	Connection	Name of Deptt.	Proposed action plan with date	Action Plan
						of Court Case and construction of CETP. The position of court case will be updated by 20.11.2018 The Chief Engineer GMDA and Chief Engineer MCG shall conduct a joint visit in Sec 34 within one week to propose a solution regarding the same.
16	Locations under Box Type Storm Water Drain	10.00	Untraced connections			Efforts are being made by all departments to trace the connections
17	STP Behrampur	170				The parameters of effluent are complying CPCB norms & hence no action is required.
18	STP Dhanwapur	168				
19	CETP IMT Manesar	55				
	Total	437.86				

10. Action Plan for STPs

The action plan for the STPs along river Yamuna is given in the table:-

S No.	Town	Existing/under construction/Proposed	Dept.	Capacity (in MLD)	Date of Commissioning/ Proposed date of completion
1. Dhanaura Escape					
1	Yamuna Nagar	Existing	PHED	25	March, 2001
2	Yamuna Nagar	Existing	PHED	10	March, 2000
3	Parwaloo Jagadhri	Existing	PHED	24	30.09.2018
4	Radaur Road Yamuna Nagar	Under Construction	PHED	20	30.6.2019
5	Baddi Majra, Yamuna Nagar	Under Construction	PHED	10	31.12.2018
2. Main Drain No. 2					
1	Sewah, Panipat	Existing	PHED	35	March, 2000
2	Sewah, Panipat	Existing	PHED	25	1.4.2016
3	Gharaunda	Existing	PHED	3	
4	Asandh	Existing	PHED	5	
5	Nissing	Existing	PHED	4	
6	Sec-19, Panipat	Existing	HSVP	30	01.11.2018
7	Sec-6, Panipat	Under Construction	HSVP	0.8	31.01.2019
8	Graunda	Under Construction	PHED	7	31.12.2018
9	Shiv Colony, Karnal	Under Construction	ULBD	8	31.12.2019
10	Phooshgarh, Karnal	Under Construction	ULBD	20	31.12.2019
11	Transport Nagar, Karnal	Under Construction	ULBD	50	31.12.2019
3. Drain No. 6					
1	Jattal Road, Panipat	Existing	PHED	10	March, 2000
2	Jattal Road, Panipat	Existing	PHED	20	1.4.2016
3	Samalkha	Existing	PHED	5	June, 2013
4	Kakroi Road, Sonapat	Existing	PHED	25	31.07.2017
5	Rathdana Road, Sonapat	Existing	PHED	30	March, 2003
6	Rajiv Gandhi Edu. City, Phase-I, Sonapat	Existing	HSVP	7.5	December, 2015.
7	Ganaur	Existing	PHED	7	1.1.2012
8	Sonapat	Proposed	HSVP	15	31.12.2022
4. Drains falling out in Najafgarh Drain (i) Drain No.8					
1	Gohana	Existing	PHED	8.3	2.7.2012
2	Gohana	Existing	PHED	3	1.11.2015
3	Jhajjar	Existing	PHED	5.5	March, 2007
4	Jhajjar	Existing	PHED	5	3.11.2014
5	Beri	Existing	PHED	2	10.1.2010
6	Rohtak	Existing	HSVP	10	18.2.2008
7	Singhpura, Rohtak	Existing	PHED	10	Feb-12
8	Singhpura, Rohtak	Existing	PHED	14	31.3.2015
9	PGI Rohtak	Existing	PHED	19.5	31.3.2016
10	Sonaria, Rohtak	Existing	PHED	40	31.3.2016

S No.	Town	Existing/under construction/Proposed	Dept.	Capacity (in MLD)	Date of Commissioning/ Proposed date of completion
11	Sampla	Existing	PHED	4	Oct-11
12	Kalanaur	Existing	PHED	3.5	1.10.2010
13	Meham	Existing	PHED	5	Jan-13
14	Rohtak	Proposed	HSVP	10	30.09.2023
15	Gohana	Proposed	HSVP	3	31.10.2021
16	Garhi Bohar, Rohtak	Proposed	ULBD	12	31.12.2020
17	Singhpura, Rohtak	Proposed	ULBD	10	31.12.2020
18	Peer Bodhi, Rohtak	Proposed	ULBD	15	31.12.2020
(ii) Mungeshpur Drain					
1	Bahadurgarh	Existing	PHED	18	Oct-12
2	Bahadurgarh	Existing	PHED	36	1.4.2014
(iii) KCB Drain					
1	Bahadurgarh	Existing	HSVP	10	2.2.2013
2	Jhajjar	Proposed	HSVP	5	31.10.2021
(iv) Leg 1					
1	Sarai Alawardi	Proposed	ULBD	1	Dec, 2019
(v) Leg 2					
1	Sector-107, Gurugram	Proposed	HSVP	175	Land acquisition under process
(vi) Leg 3 (Badshahpur Drain)					
1	Dhanwapur, Gurugram	Existing	GMDA	68	Jan, 2004
2	Dhanwapur, Gurugram	Existing	GMDA	100	01.12.2014
3	Gurugram	Existing	ULB/ MCG	30	01.08.1998
4	Behrampur	Existing	GMDA	50	Aug, 2010
5	Behrampur, Gurugram	Existing	GMDA.	120	July, 2014
6	Gurugram	Existing	ULB	50	01.10.2018
7	Gurugram (Dhankot)	Proposed	Panchayat	0.5	Yet to be decided
8	Sihi (Gurugram)	Proposed	ULB	1	Dec, 2020
9	Garoli Khurd	Under Construction	ULBD	1	Dec, 2019
10	Garoli Kalan	Proposed	ULBD	1	Dec, 2020
11	Ghata	Proposed	ULBD	2	Dec, 2020
12	Gwalpahadi	Proposed	ULBD	1	Dec., 2020
5. Budia Nallah					
1	Badshahpur, Faridabad	Existing	ULBD	20	09-01-11
2	Badshahpur, Faridabad	Existing	ULBD	45	09-01-11
3	Faridabad	Proposed	HSVP	42.5	31.10.2023
4	Faridabad	Proposed	HSVP	7.5	30.06.2022
6. Gaunchi Drain					

S No.	Town	Existing/under construction/Proposed	Dept.	Capacity (in MLD)	Date of Commissioning/ Proposed date of completion
1	Partapgarh, Ballabgarh	Existing	PHED	50	March, 2000
2	Punhana	Existing	PHED	4.5	31.12.2015
3	Nuh	Existing	PHED	3.6	25.11.2016
4	Hassanpur	Existing	PHED	3	1.3.2016
6	Hathin	Existing	PHED	4.5	31.12.2015
7	Hodal	Existing	PHED	9	May, 2013
8	Palwal	Existing	PHED	9	June, 2007
9	Firozpur Jhirka	Existing	PHED	5	31.07.2017
10	Hathin	Proposed	HSVP	5	31.3.2022
11	Kithwari, Palwal	Proposed	ULBD	10	
12	Palwal	Proposed	HSVP	10	30.06.2022
13	Jodhpur Road, Palwal	Proposed	ULBD	15	31.03.2022
14	Ferozpur, Palwal	Proposed	ULBD	2.5	31.03.2022

11. Action Plan for CETPs

The action plan for each CETP is given in the table.

Sr. No.	District	Town	Existing /Under Construction/ Proposed	Dept	Capacity (in MLD)	Date of Commissioning/ Proposed date of completion
1. Dhanaura Escape No CETP in this stretch						
2. Main Drain No. 2						
1	Panipat	Panipat	Existing	HSVP	21	October 2008
2	Panipat	IE Panipat	Construction completed	HSI IDC	2.5	Shall be commissioned when discharge is available
3	Panipat	Panipat	Under Construction	HSVP	21	31.12.2018
3. Drain No. 6						
1	Sonepat	IE Barhi, Sonepat	Existing	HSI IDC	8	1.1.2003
2	Sonepat	IE Barhi, Sonepat	Existing	HSI IDC	16	15.4.2017
3	Sonepat	IE Rai, Sonepat	Existing	HSI IDC	5	10.11.2008
4	Sonepat	IE Kundli, Sonepat	Existing	HSI IDC	4	19.3.2008
5	Sonepat	IE Murthal, Sonepat	Existing	HSI IDC	0.2	1.1.2003
i.) Drain No. 8						
1	Rohtak	IMT Rohtak	Existing	HSI IDC	10	February 2017
2	Rohtak	IE Kutana Rohtak	Existing	HSI IDC	3	October, 2018
(ii) Mungeshpur Drain						
1	Jhajjar	MIE Bahadurgarh	Proposed	HSI IDC	5	30.06.2020
(iii) KCB Drain						
2	Jhajjar	IE Bahadurgarh	Under Construction	HSI IDC	12.5	Feb 2019
(iv) Leg 3 (Badshapur Drain)						
1	Gurgaon	IMT Manesar Gurgaon HSI IDC	Existing	HSI IDC	55	April, 2004 and upgraded in Feb 2017
2	Gurgaon	Sec-37, Gurgaon	Existing	Private Party	0.2	2008
4. Budhiya Nallah No CETP in this stretch						
5. Gaunchi Drain						
1	Faridabad	Faridabad Electroplaters Association, Sec-58, Faridabad	Existing	Private Party	0.35	1.1.2004

12. Online Monitoring Devices

The plan for installation of Online Monitoring Devices at STPs is given as under.

STPs (Online Monitoring Devices)

Sr. No.	Name of the district	Name of the town/ city	Deptt.	Existing STP and Capacity (MLD)	Status of Online Devices
1	Yamuna Nagar	Yamuna Nagar	PHED	25	Installed & Connection with CPCB under process.
2	Yamuna Nagar	Yamuna Nagar	PHED	10	31.03.2019
3	Karnal	Ghogari Road, Karnal	ULBD	10	28.02.2019
4	Karnal	Gharaunda	PHED	3	31.03.2019
5	Karnal	Indri	PHED	1.5	31.03.2019
6	Karnal	Assandh	PHED	5	31.03.2019
7	Karnal	Nilokheri	PHED	6	31.03.2019
8	Karnal	Nissing	PHED	4	31.03.2019
9	Karnal	Tarori	PHED	5.5	31.03.2019
10	Panipat	Sewah, Panipat	PHED	35	Installed & Connection with CPCB under process.
11	Panipat	Jattal Road, Panipat	PHED	10	Installed & Connection with CPCB under process.
12	Panipat	Samalkha	PHED	5	31.03.2019
13	Panipat	Sewah, Panipat	PHED	25	Installed and has been Connected with CPCB & HSPCB
14	Panipat	Jattal Road, Panipat	PHED	20	Installed and has been Connected with CPCB & HSPCB
15	Sonepat	Rathdana Road, Sonepat	ULBD	30	28.2.2019
16	Sonepat	Kakroi Road, Sonepat	ULBD	25	28.2.2019
17	Sonepat	Kharkhoda	PHED	4.5	31.03.2019
18	Sonepat	Ganaur	PHED	7	31.03.2019
19	Sonepat	Gohana	PHED	3	31.03.2019
20	Sonepat	Gohana	PHED	8.3	31.03.2019
21	Jhajjar	Jhajjar	PHED	5.5	31.03.2019
22	Jhajjar	Jhajjar	PHED	5	31.03.2019
23	Jhajjar	Beri	PHED	2	31.03.2019
24	Rohtak	PGI Rohtak	PHED	19.5	31.03.2019
25	Rohtak	Kalanaur	PHED	3.5	31.03.2019
26	Rohtak	Meham	PHED	5	31.03.2019
27	Rohtak	Singhpura, Rohtak	PHED	14	31.03.2019

28	Rohtak	Sampla	PHED	4	31.03.2019
29	Gurgaon	Sohna	PHED	6	31.03.2019
30	Gurgaon	Pataudi	PHED	4.5	31.03.2019
31	Gurgaon	Farrukhnagar	PHED	3	31.03.2019
32	Mewat	Punhana	PHED	4.5	31.03.2019
33	Mewat	Nuh	PHED	3.6	31.03.2019
34	Faridabad	Munjheri, Ballabgarh	ULBD	45	28.02.2019
35	Palwal	Hassanpur	PHED	3	31.03.2019
36	Palwal	Hathin	PHED	4.5	31.03.2019
37	Palwal	Hodal	PHED	9	31.03.2019
38	Kurukshetra	Indri Road, Ladwa	PHED	7	31.03.2019
	HSVP				
1	Sonepat	Rajiv Gandhi Edu. City, Phase- I, Sonepat	HSVP	7.5	Installed but not functional as no discharge yet.
2	Panipat	Sector-13, Panipat	HSVP	30	31.05.2019
3	Jhajjar	Sec-36, Bahadurgarh	HSVP	10	31.03.2019
4	Rohtak	Sec-25, Rohtak	HSVP	10	31.03.2019
	GMDA				
1	Gurgaon	Dhanwapur, Gurgaon	GMDA	68	28.2.2019
2	Gurgaon	Dhanwapur, Gurgaon	GMDA	100	28.2.2019
3	Gurgaon	Behrampur	GMDA	50	28.2.2019
4	Gurgaon	Behrampur, Gurgaon	GMDA	120	28.2.2019
	ULBD				
1	Gurgaon	Gurgaon	MCG	50	March, 2019
2	Faridabad	Badshahpur, Faridabad	ULB	20	28.2.2019
3	Faridabad	Badshahpur, Faridabad	ULB	45	28.2.2019
4	Karnal	Near Sector-4, Karnal	ULBD	40	28.2.2019
5	Karnal	Kaithal Road, Karnal	ULBD	8	28.2.2019
6	Faridabad	Partapgarh, Ballabgarh	ULBD	50	28.02.2019

CETPs (Online Monitoring Devices)

S No.	Name of the district	Name of the town/city	Deptt.	Existing CETP and Capacity (MLD)	Online data
1	Sonepat	IE Barhi, Sonepat	HSI IDC	8	To be installed by December, 2018
2	Sonepat	IE Barhi, Sonepat	HSI IDC	16	Installed
3	Sonepat	IE Rai, Sonepat	HSI IDC	5	To be installed by December, 2018
4	Sonepat	IE Kundli, Sonepat	HSI IDC	4	To be installed by December, 2018
5	Sonepat	IE Murthal, Sonepat	HSI IDC	0.2	To be installed by December, 2018
6	Gurgaon	IMT Manesar Gurgaon HSI IDC	HSI IDC	55	Installed
7	Faridabad	IMT Faridabad	HSI IDC	10.5	installed
8	Panchkula	IE Barwala, Panchkula	HSI IDC	0.5	To be installed by December, 2018
9	Ambala	Ambala Cantt.	HSI IDC	0.5	To be installed by December, 2018
10	Ambala	Saha	HSI IDC	5	installed
11	Jind	I. E. Jind	HSI IDC	0.1	To be installed by December, 2018
12	Rohtak	IMT Rohtak	HSI IDC	10	Installed
13	Rewari	Bawal	HSI IDC	22.5	Installed
14	Panipat	Panipat	HUDA	21	Installed
15	Gurgaon	Sec-37, Gurgaon	Private Party	0.2	March, 2019
16	Faridabad	Faridabad Electroplaters Association, Sec-58, Faridabad	Private Party	0.35	March, 2019

13. Plan for Integrated Solid Waste Management (ISWM) of 7 Clusters (Falling in Yamuna Catchment Area)

The ISWM projects for towns along river Yamuna are being implemented by ULBD. The action plan is given in the table.

Sr. No	Name of Cluster & Cluster ULBs	Waste Generated (In TPD)/ Technology	Expected Release Date of Tender	Expected Completion Date of Project	Current Status/ Justification
1	Faridabad (Bhandwari Gurugram) For • Gurgaon • Faridabad	1275 Waste to Energy	Concessionaire Selected	24 months from the date of signing of agreement	<ul style="list-style-type: none"> • The Project is awarded to M/s ECOGREEN ENERGY Pvt. Ltd. dated 14th August 2017. • Leachate Treatment plant construction completed at Bhandwari Site. • The construction of the plant will be started after obtaining the Environmental Clearance. EIA Report has been submitted to MoEF&CC for appraisal of the project. • The Door to Door Collection and Transportation has commenced from 14 December 2017 Onwards. • Power Purchase Agreement (PPA) signing is under approval stage from Haryana Electricity Regulatory Commission (HERC).
2	Sonepat (Murthal, Sonipat) For • Gannaur • Panipat • Sonepat • Samalkha	450 Waste to Energy	Concessionaire Selected	26.09.2019	<ul style="list-style-type: none"> • The Project is awarded to M/s Neel Metal Products Ltd. dated 26th September 2017. • The Door to Door Collection and Transportation has been commenced. • PPA signing on 21.09.2018. • The construction of the plant will be started after obtaining the Environmental Clearance. EIA Report will be submitted soon to MoEF& CC for appraisal of the project.
3	Rohtak For • Bahadurgarh • Beri • Gohana • Jhajjar • Julana • Kalanaur • Kharkhoda • Meham • Rohtak • Sampla	437 Waste to Energy	November, 2018	24 months from the date of signing of agreement	<ul style="list-style-type: none"> • There is an existing Waste to Compost plant in Rohtak. • The tender for Rohtak Cluster intimated solid management shall be invited soon and the existing plant will be upgraded to a 500 TPD waste to energy processing plant to cater the waste of all the cluster ULBD. • Until ISWM project is awarded door to door collection segregation, pit composting and MRF facility will be developed in the ULBD for which time bound strategy is being formulated.

4	<p>Karnal (Karnal)</p> <p>For</p> <ul style="list-style-type: none"> • Gharaunda • Indri • Karnal • Nilokheri • Nissing • Pundri • Taraori 	250 Waste to Compost + RDF	November, 2018	No bids were received tenders will be floated again	<ul style="list-style-type: none"> • The clusters will have separated processing facility and the RDF generated in Karnal will be transported to Ambala Waste to Energy plant. • There is an existing waste to composted plant in Karnal (150 TPD). • The tender for Ambala ISWM shall be invited again and existing plant in Karnal will be modernized and upgraded to cater the waste of all the clusters ULBD and a new plant in Ambala will be setup. • Until ISWM project is awarded, door to door collection, segregation, pit composting and MRF facilities will be developed in the ULBD for which time bound strategy is being formulated.
5	<p>Yamunanagar (Yamuna nagar)</p> <p>For</p> <ul style="list-style-type: none"> • Yamunanagar • Jagadari • Ladwa • Barara • Radaur 	291 Waste to Compost+R DF	Nov. 2018	12 Months from the date of signing of agreement	<ul style="list-style-type: none"> • The tender will be invited Soon, TFR under finalization. • Processing and Scientific Disposal Site: New plant will come at the defunct municipal waste processing plant site in Yamuna Nagar. Total area of land is 14.2 Acres. • Until ISWM project is awarded, door to door collection, segregation, pit composting and MRF facilities will be developed in the ULBD for which time bound strategy is being formulated.
6	<p>Farukhnagar (Farukhnagar)</p> <p>For</p> <ul style="list-style-type: none"> • Farukhnagar • Haily Mandi • Nuh • Pataudi • Sohna • Taoru 	72 Waste to Compost+R DF	December 2018	12 Months from the date of signing of agreement	<ul style="list-style-type: none"> • The tender will be invited Soon, TFR under finalization. • Until ISWM project is awarded, door to door collection, segregation, pit composting and MRF facilities will be developed in the ULBD for which time bound strategy is being formulated.
7	<p>Punhana (Punhana)</p> <p>For</p> <ul style="list-style-type: none"> • F/Jhirkha • Hathin • Hodel • Palwal • Punhana 	136 Waste to Compost+R DF	Nov, 2018	12 Months from the date of signing of agreement	<ul style="list-style-type: none"> • The tender will be invited Soon, TFR under finalization. • Until ISWM project is awarded, door to door collection, segregation, pit composting and MRF facilities will be developed in the ULBD for which time bound strategy is being formulated.

14. Plan for e-waste management by HSPCB/ULBD.

Present Scenario

A study was conducted through CSIR-NEERI in the year 2010 and accordingly the total quantity of waste Electrical & Electronic equipments generated in Haryana is **4506.9 Ton**. In the State, there are **22** number of authorized refurbishers, dismantlers and recyclers for management of E-waste. The total authorized capacity of these units is **91389 MT/annum** which is approx. **1.8** times more than the waste generation in the State.

Future Course of Action

1. Policy for E-waste Management will be prepared within 3 months.
2. The E-waste collection bins has been proposed to be placed at the prominent places like Govt. offices, IT Parks etc.

15. Plan for plastic waste management by HSPCB/ULBD.

Draft Policy and Plan for plastic waste management has been prepared by the ULBD and accordingly plastic waste shall be collected from un-organized sectors and from house hold/commercial sectors. The challans are issued to the violators.

16. Plan for Bio-Medical Waste Management.

Present scenario of Bio Medical Waste Management in Haryana

Total number of HCFs in the State	:	3412
Total number of Bedded HCFs	:	2410
Total number of Non Bedded HCFs	:	1039
Total number of Beds in HCFs	:	48357
Total BMW waste generated in State	:	11732 Kg/ day

For the treatment of this Bio medical Waste, **11** no. of Common Bio medical Waste Treatment Facilities (CBWTFs) has been authorized in the State. The total incineration capacity of these CBWTFs to treat Bio Medical Waste is **39600 Kg/day**. All the CBWTFs have upgraded their incinerator to meet revised emissions standards as per MOEF Notification 2016 and provided Online Continuous Monitoring System on their incinerator.

The **3393** number of Health Care Facilities made agreement with these CBWTFs for collection & disposal of their Bio Medical Waste.

The Govt. of Haryana, Environment & Climate Change Department has constituted State Level Advisory Committee (SLAC) and 1st meeting of SLAC has already been held under the Chairmanship of Additional Chief Secretary to Govt. of Haryana, Health Department-cum-Chairman of SLAC on 16.8.2018.

Future Course of action

1. Establishment of a Bar- Code System for bags or containers containing bio-medical waste will be implemented by 29.3.2019 as per CPCB guidelines.
2. All the Veterinary Hospitals, Animal Houses, Pathological Laboratories, Blood Banks & Research Institutions will be inspected and complied them as per Bio Medical Waste Rules, 2016 upto 31.3.2019.

17. Water Efficient Agriculture Practices:-

The major demand for river water is for Irrigation purposes and accordingly the State of Haryana has taken initiatives for water efficient farming practices which are given in succeeding paras and these are expected to reduce the pressure on river water.

(A) Pilot Project for installation of solar/grid powered micro irrigation infrastructure on sewage treatment plants for utilizing treated water for Irrigation.

With a view of augmenting water of assured supply to the every field, a new intervention has been proposed for the reuse of treated waste water from the existing Sewage Treatment Plants for the use of water in the best alternative which will help in enhancing the irrigation. Working on these lines this pilot project has been prepared on over exploited & critical blocks by selecting STPs of Ladwa, Shahabad and Pehowa towns for irrigation. The farmers of the area to be benefited from this water have already formed Water User Associations and also given an undertaking to the effect that their area, to be covered under this project, is not covered by any canal command and they are willing to adopt this technology. The common Micro Irrigation Infrastructure will be provided for each STP outlet for supplying pressurized water supply at farm gate by providing pumping unit (grid/solar powered), filtration, HDPE pipe network etc. the water will be provided under pressure of 2-2.5 Kg/cm² So that farmers may utilize this for sprinkler and drip system. Farmers will be provided hydrant for every 4 acres or less if the holding of the farmers is less than four acres. In this manner the treated water, which was otherwise going unutilized in drain, will be put to proper use. It is also reported that sewage water from all these STPs is being properly monitored and tested by Public Health Engineering Department and parameters of this treated water meet with the standards for irrigation.

ADVANTAGES OF THE PROJECTS

1. New area will be brought under irrigation with optimum utilization of the available surplus water.
2. The project will encourage use of Micro Irrigation technologies.
3. Saving of power & diesel for farmers.
4. Increase in yield as nutrient rich water will be supplied.

5. The water, which was otherwise going waste, will be put to proper use.
6. No land acquisition will be involved.

Accordingly, a project has been prepared for using the treated water in Irrigation in district Kurukshetra. A common infrastructure has been provided with the following components in the command area of each outlet to be covered under Model Command Area of Jal Kranti Abhiyan:-

1. Water storage tank near outlet head.
2. Pumping Unit (Grid/Solar Powered).
3. Filtration units.
4. HDPE pipe network.
5. Hydrant/Outlet assembly.
6. Valves

Drip/Sprinkler irrigation sets will be provided 2 no./per 15 HP pump and individual farmers can also install the drip/sprinkler sets in their farm holdings by availing the benefits of subsidy from the State Horticulture/Agriculture Departments as per their existing schemes of promoting the Drip/Micro Sprinkler Systems.

The cost of common infrastructure has been worked out as Rs. 109000/- (Approx.) per hectare of CCA and the total estimated cost of the project is Rs. 3.65 Crore. Detail list of site wise schemes taken up is as under:-

Sr. No.	Name of District	Name of Block	CCA in Hectare	Cost {CCA (hct.) X 1.09 lakh}
1.	Kurukshetra	Pehowa	76	8676084
2.	Kurukshetra	Ladwa	63	7192017
3.	Kurukshetra	Shahabad	151	17238009
		Total	290	33106110

	=33106110
Add 1% Contingency Chares	= 165531
Add 15% Tender Premium	= 3310611

=36582252

SALIENT FEATURES

- Total Cost of Project Rs. 3.65 Crore
- CCA to be covered in Acre/Ha. 715/290
- No. of Sprinkler sets 01 No./ 15 HP pump
- Benefit Cost Ratio 1.3:1

- Total number of schemes 3
- Number of Districts/Villages covered 1/5
- Name of villages: Pehowa- (Pehowa, Morthli, Bhatt Majra), Ladwa- (Baraichpur) & Shahabad-(Chhapra).

(B) Project of Recycle and Ruse of Treated Wastewater for Irrigation Purpose in Fatehabad, Hisar, Sirsa & Jind Districts of Haryana.

Project was prepared under the guidelines of the scheme for "Incentivization Scheme for Bridging Irrigation Gap (ISBIG) of Ministry of water Resources, River Development and Ganga Rejuvenation, govt. of India" under components infrastructure for conveyance and additional treatment of municipal and industrial wastewater for augmenting water for the farm use "Project Under newly created Irrigation Efficiency in phasing during the financial year 2018-19 to 2020-2021 for amounting in Rs. 235.94 Crore only.

This office planned to carry out the work of Recycle and Reuse of Treated Wastewater of Irrigation Purposes from the STPs of Fatehabad, Sirsa, Hisar and Jind districts having the capacity 29.50, 15.00, 22.50 & 20.00 MLD respectively amounting to Rs. 87.00 Crore in 1st phase as planned for the year 2018-19. The estimate for this project will be prepared on the basis of already approved item rates of CADA for re-use of wastewater which are the part of the estimate and remaining item rates will be prepared on the basis of HSR and market rates. Thereafter, e-tender will be called on EPC basis towards successful commissioning plus 1 year of assured performance demonstration after commissioning and comprehensive O & M of the schemes for 3 years thereafter. A new concept A.P.O.P treatment technology for Advanced Photo Oxidation processes at STPs be adopted an intervention for disinfection, removal of endocrine disruptors and other hazardous compounds. This intervention is essentially required because all the composition of the waste water has been addressed effectively and efficiently by the MBBR & SBR treatment technologies except toxic chemical and pathogens. A high concentration of pathogens such as viruses, bacteria, helminthes eggs and fecal coliforms have the potential to cause diseases if present in a human host insufficient quantity.

District wise lit of STPs provided in the project

Sr. No.	Name of District	Name of STO	Capacity of STP (In MLD)	Treatment Technology
1.	Ambala	Barara	6.00	MBBR
2.	Ambala	Narayangarh	5.00	MBBR
3.	Bhiwani	Badra	10.00	MBBR
4.	Bhiwani	Kairu	10.00	MBBR
5.	Charkhi Dadri	Charkhi Dadri	5.00	MBBR
6.	Faridabad	Balhabgarh	18.00	MBBR

7.	Gurugram	Behrampur	50.00	MBBR
8.	Hisar	Hansi	12.50	MBBR
9.	Hisar	Hisar, Sector 3	10.00	MBBR
10.	Jhajjar	Jhajjar	5.50	MBBR
11.	Jhajjar	Salhwas	5.00	MBBR
12.	Jind	Jind	15.00	MBBR
13.	Jind	Narwana	5.00	MBBR
14.	Rewari	Rewari	6.50	MBBR
15.	Rewari	Rewari	8.00	MBBR with Dual Mode Filter
16.	Kaithal	Gulha	10.00	SBR
17.	Kaithal	Kaithal	10.00	SBR
18.	Fatehabad	Fatehabad	10.00	MBBR
19.	Fatehabad	Tohana	10.00	MBBR
20.	Fatehabad	Jakhal	3.00	SBR
21.	Fatehabad	Ratia	6.50	MBBR
22.	Karnal	Karnal	10.00	SBR
23.	Karnal	Karnal	8.00	MBBR
24.	Mahendergarh	Nangal Chaudhary	6.50	MBBR
25.	Mahendergarh	Narnaul	7.50	MBBR
26.	Mewat	Punhana	4.50	MBBR
27.	Mewat	Nuh	3.60	MBBR
28.	Panipat	Panipat	25.00	SBR
29.	Palwal	Hathin	4.50	MBBR
30.	Panchkula	Kalka	4.75	MBBR
31.	Panchkula	Pinjor	5.00	MBBR
32.	Rohtak	Rohtak	10.00	MBBR
33.	Sirsa	Sirsa	15.00	SBR
34.	Sonipat	Sector 23	10.00	MBBR
35.	Yamuna Nagar	Radaur	3.50	MBBR
	Total		338.85	

(C) INSTALLATION OF COMMUNITY BASED SOLAR/GRID POWERED MICRO IRRIGATION INFRASTRUCTURE IN EXISTING CANAL COMMANDS

The Pilot Project has been prepared by CADA for Rs. 30.60 Crore with provision for installation of community based MI schemes in commands of the 14 different canal outlets spread over 13 different districts of the State covering area 2231 Hectare. The concept of community based micro-irrigation has been introduced in the first instance on pilot basis on some of the canal outlets in the command of the ongoing CADWM Projects. Common Micro Irrigation infrastructure will be provided for each canal outlet command for supplying pressurised water supply at the farm level of each farmer of the outlet chak instead of constructing lined channels. Community based water storage tank, pumping unit (Grid/solar powered), filtration unit, HDPE pipe network, hydrant/outlet assemblies, valves, etc. shall be constructed by the

department. Drip/Sprinkler irrigation sets will be installed by the individual farmers in their farm holdings by availing the benefits of subsidy from the State Horticulture/Agriculture Departments as per their existing schemes of promoting the Drip/Sprinkler Systems.

Water User Associations (WUA) have been framed for all the water courses. The WUAs have committed to provide land for construction of community pond for storing water from outlet and supplying further to individual farmers. Further the management of the water at outlet will be completely done by the shareholders. The WUAs will help in creating healthy and cordial atmosphere between the shareholders themselves. Moreover, this will also help in developing a sense of ownership amongst the shareholders and also facilitate implementation of warabandi. A better co-ordination will emerge between the end users and the CADA department for planning, execution and monitoring of the pilot project thereby initiating proper transfer of management to farmers.

The Solar Power Systems to be installed on the various schemes under the project are proposed to be connected with the utility power grid so that the energy generated by the solar modules, whenever not required for operation of the pumping system or is in excess of requirement, can be sent to the Utility Grid and when the solar power system is producing lesser power than needed for operation of the pumping system or is not producing any power at all, additional power for operation of the pumping system can be drawn from the Grid. The provision has also been made for interconnection of the solar power systems with the utility power grid through 11 KV independent feeder lines from the nearest Sub Stations for each scheme with provision of import/export (Bi-directional) meter. The excess energy produced from the solar power systems and transferred to the utility power grid will be credited on the rate mutually agreed between the Department/WUA and DISCOM as per Government Policy against the power supplied from the utility grid.

The project will help in making an assessment of the workability of the proposed model in the State and evaluating its actual impact and benefits. The project will demonstrate to the farmers of the State the value of water and help in changing their mindset and motivating them to adopt the water efficient MI technology in canal commands on a large scale.

The main objectives of the project are to improve water use efficiency and increase crop productivity. The water use efficiency will be achieved by adopting integrated approach in water management:-

- Supply management - By increasing the available supply by reduction in conveyance losses.
- Demand Management - By increasing the field application efficiency with the use of water efficient Sprinkler & Drip Irrigation technology.

Detail list of sites:-

Sr. No.	Name of District	Name of villages	Name of outlet	Outlet RD	CCA in acre	CCA in Hectare
1	Kurukshetra	Gumthala Garhu	Sandhola Minor	25220/L	147	59
2	Kaithal	Kakrala Anayat, Kakeor Majra	Paharpur Minor	44600/R	417	169
3	Karnal	Salwan	Salwan Minor	7700/L	502	203
4	Sirsa	Shahpuria	Gegorani Minor	45800/R	705	285
5	Hisar	Masudpur	Singhwa Disty	25300/L	392	159
6	Panipat	Bajirpur Titana, Maandi	Naraina Disty	40900/R	856	346
7	Jhajjar	Subana	Subana Minor	7200-L	239	97
8	Jhajjar	Amadalpur	S.L.C.	65800-L	519	210
9	Bhiwani	Jhumpa Kalan	Motipura Disty	72000-R	342	138
10	Ambala	Mallour	Mallour Disty	5775-R	138	56
11	Jind	Behbalpur	Ramkali Minor	53620-L	98	40
12	Sonipat	Baroda Mor	2R Baroda Minor	4200-L	651	264
13	Rewari	Berli Kalan	Musepur Minor	2.800-R	272	110
14	Mahendergarh	Panldi Panihar	Dholi Minor	4.000-L	233	95
				Total	5511	2231

Date of completion of the Project is 31.12.2018.

18. Increasing the Water Storage Capacity

The construction of ponds/dams/reservoir along the rivers has been explored and the action taken so far in this regard has been given by the Irrigation Department with future course of action. This will helping maintaining. The same has been given in the table. The State Government as also link the village ponds with nearby existing channels for revival of ponds. The number of ponds for each circle have been given in the table:-

Sr. No.	Particulars	Adibadri Dam	Darpur Dam	Nagli Dam	Chikan Dam	Kansli Dam on Kansli Khol	Khilanwala Dam on Khilanwal Khol	Ambawali Dam on Ambawali Khol	Lohgarh Dam on Lohgarhki Khol	Dhanaura Dam
1	Name of river/nallah	Somb Nadi- tributary of river Yamuna	Palasi Khol- tributary of Pathrala Nadi	Nagli ki Khol- tributary of Pathrala Nadi	Chikan Khol- tributary of Pathrala Nadi	Trivutary of Pathrala Nadi	Tributary of Pathrala Nadi	Tributary of Pathrala Nadi	Trivutary of Somb-Pathrala Nadi	Somb Nadi
2	Gross storage capacity	2604.9 acre feet	1414.84 acre feet	2557.69 acre feet	1405.22 acre feet	1220.71 acre feet	2715.10 acre feet	3212.17 acre feet	2819.82 acre feet	
3	Total land required	96 acres	83.5 acres	84.0 acres	76.5 acres	57.5 acres	141.0 acres	139.0 acres	139.0 acres	
4	No. of villages benefitted	05 No. districts	7 Nos.	12 Nos.	6 Nos.	5 Nos.	9 Nos.	6 Nos.	20 Nos.	
5	Command area	Main proposal is for revival of Holy Sarasvati River and recharge of Ground water	1500 acres CCA	4000 acres CCA	1750 acres CCA	1467 acres CCA	3200 acres CCA	2660 acres CCA	6708 acres CCA	
6	Village Benefitted	1) Yamuna Nager 2) Kurukshetar 3)Kaithal 4)Jind 5)Fatehabad.	1) Darpur 2) Jatanwal 3) Siplanwala 4) Chuaharpur 5)Shahabuddinpur Kalan 6)Shahabuddinpur Khurd 7) Muqaribpur	1) Nagli 2) Sanderpur 3) Ganrabani 4) Rajpur 5) Rampur Jat 6) Chabutaran 7) Pirthipur 8) Tarpur 9) Bir-Tarpur 10) Haidarpur	1) Chikan 2) Kalsia 3) Shazadwala 4) Daulatpur 5) Dhakwal 6) Tibbi	1) Kansli 2) Banlawala 3) Khilanwala 4) Meghowala 5) Nhangera	1) Bagpat 2) Bhangeri 3) Bhangera 4) Musafat Khurad 5) Bari Musafat 6) Bakarwala 7) Muhabatwala 8) Lahasabad	1) Ambawali 2) Chandpur 3) Nagal 4) Tibrian 5) Khizri 6) Khizrabad	1. Bahadurpur 2. Gandwan 3. alisherpur Majra 4. Ramgarh 5. Chholi 6. Katarwall 7. Jogiwara 8. Manakpur 9. Nari Lalhari	

Sr. No.	Particulars	Adibadri Dam	Darpur Dam	Nagli Dam	Chikan Dam	Kansli Dam on Kansli Khol	Khilanwala Dam on Khllanwal Khol	Ambawali Dam on Ambawali Khol	Lohgarh Dam on Lohgarhki Khol	Dhanaura Dam
				11) jaitpur 12) Mehran			9) Hafizpur		10. Chhoti Lalhari 11. Bankat 12. Chantpur 13. Manipur 14. Khanuwala 15. Tugalpur 16. Barauli 17. Arjan Majra 18. Kot Basawar Singh 19. Kothmustarka 20. Ghisarpari	
7	Jurisdiction of reservoir land	Himachal Pradesh	Haryana	Haryana	Haryana	Haryana	Haryana	Haryana	Himachal Pradesh	Himachal Pradesh
8	Environment clearance	Required	Not required	Not required	Not required	Not required	Not required	Not required	Required	---
9	Total Cost	Rs. 108.70 Crores	Rs. 18.37 Crores	Rs. 24.92 crores	Rs. 19.56 crores	Rs. 15.15 crores	Rs. 19.65 crores	Rs. 29.70 crores	Rs. 63.40 crores	
10	Benefit Cost Ratio	NA	0.74:1	1.06:1	0.94:1	1.01:1	1.42:1	1.29:1	0.93:1	

Sr. No.	Particulars	Adibadri Dam	Darpur Dam	Nagli Dam	Chikan Dam	Kansli Dam on Kansll Khol	Khilanwala Dam on Khllanwal Khol	Ambawali Dam on Ambawali Khol	Lohgarh Dam on Lohgarhki Khol	Dhanaura Dam
11	Status of Projects	DPR is in process and likely to be completed upto 31.12.2018. Tenders for environment impact assessment have been approved and work is under process	Feasibility report approved by Govt. and Interstate clearance has been received from UYRB. Case submitted to Forest Dept for Forest & Wildlife clearance.	Feasibility report approved by Govt. and Interstate clearance has been received from UYRB. Case submitted to Forest Dept. for Forest & Wildlife clearance	Feasibility report approved by Govt. and interstate clearance has been received from UYRB. Case submitted the Forest Dept. for Forest & Wildlife clearance	Feasibility report approved by Govt. and interstate clearance has been received from UYRB. Case submitted the Forest Dept. for Forest & Wildlife clearance	Feasibility report approved by Govt. and interstate clearance has been received from UYRB. Case submitted the Forest Dept. for Forest & Wildlife clearance	Feasibility report approved by Govt. and interstate clearance has been received from UYRB. Case submitted the Forest Dept. for Forest & Wildlife clearance	Feasibility report approved by Govt. and interstate clearance has been received from UYRB. Case submitted the Forest Dept. for Forest & Wildlife clearance	Feasibility report submitted by WAPCOS and is under examination

Progress report of ponds sanctioned by Department & Panchayat Department under HRDFA													
Sr. No.	Name of the circle	Name of District	No. Of Village Ponds	Tender called/allotted	Work in progress	Completed	Yet to Start	Not feasible	Tender to be called	Not Required	Amount Sanctioned in Rs.	Amount Released by HRDFA in Rs.	Amount released by Irrigation Department
1	JWS Circle, Jhajjar	Jhajjar	63	46	1	31	10	16	0	5	42256556	41490864	21472362
		Gurgaon	5	0	1	3	0	1	0	0	5576932	5576932	3577118
2	YWS Circle Rohtak	Jhajjar	28	28	3	18	6	0	0	1	49641000	40810500	25015026
		Rohtak	14	14	0	4	10	0	0	0	22406998	18540000	1874380
		Sonepat	1	1	1	0	0	0	0	0	2393000	2000000	0
3	JLN Circle Namaul	Jhajjar	1	1	0	0	1	0	0	0	279000	279000	0
4	YWS Circle Karnal	Sonepat	23	10	1	1	8	13	0	0	59216000	38471000	1012000
5	YWS Circle Karnal	Karnal	2	2	0	2	0	0	0	0	440000	440000	372000
6	YWS Circle Karnal	Panipat	29	20	0	0	18	11	0	0	42771000	36913000	0
7	YWS Circle Sonepat	Sonepat	9	7	0	3	4	0	0	2	7005000	6772000	4058020

The Plan of Municipal Corporation, Faridabad to increase storage capacity.

As per the NGT order on 20th July 2018 to Govt. of Haryana to provide unique identification No. to all its water bodies, MCF undertook this documentation study and allotted the work to M/s Development 2050 for survey of 76 water bodies with the municipal limits. Out of them around

- 17 water bodies require judicial intervention
- 20 water bodies require encroachment removal drive
- 18 water bodies require inter department coordination due to ownership issues
- 56 water bodies have dried up, 8 are seasonal and 12 have perennial presence of water
- 48 water bodies can be restored after overcoming above hurdles

As per the report received there are 20 water bodies (list at **Annexure VIII**) of around 60 Acres area in total within city under direct ownership of MCF that can be restored without much administrative hurdles like encroachment, legal disputes, other department ownership etc.

List of Water bodies with Restoration Priorities

Sl. No.	Name	Area in Acres
01	NanglaGujaran 48	2.59
02	JharSentli 117	1.16
03	JharSentli 163	5.34
04	Sihi 163	8.79
05	Uncha Gaon 101	2.77
06	Gouchi 146	4.08
07	Gouchi 148	2.25
08	Gouchi 149	3.84
09	Agwanpur 66	1.06
10	Budena 22	3.12
11	Budena 46	2.69
12	Wazirpur 43	0.7
13	Sehatpur 37	1.18
14	Sarai Khwaja 96	1.88
15	Gazipur 31 & 32	2.02
16	Bajri 30	3.67
17	Bajri 31 & 32	5.84
18	Dabua 65	3.44
19	Bhankhri 199	0.56
20	Ankheer 72	1.39
	Total Area in Acres	58.37

The Municipal Corporation, Faridabad is in stage of preparing detailed project report (DPR) and we would require a budget of around INR 40 Crores for restoration of these water bodies (including 10% for capacity building) to maximize the recharge of ground water on the concept of sponge cities and redevelop them as social spots promoting tourism and culture.

The authorities are exploring the option of construction of check dams along the river Yamuna for recharge of sub surface water for recharge of Rainey Wells. Feasibility reports are being prepared for highlighting of water logged

areas within the municipal limits to identify the water harvesting potential and proposal of additional Rain water harvesting pits for recharge of ground water.

MCF limits the use of borewell for extracting ground water and systematically checks and closes as well as seals all such illegal bore wells with hefty fines. Before monsoon 2018, MCF took initiative for restoration of 180 choked rainwater harvesting within Municipal Limits of Faridabad. More than 50 locations were covered and maintenance- restorations were carried out. Now there is a proposal to upgrade these rainwater harvesting systems with innovative design solutions and we need funds of around INR 10 Cr for the restoration of these systems.

19. Greenery Development Plan

The action plan for greenery development by HSVP in towns along river Yamuna.

Sr. No.	Name of U/E	Plantation done			Plantation to be done	
		Year 2015-16	Year 2016-17	Year 2017-18	Year 2018-19	Year 2019-20
1	Jagadhri / Yamunagar	90	1905	1746	500	500
2	Karnal	5400	6819	10038	5000	5500
3	Faridabad	16113	22073	26513	14300	12300
4	Palwal	0	1125	950	100	100
5	Hathin	0	0	0	100	100
6	Gurugram	21525	21628	53315	39850	24200
7	Rohtak	9100	10497	3373	4000	3000
8	Bahadurgarh	1852	2145	4035	2350	2000
9	Jhajjar	150	500	354	500	200
10	Sonepat	7660	1655	3784	3000	2000
11	Panipat	4200	3153	2584	2500	2800
12	Total	21603	31922	39247	72200	52700

The action plan for greenery development by Municipal Corporation, Faridabad in towns along river Yamuna.

Since plants play an important role in reducing the environment pollution load, vegetal acts as a pollution scavenger and absorbs gasses and filter dust, smoke and other pollutants in the air, this Corporation during the year 2018, in order to make Faridabad green, has planted more than 34,400 plants of tree species of (i) Alstoniascholaris. (ii) Neem (iii) Chakresia (iv) Peepal retusa (v) Mango (vi) Polyalthialongifolia (vii) Mahua (vii) Gulmohar (viii) Amaltash (ix) Ficus (x) Ficus Benjamina in various green belts, parks, Government premises, Colleges, Schools, Hospitals, Tube-wells, Disposals, Boosting Stations and other alike premises. Main area of plantation are as below:-

Faridabad NIT area

Sr. No	Area	No. of trees	No. of shrubs	Total
1	BK to NH-5 Thana	100	-	100
2	NH-5 Thana to Bata Flyover	284	-	284
3	Chimni Bai Dharamshala to Tikona park.	258	805	1063
4	Outer periphery NH-3 & NH-2	26	1500	1526
5	Pyali chowk to FCI Godown	385	-	385
6	Rose garden	183	1200	1383
7	Sector-21B road near Nallah	100	-	100
8	Pali crusher zone	225	250	475
	Total	1561	3855	5416

In total 11815 shrubs and trees have been planted in parks, green belts, road sides etc. of NIT sub-division.

Ballabgarh Area

10460 plants have been planted in various road sides, parks, old green belts of Ballabgarh sub-division.

Old Faridabad Area.

12125 plants have been planted in various road sides, parks, old green belts of Old Faridabad sub-division.

It is proposed to increase tree cover along important roads of whole of MCF area. Plantation of 35000 shrubs and trees will be done in 2019. Shrubs will be planted on central verges, road sides, greenbelts and parks of MCF with active participation of voluntary agencies and RWAs. Beautification of junctions and corners will be done by planting grass and ground covers. More than 350 parks have been handed over to RWA for maintenance under PPP Scheme and it is proposed to involve voluntary agencies for adoption of parks, roundabouts under CSR.

In addition to above:

- a) Under the “Nagar Vanikaran Yojna- “Ek Kadam Haryali ki Aur”, a Programme for Climate Smart Green Cities, having been launched by Government of India under which 200 city Forest/Nagar van in the Corporation Cities across the Country are proposed to be developed, a site along the bye-pass right from Delhi Border to Keli Gaon already stands selected for development of a “City Forest” for providing wholesome living, environment and contributing to Smart, Clean, Green and Healthy Faridabad.

- b) An area of 200 acres on the Aravali Hills is also proposed to be devolved as “Oxy Park”.
- c) This Corporation has also a proposal to develop the area from pillar to pillar of Metro Rail running from Delhi Boarder up to Ballgarh by planting trees upto the height of Metro track and develop the area as green.
- d) There is a proposal for revival of Badkha lake under one of the Smart City projects. While carrying out the said work, the area around the said lake is proposed to be developed as green by planning different trees.

20. Ground Water Management

Steps taken by HSPCB

HSPCB has decided to incorporate the necessary condition in its consent management policy that the industries shall obtain NOC from Central Ground Water Authority (CGWA) before withdrawal of ground water.

Steps taken by HSVP for rain water harvesting / conservation of water/avoid exploitation of ground water

1. ROOF TOP RAIN WATER HARVESTING SCHEME

On 31.10.2001, a notification regarding making roof rain water harvesting-Conversation & Artificial recharge of ground water compulsory in Govt. buildings/HSVP Buildings, including all the private houses/buildings to be constructed in Urban Estates, in future having roof top surface area 100 Sqm. more was issued. Notification has already been circulated vide No.9945-46 dated 29.11.2001 (copy enclosed) and the areas/Urban Estates in Haryana where this notification has been made applicable have also been notified vide letter no.1200 dated 10.12.2001. (copy enclosed).

Zonal Administrator/Estate Officers of HSVP ensure that occupation certificate is not issued in the absence of the implementation of above cited notification.

Further, station wise detail of rain water harvesting systems constructed by HSVP is as under:

Sr.No.	Name of U/E	No. of rain water harvesting wells constructed
1.	Karnal	5
2.	Yamunanagar	1
3.	Gurugram	376
4.	Faridabad	23
5.	Palwal	2
6.	Sonepat	7
7.	Panipat	11

2. INSTALLATION OF DUAL BUTTON FLUSHING CISTERN

Haryana Govt. has issued notification on 13.08.2014, making installation of dual button cisterns (capacity 10/5 Litre and 6/3 Litre) mandatory for all types of plot holders (new buildings) in HSVP areas in addition to all Govt. Buildings and Buildings in

licensed areas. Occupation certificate shall not be issued in the absence of dual button flushing cisterns in these buildings.

3. GRADED TARIFF FOR ECONOMIC USE OF WATER

The graded water tariff has been implemented in various Urban Estates in Haryana for economical domestic use of water.

4. REUSE OF TERTIARY TREATED / RECYCLED WATER

To avoid exploitation of ground water, tertiary treated water is being used for irrigation/flushing purpose in some of Urban Estates of HSVP. Efforts are being made for its implementation in other Urban Estates also.

21. Estimation of sewage in towns encasement of river Yamuna.

The estimation for generation of sewage for population upto year 2040 and the gap in treatment capacity is given in the table.

Estimation of sewage generation and treatment upto the year 2040								
Sr. No	Name of Town	Treatment CPACITY				Treatment Capacity required 2040 in (MLD)	Gap in treatment upto 2040 (in MLD)	Remarks
		Existing	Under Construction	In planning stage	Total			
1	Pataudi	4.5			4.5	4	-	
2	Farrukhnagar	3			3	2.6	-	
3	Sohana	6			6	7.1	1.1	
4	Beri	2			2	3.1	1.1	
5	Bahadurgarh	54			54	33.1	-	
6	Jhajjar	10.5			10.5	9.4	-	
7	Safidon	9			9	6.7	-	
8	Nilokheri	6			6	3.5	-	
9	Taraori	5.5			5.5	5	-	
10	Indiri	1.5	4		4	3.4	-	New STP of 4 MLD is under construction in place of existing 1.5 MLD
11	Karnal	58	8		66	58.5	-	Covered under AMRUT
12	Nissing	4			4	3.4	-	
13	Assandh	5			5	5.3	0.3	
14	Gharuaunda	3	7		7	7.3	0.3	New STP of 7 MLD is under construction in place of existing 3 MLD

Estimation of sewage generation and treatment upto the year 2040								
Sr. No	Name of Town	Treatment CPACITY				Treatment Capacity required 2040 in (MLD)	Gap in treatment upto 2040 (in MLD)	Remarks
		Existing	Under Construction	In planning stage	Total			
15	Ladwa	7			7	5.6	-	
16	Nuh	3.6			3.6	3.1	-	
17	Ferozpur Jhirka	5			5	4.8	-	
18	Punahana	4.5			4.5	4.8	0.3	
19	Palwal	9			9	25.6	16.6	Covered under AMRUT
20	Hathin	4.5			4.5	2.8	-	
21	Hassanpur	3			3	2.2	-	
22	Hodal	9			9	9.7	0.7	
23	Panipat	90			90	57.3	-	
24	Samalkha	5			5	7.7	2.7	
25	Meham	5			5	4	-	
26	Rohtak	83.5			83.5	72.5	-	
27	Kalanaur	3.5			3.5	4.5	1	
28	Sampla	4			4	4	-	
29	Gohana	11.3			11.3	12.7	1.4	
30	Ganaur	7			7	6.9	-	
31	Sonepat	55			55	56.1	1.1	Covered under AMRUT
32	Khorkhoda	4.5			4.5	4.9	0.4	
33	Jhagadhri	25	49		74	24.2	-	Covered under AMRUT
34	Yamuna Nagar	10	30		40	42.1	2.1	Covered under AMRUT
35	Radaur	3.5			3.5	2.7	-	
36	Chhachhrauli	3			3	2	-	

22. Open defecation in Distt.

The action taken and plan of the Municipal Corporation, Faridabad in this regard alongwith future course of action alongwith timelines.

Under SBM, MCF is undertaking all the major steps to make Faridabad an Open Defecation Free City. The following activities are being undertaken by MCF till date:

- IHHL – 19932 applications were received out of which 14297 applications have been approved. 1st installment of IHHL have been given to 12464 beneficiaries and release of 1st

installment for 393 out of balance 1833 beneficiaries in under process. 12517 beneficiaries have constructed their toilets.

- Existing Toilets – 29 Public Toilets already exists and 29 Common Toilets are in place. 179 pre cast PT are in working condition in OD locations (jhuggis, slums, etc.) of Faridabad, 80 pre cast toilets are in progress and will be installed within 2 months. 9 movable toilets (4 seaters) are in working condition and are deployed as per requirement for different activities. E.g. construction site, functions/events, etc.
- Proposed and under construction Toilets – 1 PT (4 Male Units, 4 female units, 2 handicapped units) is under construction (605 completed) near Neelam Cinema, NIT Faridabad. Out of 47 CTs (4 Male Units, 4 female units, 2 handicapped units) proposed 2 CTs at Dayal Nagar and Dabua Colony are in construction stage (55% completed). Rest of the CTs will be constructed once the land approval is cleared from MCF or HUDA. Tenders have been floated for 6 Deluxe PTs. Bids have been received and are under evaluation stage.

Apart from this Community Toilets (10 seaters) have also being constructed by MCF under Corporate Social Responsibility (CSR) by Faridabad Industrial Association (FIA). Few of the locations can be mentioned as: Krishna Nagar (Ward no. 32), Ram Nagar (Ward no. 13), Sant Nagar (Ward No. 31) and Milhard Colony (Ward no. 13).

Public and Community Toilets have also been proposed by MCF under Built Operate and Transfer Basis to various private agencies. These agencies generate revenue through advertisement basis and undertake the operation & maintenance of these toilets.

Under IHUWASH Project which is being implemented in Faridabad by National Institute of Urban Affairs (NIUA) and funded by United States Aid for International Development (USAID), there are provisions for constructing innovative and smart toilets for Public and Community Toilets at the identified stress locations in order to improve the Public Sanitation System. The innovations proposed in the toilets would be based on technologies to reduce water usage, recycling of waste water, use of solar energy, and would focus on lesser manual intervention in the operation and maintenance system. These toilets are already on the verge of construction in Mysore and Udaipur. Site assessment for proposing Public Toilet/Community Toilet at Faridabad have been done for seven selected sites. As per the site analysis and recommendation of MCF Officials, it has been suggested to propose PT at Nahar Singh Park, Ballabgarh. Designs for proposing Innovative Public Toilet at Nahar Singh Park, Ballabgarh have been submitted to MCF and the work would initiate once the formal land approval is furnished by MCF. Similarly, Community Toilets will be developed in areas where there is lack of proper water and sanitation facility. These toilets will also contribute in livelihood generation by providing ownership to the community for operation and maintenance.

Open urination is also an issue in Faridabad City. Innovative methods to control urination along the flyovers/walls of public buildings will be adopted by proposing stand and pee post at designated locations. The waste can be utilized for other usage e.g. – fertilizer in agricultural land, electricity generation, etc. A fund of INR 1 crore will be required to undertake the proposal at a pilot scale in Faridabad.

23. Disposal by sewages through tankers by private parties.

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On 12th August 2018, a notification has been issued by MCF to owners of private tankers for discharging of collected sewage at STP and in order to do so, they have to pay Rs. 100 for each tanker discharge. A fine of Rs. 2000/- will be levied, if found guilty and not following the norms of MCF.

Plan of Municipal Corporation, Gurugram.

The decentralized STPs planned along the drains shall also be planned for receiving untreated sewage by tankers for treatment. The practice of disposing sewage in drains through the tanker is going on in many town/cities. Municipal Corporation Gurugram has finalized the rate contract for disposal of sewage through Suction Tanker. Under this Septage Management Plan, the sewage of unauthorised colonies and septic tanks shall be listed through Suction taken and disposed-off at 35 No. identified locations of STP/MPS. This will be monitored by online monitoring system through QR code.

The above plan shall be implemented for all the towns in Haryana.

24. Involvement of Civil Society/Creation of awareness

For involving the general public and other stakeholders, it has been decided to create a website by HSPCB giving a provision for inviting suggestions, comments and feedback. A redressal system will also be provided through concerned Departments and action taken on the suggestions/complaints in the portal. It has also been planned to involve eco-clubs through the Education Department. HSPCB will be issuing advertisements on such sensitive issues periodically. Besides, the SESTF, constituted at District level will also actively involve public participation and in redressal of issues relating to pollution and cleaning of the rivers/drains.

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MCF is taking active stand in making Faridabad an Open Defecation Free City through creating awareness among the citizens/students/communities, etc. Regular visits are being conducted by MCF officials to the localities/schools/colleges to spread awareness about the importance of maintaining a healthy and hygienic lifestyle by keeping their surroundings clean.

Also, community awareness is a major component of the IHUWASH Project. Similar events are being conducted through the support of Wash Innovation Lab in the Project cities at regular intervals. Global Handwashing Day (GHW) event was celebrated on October 15th, 2018 at GGSS School No. – 5, Faridabad through the support of Wash Innovation Lab (established under IHUWASH Project in Manav Rachna International Institute of Research and Studies, Faridabad) and MCF. The program was organized to create awareness among the school children on the importance of hand washing and its impact on healthy & hygienic lifestyle. Around 126 students from the school participated in the drawing and slogan competition for GHW Day. The Theme for the competition was Clean Hands - A recipe for Good health. Around 350 students took part

in the event. A live demo on how to wash hands and a skit on the importance of hand hygiene was performed by the students of MRIIRS. WIL had also developed a set of interactive games for the students on how to wash hands, when and why washing hands is important. The winners of the games were felicitated by prizes as organized by the WASH Lab. Prize and Certificates were distributed to the selected participants of the Drawing and Slogan Competition. Kits sponsored from Savlon under Savlon Swasth India Mission along with handwash pamphlets were distributed to 350 students who attended the event.

Under IHUWASH project, a WASH Forum would be created which will provide a platform for city stakeholders to discuss about the ongoing issues of Faridabad city e.g. Water Scarcity, Depletion of Ground Water Level, Waste Management, Sanitation and Hygiene, etc. and to implement innovative solutions through multi stakeholder's consultation. WIL in Faridabad would Identify important stakeholders for the WASH forum and form a group/committee with designated roles and responsibilities for undertaking activities under WASH Sector improvement in Faridabad. The WASH FORUM will have a steering committee comprising of core members. The members of the committee should have representatives from government, NGO, Private sector, Academia and public who are interested in WASH and any individual with interest in city WASH sector can be part of the WASH Forum. WASH LAB will develop a detailed ToR for forming the committee and WASH FORUM. It would also define the detailed objective of the Forum, roles and responsibility of the committee members. The first two years of WASH Forum will be under the management of WASH LAB. Post two years, the core committee members may choose the future course of action. WASH forum can decide on membership for any citizen to be its part.

25. Organizing of Health Camps.

Health Department has been directed to organize health camps in areas prone to water pollution and to get profile studies conducted on specific diseases observed in the locality, through reputed institutions. The Health Department informed that it had issued directions on 22.11.2018 all the District Level Officers to organize health camps. Health Department shall review the status and progress in the case in its monthly meeting.

Concluding Remarks

The above action plan has been prepared on specific action points after consulting all the stakeholder Departments of Haryana and they have also provided a specific time frame for every activity to bring down the pollution contributing to river Yamuna. This will be reviewed by the Departments concerned, at their level, in every monthly meeting. Further, the progress of all the actions shall be reviewed by Administrative Secretary of Environment Department every month with the Secretaries / senior officers of all stakeholder Departments, where the progress vis-a-vis timelines will be reviewed. It has also been decided that a Quarterly Review meeting will be done at the level of Chief Secretary with the Administrative Secretaries concerned and the progress will be reported after every Quarterly Review Meeting, to the Monitoring Committee appointed by NGT and the status will be reported to NGT as well.