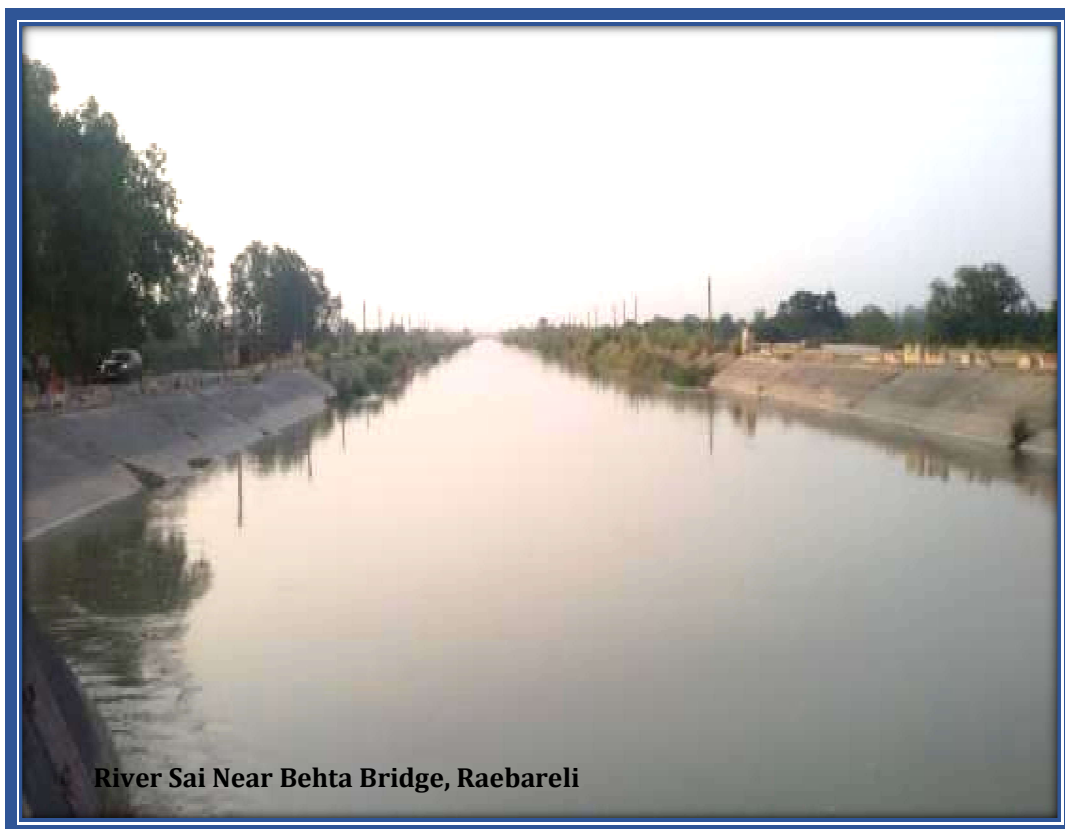


**ACTION PLAN
FOR
RESTORATION OF POLLUTED STRETCH
OF
RIVER SAI
FROM
UNNAO TO JAUNPUR**



**UTTAR PRADESH POLLUTION CONTROL BOARD
TC - 12V, VIBHUTI KHAND, GOMTINAGAR,
LUCKNOW (UP)**

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1. INTRODUCTION

The Sai River, also referred to as the Adi Ganga, is a tributary of the Gomti River in the Indian state of Uttar Pradesh. River Sai rises from a pond in village Bijgwan near Pihani in district Hardoi and travel about 600 km to form district boundary between Lucknow and Unnao. After passing through Hardoi, Raebareli and Jaunpur district where it finally joins the Gomati River at Rajepur in Jaunpur district (25°39'8.63"N 82°48'5.00"E). Therefore, the total length of River Sai from its origin point to its confluence with Gomti River at Jaunpur is approximately 750 kms which included 594 kms of polluted stretch identified under Priority-V of list of rivers for their rejuvenation and restoration. In Hardoi local call the stretch as "Jhabar" from where a river called Bhainsta take shape. The river flows for a good 10 kms before getting it more popular name Sai. The area under study is a part of the Indo-Gangetic Plains, which lies between the latitude 27°42'22.52"N to 25°39'44.86"N and the longitude 80°8'34.27"E to 82°46'45.10"E in various districts of Uttar Pradesh.

The Sai catchment is bounded in north by Ghaghara catchment while in south by Ganga catchment. Throughout its journey Sai river travel in the alluvial terrain and transports the sediment derived from Himalayan terrain. In its long journey, the river receives water from other streams also namely Bhainsta, Loni, Sakarni and Bakulahi rivers.



Fig : 1.1, River Sai at Behta Khurd, Raebareli district

As per the last year's monitoring of river water quality in the identified polluted stretch of river Sai, falls in category -D which can be used for propagation of Wild life and Fisheries (Class - D, specified as per IS - 2296-1982).

The climate of the area is characterized by a moderate type of subtropical monsoon. The average annual rainfall in the area is about 1000 mm, out of which the main part is received during the monsoon period. The major land use is agriculture and there is no significant forest cover.

The soil of the area is loam to silty loam and slightly eroded associated with fine soils. The total length of River Sai from its origin point at Pihani in Hardoi ditrict to its confluence with Gomti River at Jaunpur is approximately 750 kms which included 594 kms of polluted stretch identified under Priority-V of list of rivers for their rejuvenation and restoration. Though, it is a

perennial river that gets flow throughout the year. Presently, the maximum percentage of flow in the river is of domestic wastewaters.

The polluted stretch of river receives considerable amounts of wastewater every day generated from various anthropogenic activities and sewage system flow from different municipal area of Unnao, Raebareli and Pratapgarh districts which leads to deterioration of its water quality.

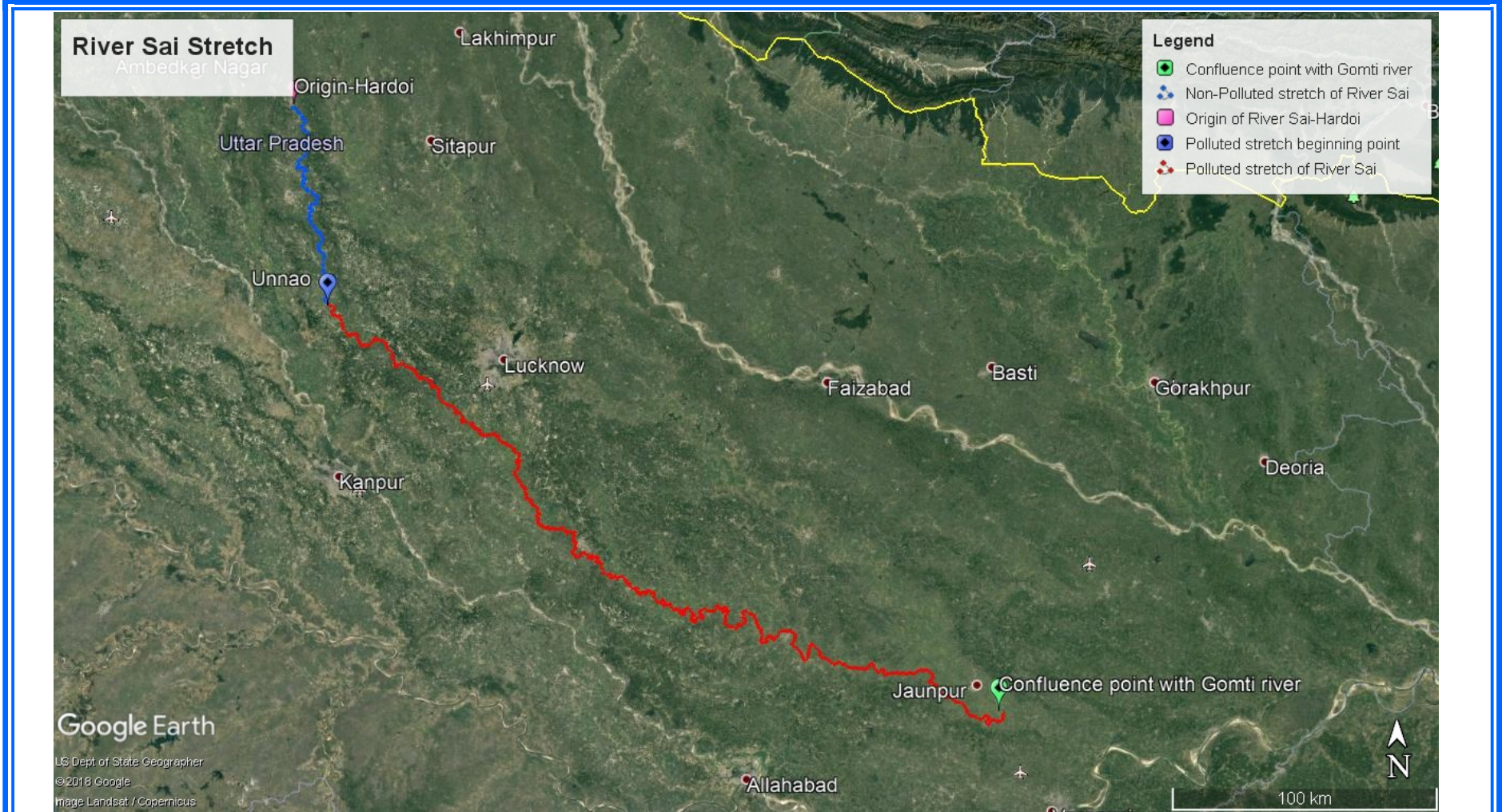


Fig:1.2: Google Earth image showing stretch of River Sai from Hardoi to Jaunpur alongwith the polluted stretch from Unnao to Jaunpur

1.1 POLLUTED STRETCH OF SAI RIVER FROM UNNAO TO JAUNPUR

Polluted Stretch of River Sai begins from Unnao district and flows South, South east coursing through Raebareli, Pratapgarh districts ultimately confluencing with River Gomti at Rajepur in Jaunpur district of Uttar Pradesh. During its course from origin to its confluence in River Gomti at Jaunpur, it traverses a distance of about 750 Kms, out of which polluted stretch is about 594 kilometres which lies in districts Unnao to Jaunpur, Uttar Pradesh.

There are 76 villages located on the banks of this Priority-V polluted stretch of river Sai. The total population of these villages is 1,71,508 which generates 17.95 MLD of sewage.

There are 03 water polluting industries located in the catchment area of the present stretch of River Sai Appendix -3. Out of these 3, one chemical industry is closed itself, one Pulp & Paper unit is closed by board and one unit is semi-operational (only assembling of electronic parts is done).

2. OBJECTIVE OF THE ACTION PLAN

The objective of the Action Plans is to restore the quality of this priority -5 polluted stretch of River Sai to be fit for at least bathing purposes within 06 months from the date of action plan gets approved, as directed by Hon'ble National Green Tribunal vide its order dated 20th September 2018 passed in the original Application No 673/2018 in the matter of NEWS ITEM PUBLISHED IN '*THE HINDU*' AUTHORED BY *SHRI JACOB KOSHY* titled " More river stretches are now critically polluted: CPCB.

3. POLLUTION INVENTORY

3.1 DETAILS OF DRAINS POLLUTING RIVER SAI

In the polluted stretch under question of River Sai, total discharge of 17.95 MLD is estimated in the form of sewage and no industrial effluent is discharged in the river. As per desk inventory, only 01 Industrial drain is found in Raebareli which has no discharge directly into the River Sai. The treatment of sewage is a major area of concern as total estimated sewage discharge of 17.95 MLD of sewage is being discharged without any treatment. A detailed drain wise data regarding sewage, industrial effluent, number of industries discharging into drain, status of tapping and status of installing of bar meshes etc. is given in **Appendix - 1**.

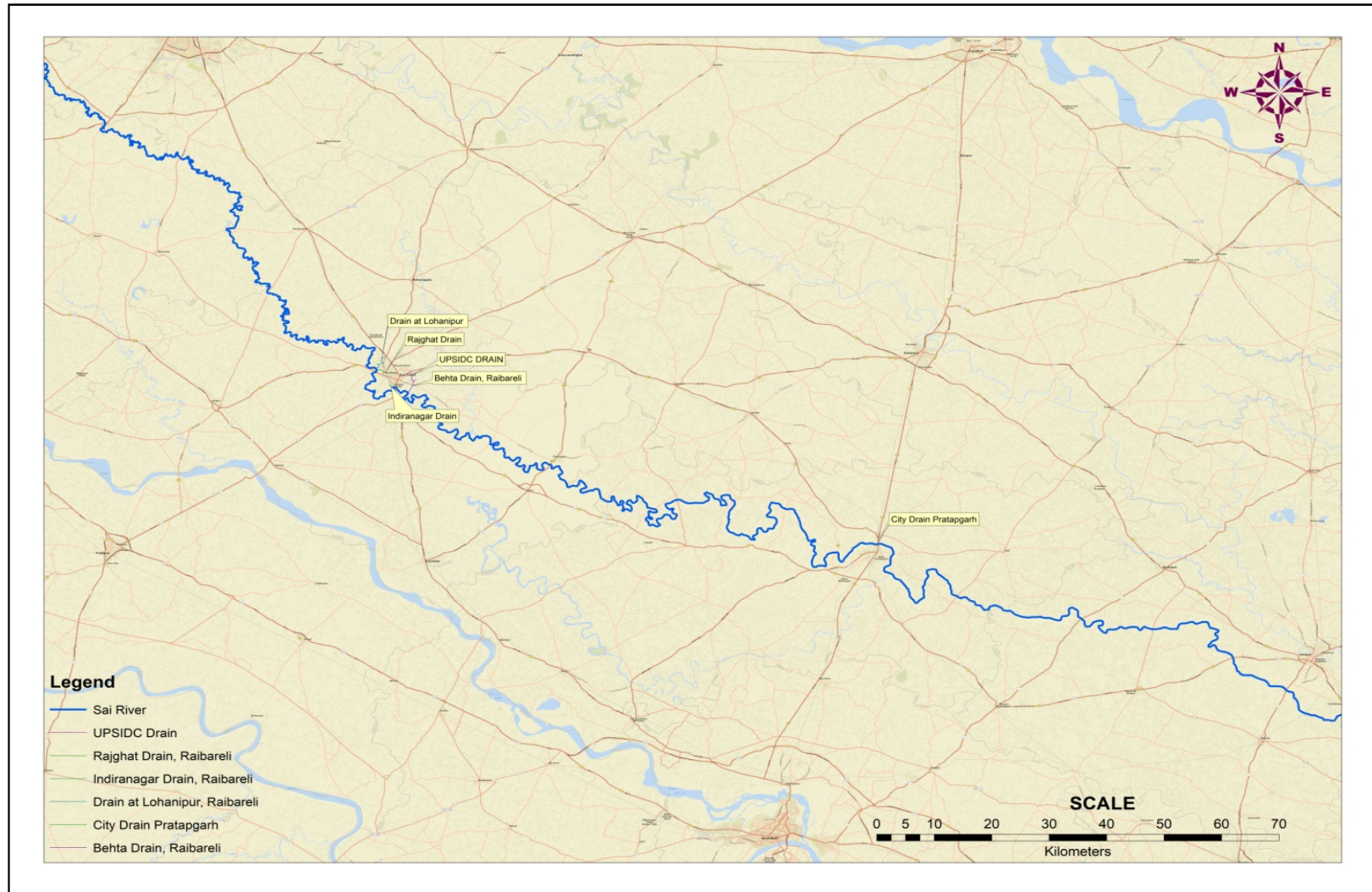
Summary of drains polluting River Sai

S No.	District	No. of Drains	Type of Drains			Status of Drains			Industries		Sewage Discharge (MLD)			Total Discharge in the River (MLD)
			Domestic	Industrial	Mixed	Tapped	Untapped	Partially Tapped	Number	Treated Effluent (MLD)	Treated	Untreated	Total	
1	Raebareli	05	04	01	00	--	Untapped	--	03*	--	--	12.0	12.0	12.0
2	Pratapgarh	01	01	--	--	--	Untapped	--	00	--	--	8.95	8.95	8.95
		07	06	01					03					17.95

*Non-operational Industrial units and the drain is found dry.

Source: Joint Verification report submitted in Hon'ble NGT in OA No. 200/2014 and desk inventory of UPPCB

Fig : 3.1, GIS Map of River Sai Polluted Stretch with Drains



A. LOHANIPUR DRAIN (RAEBARELI)

a. Origin

Lohanipur Drain originates from Gokulpur in Raebareli district, Uttar Pradesh. Coordinates of its origin point are: Latitude: 26°15'19.1" N & Longitude: 81°14'02.3"E.

Lohanipur drain joins Sai River at Lohanipur. Coordinates of its meeting point in River Sai are Latitude: 26°14'1.95"N & Longitude: 81°13'6.53"E.

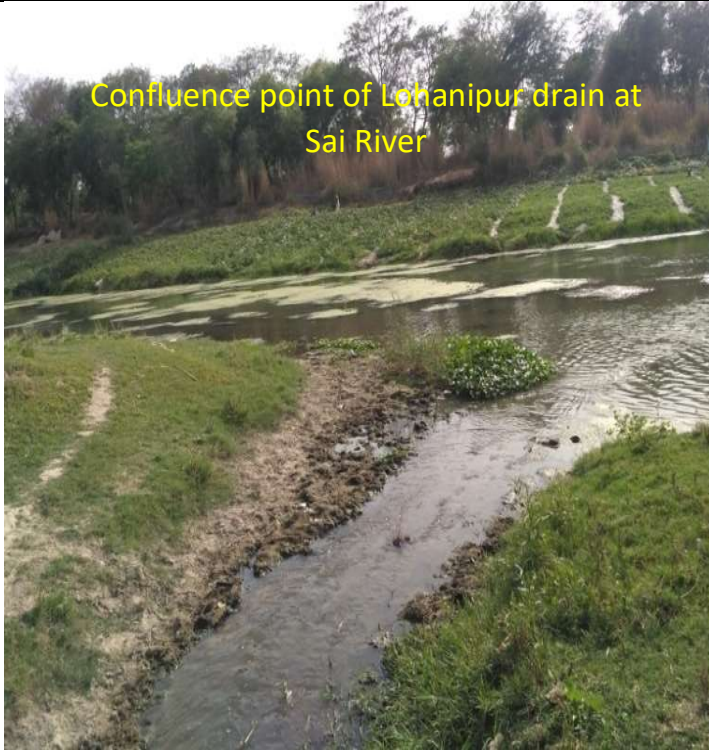
b. Length covered

Distance covered by Lohanipur drain from Gokulpur to its meeting point to River Sai in Lohanipur is approx.: 4.83 km.

c. Details of discharge into the drain

Lohanipur Drain carries domestic waste water of nearby villages. Total Discharge from Lohanipur Drain to River Sai is 1.5 MLD which is untreated in nature.

WATER QUALITY OF CONFLUENCE POINT OF DRAIN AT LOHANIPUR,RAEBARELI	
Nature of drain	Domestic
Parameters	Results
pH(pH Scale)	7.1
TSS (mg/l)	88
DO (mg/l)	2.4
BOD (mg/l)	38
COD (mg/l)	156
T Coli (MPN /100ml)	1,60,000
Date of Sampling	07-05-2019



B. RAJGHAT DRAIN (RAEBARELI)

a. Origin

Rajghat Drain originates from Ratapur Road, PNT Colony in Raebareli district, Uttar Pradesh. Coordinates of its origin point are: Latitude: 26°13'34.32" N & Longitude: 81°14'05.74"E.

Rajghat drain joins Sai River at Unnao-Raebareli Road Near Chak Bhadurpur, Raebareli. Coordinates of its meeting point in River Sai are Latitude: 26°13'41.37"N & Longitude: 81°13'6.71"E.


b. Length covered

Distance covered by Rajghat drain from Ratapur Road, P&T Colony to its meeting point to River Sai in Unnao-Raebareli Road near Chak Bhadurpur is approx. 2.32 km.

c. Details of discharge into the drain

Rajghat Drain carries domestic waste water of various wards of Raebareli city. Total Discharge from Rajghat Drain to River Sai is 3.0 MLD which is untreated in nature.

WATER QUALITY OF CONFLUENCE POINT OF RAJGHAT DRAIN, RAEBARELI	
Parameters	Results
Nature of drain	Domestic
pH(pH Scale)	7.3
TSS (mg/l)	102
DO (mg/l)	2.1
BOD (mg/l)	48
COD (mg/l)	188
T Coli (MPN /100ml)	1,60,000
Date of Sampling	07-05-2019



C. INDIRANAGAR DRAIN (RAEBARELI)

a. Origin

Indiranagar Drain originates from Indiranagar Awas Vikas Colony in Raebareli district, Uttar Pradesh. Coordinates of its origin point are: Latitude: 26°12'25.02" N & Longitude: 81°14'27.29"E.

Indiranagar drain joins Sai River at Indiranagar, Near Bibipur Mutfarrikat, Raebareli. Coordinates of its meeting point in River Sai are Latitude: 26°12'3.02 "N & Longitude: 81°14'41.29"E.


b. Length covered

Distance covered by Indiranagar drain from Indiranagar Awas Vikas Colony to its meeting point to River Sai in Indiranagar, Near Bibipur Mutfarrikat is approx.: 1.56 km.

c. Details of discharge into the drain

Indiranagar Drain carries domestic waste water of various wards of Raebareli city. Total Discharge from Indiranagar Drain to River Sai is 3.0 MLD which is untreated in nature.

WATER QUALITY OF CONFLUENCE POINT OF INDIRA NAGAR DRAIN, RAEBARELI	
Nature of drain	Domestic
Parameters	Results
pH(pH Scale)	7.5
TSS (mg/l)	116
DO (mg/l)	1.8
BOD (mg/l)	58
COD (mg/l)	218
T Coli (MPN /100ml)	>1,60,000
Date of Sampling	07-05-2019



Confluence point of Indira Nagar drain at Sai River

D. BEHTA DRAIN (RAEBARELI)

a. Origin

Behta Drain originates from Srinagar, Jagdishpur, Uttar Pradesh. Coordinates of its origin point are: Latitude: 26°12'21.98" N & Longitude: 81°16'32.25"E.

Behta drain joins Sai River at Mahanandanpur, Uttar Pradesh. Coordinates of its meeting point in River Sai are Latitude: 26°11'31.56"N & Longitude: 81°16'06.46"E.

b. Length covered

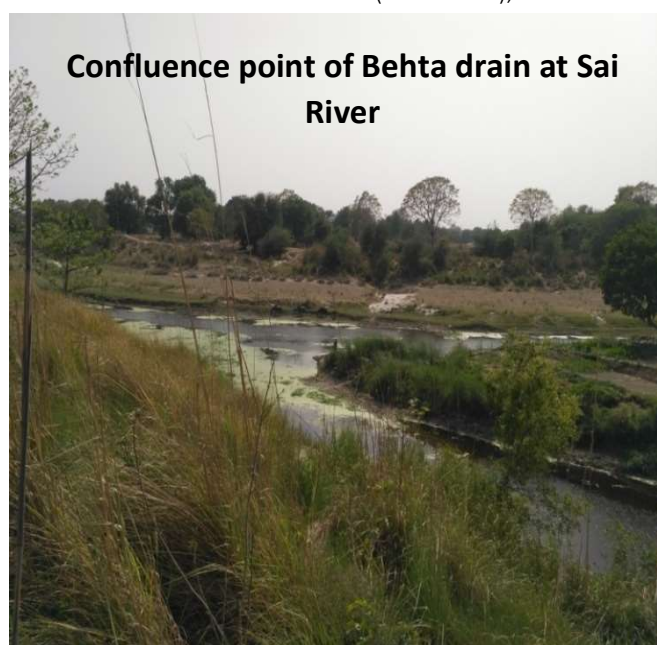
Distance covered by Behta drain from Srinagar, Jagdishpur to its meeting point to River Sai in Mahanandanpur is approx.: 2.86 km.

c. Details of discharge into the drain

Behta Drain carries domestic waste water of various wards of Raebareli city. Total Discharge from Behta Drain to River Sai is 1.50 MLD which is untreated in nature.

WATER QUALITY OF CONFLUENCE POINT OF BEHTA DRAIN(Ganda Nala),RAEBARELI

Nature of drain	Domestic
Parameters	Results
pH(pH Scale)	8.1
TSS (mg/l)	78
DO (mg/l)	7.0
BOD (mg/l)	18
COD (mg/l)	108
T Coli (MPN /100ml)	63,000
Date of Sampling	07-05-2019



E. UPSIDC DRAIN (RAEBARELI)

a. Origin

UPSIDC Drain originates from Srinagar, Raebareli, Uttar Pradesh. Coordinates of its origin point are: Latitude: 26°13'26.21" N & Longitude: 81°16'17.953"E.

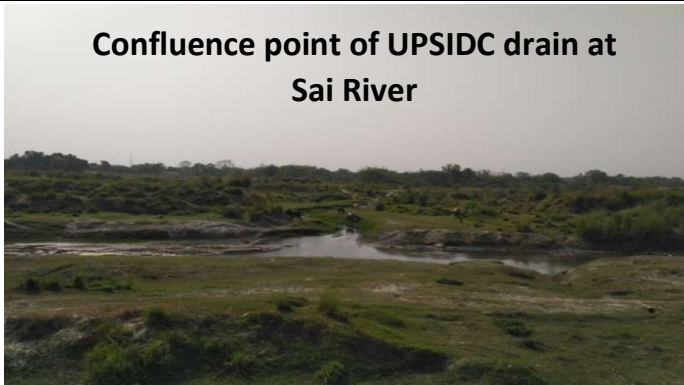
UPSIDC drain joins Sai River at Srinagar, Raebareli, Uttar Pradesh. Coordinates of its meeting point in River Sai are Latitude: 26°12'42.34"N & Longitude: 81°16'36.94"E.

b. Length covered

Distance covered by UPSIDC drain from Srinagar, Raebareli to its meeting point to River Sai in Srinagar, Raebareli itself is approx.: 2.33 km.

c. Details of discharge into the drain

UPSIDC Drain has no waste water discharge into the river Sai as it is dry in nature. Though, it has been categorised as industrial drain.

WATER QUALITY OF CONFLUENCE POINT OF UPSIDC DRAIN, RAEBARELI		
Nature of drain	Industrial	
Parameters	Results	
	DRY	

F. CITY DRAIN (PRATAPGARH)

a. Origin

City Drain originates from Prayagpur Aurehta, Uttar Pradesh. Coordinates of its origin point are: Latitude: 25°55'55.20" N & Longitude: 82°06'05.33"E.

City Drain joins Sai River at Bela Pratapgarh, Uttar Pradesh. Coordinates of its meeting point in River Sai are Latitude: 25°56'4.49"N & Longitude: 82° 0'9.73"E.


b. Length covered

Distance covered by City Drain from Prayagpur Aurehta to its meeting point to River Sai in Bela Pratapgarh itself is approx.: 0.44 km.

c. Details of discharge into the drain

City Drain carries domestic waste water of habitations settled along the course of River Sai. Total Discharge from City Drain to River Sai is 8.95 MLD which is untreated in nature.

WATER QUALITY OF CONFLUENCE POINT OF, CITY DRAIN, PRATAPGARH	
Nature of drain	Domestic
Parameters	Results
pH(pH Scale)	8.4
TSS (mg/l)	118
DO (mg/l)	0.8
BOD (mg/l)	65
COD (mg/l)	252
T Coli (MPN /100ml)	>1,60,000
Date of Sampling	07-05-2019



Confluence point of City drain at Sai River

3.2 DETAILS OF SEWAGE POLLUTION SOURCES

As mentioned above, total sewage discharged into Sai river through 06 drains is approximately 17.95 MLD. There are 02 cities Raebareli and Pratapgarh located in the catchment area of the river Sai (**Appendix - 2**). The sewage and other effluent generated from these cities contribute to the organic load of the river. As mentioned earlier, the treatment of sewage is a major issue of concern, till date 5 drains of Raebareli with a cumulative flow of 9.0 MLD(UPSIDC drain was found dry) have been identified and a STP of 18.0 MLD is proposed in Raebareli to treat the sewage receiving from these drains. The only drain in Pratapgarh city with a flow of 8.95 MLD will be intercepted and routed to STP under construction at Pratapgarh near Belhamayee Bridge (8.95 MLD). There is also a need of complete household sewer connections and connectivity of conveyance channel to the Sewage Treatment Plants. The details of Sewage Treatment Plants along with installed capacity, utilized capacity, operating agency and discharge points are given in the table below:-

**Details of Plan for Treatment of Sewage Gap in River Sai Priority-V Stretch from
Unnao to Jaunpur**

Sl. No.	District	Name of Drain (City)	Details of STPs proposed		Details of DPR				Expected date of completion
			Name	Capacity (in MLD)	Status (under preparation/prepared)	Amount of DPR (Rs. In crore)	Status of approval (submitted/approved)	Funding Agency	
1.	Raebareli	All 05 drains of Raebareli	Raebareli Sewage Treatment Plant & Sewerage work	18.0	Under preparation	111.89	Approved	AMRUT	30/04/2020
2.	Pratapgarh	City Drain	Pratapgarh Sewage Treatment Plant	8.95	Prepared	18.2075	STP Installed	State Sector	12/2010 Prepared***

** *Indira Nagar Drain, UPSIDC Drain, Police Line Drain*

****Installed but not connected with sewer line yet.*

Analysis of gap generated in Sewage Treatment based on projection of Population for Year 2030 in the catchment of River Sai

S. NO.	CITY	POPULATION (AS PER CENSUS 2011)	ESTIMATED POPULATION 2030	WATER CONSUMPTION (MLD) (@135)	ESTIMATED SEWAGE GENERATION YEAR 2030 (MLD)	INSTALLED CAPACITY OF EXISTING STP (MLD)	PROPOSED STP CAPACITY (MLD)	GAP IN STP CAPACITY UTILIZATION BASED ON POPULATION YEAR 2030 (MLD)
1	Raebareli	191316	258782	34.94	27.95	No existing STP	18.0	9.95
2	Pratapgarh	76133	101447	13.70	10.96	8.95 *	--	2.01
	Total			48.63	38.90	8.95	18.0	11.96

Note- There are 2 Cities situated in the catchment area of Polluted Stretch of River Sai Estimated Sewer Generation on the basis of Census 2011 is 38.90 MLD. There are no existing STPs, but there a STP of 18 MLD in Raebareli and one of 8.95 MLD in Pratapgarh is proposed. There will still be a gap in the treatment of Sewage Generated and STPs to be installed at Raebareli and Pratapgarh.

*Installed but not connected with sewer lines yet.

3.3 DETAILS OF WASTE MANAGEMENT

3.3 (a) Municipal Solid Waste

Only 02 cities located in the catchment area of polluted stretch of River Sai as Unnao lies at far distance from the catchment of River Sai. Hence, total of 81.9 TPD Solid Waste is generated from the 2 cities lies in the catchment of the polluted stretch of River Sai. All the cities/ULBs- Unnao/Raebareli/Pratapgarh/Jaunpur has been declared ODF by QCI. Although, the ULBs have been practicing door to door collection of MSW, however, there has been lack of processing facility and it is required that ULBs establish Municipal Solid Waste Treatment & Disposal Facility as early as possible for restoring and maintaining the water quality of the river stretch under consideration. The city wise details of municipal solid waste generation are given below:

S.No.	District	Waste generated (TPD)	Waste Collected (TPD)	Door to Door (Collection)	Remarks
1	Raebareli	70	70	100%	As of now the MSW processing facility is not established /functional in the ULBs. For city of Raebareli and Pratapgarh the department has issued a LoA for setting up of WTE plants, however, it is required to work on decentralized processing of waste till the WTE plants are established.
2	Pratapgarh	11.9	11.9	100%	
	Total	81.9	81.9		

There is no legacy waste dumping site within 500 meter of Sai River within the polluted stretch from Unnao to Jaunpur.

There are 76 villages located on the banks of this Priority-V polluted stretch of river Sai. The total population of these villages is 1,71,508 which

generate 81.9 TPD of un-segregated solid waste. This un-segregated solid waste is dumped in open plots or ponds/low lying areas in the villages which contribute to air and groundwater pollution. Details of villages, their location, population etc. is given in **Appendix -4**. The details of existing wetlands are given in **Appendix - 5**.

Gap Analysis of Municipal Solid Waste Treatment based on Year 2030 Population in the catchment of River Sai

S. NO.	CITY	POPULATION (AS PER CENSUS 2011)	ESTIMATED POPULATION 2030	MSW GENERATION ESTIMATED (TPD) (@350 gm/capita/day)	AVAILABLE PROCESSING FACILITY (TPD)	GAP (TPD)	PROPOSED PROCESSING FACILITY & TIMELINE
1	Raebareli	1,91,316	25,782	90.57	70	20.57	1 YEAR AS PER APENDIX-8
2	Pratapgarh	76,133	1,01,447	35.51	NO	35.51	
				126.08		56.08	

There are 2 Cities situated at the catchment area of Polluted Stretch of River Sai. Estimated MSW Generation on the basis of Census 2011 is 126.08 TPD. There is one processing facility available in Raebareli namely M/s ACCORD HYDROAIR PVT. LTD at Jaitpur, Parsadepur, near PAC Ground in Raebareli which has 70 TPD capacity of compost production and in Pratapgarh, Nagar Nigam shall identify the site for such wastes these towns. Therefore, gap of 56.08 TPD exists in the catchment area of polluted River Stretch.

3.3 (b) Bio-Medical Waste

In 02 cities located in the catchment of polluted stretch of river Sai, there are 888 Health Care Facilities which generate 0.92 TPD of Bio-Medical Waste. All the Health Care Facilities have valid agreements with 02 Common Bio-Medical Waste Treatment Facilities situated in Prayagraj for collection, transportation and disposal of Bio-Medical Waste. The segregation of Bio-Medical Waste and disposal in the CBWTFs as per the provisions of Bio-Medical Waste Management Rules, 2016 is a major area of concern. The mixing of Bio-Medical Waste with Municipal Solid Waste is also observed which also needs to be addressed. The details of Bio-Medical Waste generated in the Cities/Towns and details of Common Bio-Medical Waste Treatment Facilities are given below:

S.No.	District	Total No. Of H.C.Fs	Bio Medical Waste generated (TPD)	Bio Medical Waste Treated (TPD)	No. Of H.C.Fs attached with CBWTF	No. Of H.C.Fs having captive treatment facility	Gap between waste generated & treatment capacity available (TPD)	Remarks
1	Raebareli	701	0.587	0.587	192	0	--	H.C.Fs attached with Ferro Build Hard (I) Pvt. Ltd. Naini, Allahabad
2	Pratapgarh	187	0.343	0.343	86	0	--	H.C.Fs attached with Sangam MediCare, Hadiya Allahabad
		888	0.920	0.920	278*	00	--	

Source: Desk Inventory of UPPCB

*Note- Remaining 610 HCFs/Clinics which generate no waste.

Details of Bio-Medical Waste Treatment Facilities

S.N.	Name of the CBWTF operator connect No. & Address	Total No. Of HCFs Being Covered	Coverd District	Treatment facility available			BMW Treatment capacity Kg/day	Number of Vehicles	Status of On Line Continuous Emission Monitoring System & Connectivity	Validity of issued Authorization
				Incinerator	Auto Clave	Shredder				
1	2	3	4	5	6	7	8	9	10	11
1	Ferro Build Hard (I) Pvt. Ltd. Naini, Allahabad	347	Prayagraj, Raebareli, Pratapgarh	200 kg/hr	720 kg/day	400 kg/day	3800	09 (with GPS)	Installed & not Connected	18.12.2019
2	Sangam MediCare, Hadiya Allahabad	158	Prayagraj, Varanasi, Kaushambi, Sonbhadra, Mirzapur, Jaunpur, Pratapgarh, Chitrakoot	250 kg/hr	500 litr/shift	400 kg/day	4000	10 with GPS	Installed & Connected	19.01.2023

Source: Desk Inventory of UPPCB

3.3 (c) Hazardous Waste

The total hazardous waste generation in the catchment area of the stretch from 08 industrial units is 1.643 Ton/Annum which is collected, treated and disposed by 01 Common Facilities located near Kanpur Dehat. The details of Hazardous Waste generated and the treatment facilities are given below.

S.No.	District	Total No. Of Hazardous Waste Generating Units	Hazardous Waste Generated (TPA)				Facility for Treatment & Disposal of Hazardous Waste	Gap between waste generated & treatment capacity available (TPA)
			Incinerable	Landfillable	Recyclable	Total		
1	Raebareli	08	--	0.004	1.639	1.643	The Incinerable & Landfillable Hazardous waste is disposed to authorized TSDFs situated at Kanpur Dehat and the waste is sent to TSDF Kanpur by industries	There is no gap between generation & disposal of Hazardous Waste
2	Pratapgarh	NIL	--	--	--			
	Total					1.643		

Source :Desk Inventory of UPPCB

3.3 (d) E-Waste

In the State, total 43 Common E- Waste Disposal Facilities are operational. Out of these, 10 units are collection center, 16 have the facility of collection & dismantling whereas remaining 17 are collection, dismantling and recycling centers. The cumulative capacity of these plants- 2,48,000/annum. The quantum of E-Waste generated in the State is approximately 86,000 TPA. Hence, there is no gap in the generation and treatment infrastructure for safe E-Waste handling as per the provisions of E-Waste Rules, 2016. The status report of E-Waste disposal facilities in the State is enclosed at **Appendix-6**.

4. DETAILS OF INDUSTRIAL POLLUTION SOURCES:

There are 03 water polluting industries located in the catchment area of the present stretch of Sai river **Appendix -3**. Out of 3, two are non-operational and only 1 is operational in which only assembling work is done that discharges no industrial effluent in the river. The drain wise and sector wise distribution of industries and is given in tables below.

4.1 DETAILS OF INDUSTRIAL UNITS

The drain wise and sector wise distribution of industries and their discharge is given in the tables below:

Summary of Industrial Units

S N	District	Drain	Type of Industry							Total Effluent Discharge (MLD)
			* The Type of Industry may be changed as per local conditions							
			Sugar	Pulp & Paper	Distill ery	Textile	Slaughter House	Others	Total	
1	Raebareli	UPSIDC drain	--	01	--	--	--	02	03	Dry*

*UPSIDC drain is found dry and out of 3 industries connected with this drain 2 are non-operational and in 1 only assembling work is done that discharges no industrial effluent in to the drain.

4.2 GAP ANALYSIS OF INDUSTRIES SITUATED IN THE CATCHMENT OF RIVER SAI

Presently polluted stretch of River Sai receives no treated or untreated industrial effluent as out of 3 industries, two are non-operational and in the remaining one industry, only assembling work is done which discharges no industrial effluent in the river. Hence, there is no gap reported of industrial effluent being discharged into the river Sai.

5. STATUS OF GROUND WATER

The Priority-V polluted stretch of Sai River from Unnao to Jaunpur lies in Doab region of Ganga and Yamuna rivers, more specifically in the Gomti River Basin. The river flows through 10 Development Blocks in the districts of Unnao, Raebareli, Pratapgarh and Jaunpur. The status of Groundwater in these blocks is given below:

River Sai Stretch from Unnao to Jaunpur Ground Water Status

S. N.	Name of District	Name of Block	Pre Monsoon / Post Monsoon water level (Meters)				Status of Exploitation
			May-14	Aug-14	Nov-14	Jan-15	
1	Unnao	Auras	5.87	5.42	5.10	6.02	Safe
		Ganj Moradabad	12.33	11.31	11.46	11.81	Safe
2	Raebareli	Harchandpur	5.45	3.85	4.0	4.25	Semi-Critical
		Raebareli	13.5	10.90	11.10	11.10	
4	Pratapgarh	Sangipur	7.74	7.64	8.29*	8.37**	Safe
		Lalganj	3.36	3.22	6.92*	7.09**	Safe
		Raniganj	4.97	5.07	6.88*	7.23**	
5	Jaunpur	Mariahu	5.65	2.77	4.05	5.43**	Safe
		Sujanganj	7.45	7.33	7.94*	7.3	Semi-critical
		Maharajganj	4.34	1.19	6.78*	3.05	Critical

* Post Monsoon Data of 2015.

**Pre Monsoon Data of 2016

**CHEMICALS ANALYSIS DATA OF SAMPLES COLLECTED FROM
GROUND WATER MONITORING WELLS IN UTTAR PRADESH 2014-2015
River Sai from Unnao to Jaunpur**

Sl. No.	District	Block	pH	E.C.µ S/cm at25°C	CO ₃	HCO ₃	Cl	F	NO ₃	SO ₄	TH	Ca	Mg	Na	k	SiO ₂	PO ₄	TDS	RSC	SAR
1	Raebareli	Satawan	8.0	602	NIL	329	28	0.25	2.4	15	260	44	36	31	4.4	30	ND	403	0.2	0.85
		Rahi	8.0	920	NIL	329	121	0.16	4.2	47	380	56	58	55	4.1	3	ND	616	-2.2	1.23
		Salon	8.0	534	NIL	317	11	0.67	2.2	10	200	36	27	40	4.1	34	ND	358	1.2	1.23
		Deeh	8.0	2080	NIL	891	177	0.43	1	129	490	20	107	299	6.7	39	ND	1394	4.8	5.87
		Amawan	7.9	658	NIL	403	14	0.34	1.1	6.2	240	32	39	54	6	35	ND	441	1.8	1.5
2	Pratapgarh	Lalganj	8.17	1040	NIL	586	14	1.09	ND	6.2	160	12	32	161	1.9	27	ND	697	6.37	5.51
		Pratapgarh	7.76	830	NIL	427	28	2.25	ND	18	270	20	54	58	7.4	32	ND	556	1.56	1.53
		Lakshmanpur	8.12	790	NIL	415	28	0.63	ND	4.8	300	20	61	32	6.2	31	ND	529	0.79	0.8
		Sangipur	8.17	2580	NIL	1244	107	2.5	0.6	82	320	20	66	437	6.6	29	ND	1729	13.96	10.6
3	Unnao	Auras	8.1	780	NIL	353.9	39	0.67	0.3	70	220	24	39	91	3.8	27	ND	523	1.4	2.67
		Hilauli	8.0	965	NIL	427.1	64	0.64	0.17	60	280	28	51	100	6	25	ND	647	1.4	2.6
		Nawabganj	8.35	990	12	463.7	50	1.5	15	44	225	24	40	143	4.8	23	ND	663	3.5	4.14
		Hasanganj	8.2	470	NIL	237.9	25	1.2	0.77	8.8	175	24	28	29	3.6	24	ND	315	0.4	0.95
		Asoha	7.76	3132	NIL	402.7	489	0.36	0.21	660	550	52	102	520	11	31	ND	2098	-4.4	9.64
4	Jaunpur	Maharajganj	7.55	690	NIL	354	14	0.62	1.2	2.4	240	24	44	36	4.7	37	ND	442	0.99	1.01

Sl. No.	District	Block	pH	E.C.µ S/cm at25°C	CO ₃	HCO ₃	Cl	F	NO ₃	SO ₄	TH	Ca	Mg	Na	k	SiO ₂	PO ₄	TDS	RSC	SAR
		Buxa	7.47	1250	NIL	317	206	0.28	12	58	460	16	102	70	4.7	32	ND	838	-3.99	1.42
		Sujanganj	7.98	820	NIL	427	28	0.55	ND	5.8	230	20	44	77	4.3	30	ND	549	2.38	2.2

ND – Not Detectable

RSC – Residual Sodium Carbonate

SAR – Sodium Absorption Ratio

Source : GWYB – NR – 2014-2015

6. MONITORING OF POLLUTION SOURCES

6.1 MONITORING OF DRAINS

All the 06 drains will be monitored on monthly basis and the sampling points are selected near the confluence of the drains with the Sai River. Proper care has been taken to avoid backwater effect of the river at the sampling point and no source of pollution joins the drain after the sampling point. The details of drain sampling points are given below:

Drain Sampling Points

S N	District	Name of Drain	Monitoring Point			Monitoring Frequency	Controlling Regional Office
			Place	Latitude	Longitude		
1	Raebareli	Drain at Lohanipur	Lohanipur	26°14'1.95"N	81°13'6.53" E	Monthly	Raebareli
2		Rajghat Nala	Rajghat, Kanpur road	26°13'41.37" N	81°13'6.71" E	Monthly	Raebareli
3		Indiranagar Nala	Indira Nagar	26°12'3.02" N	81°14'41.29" E	Monthly	Raebareli
4		UPSIDC Drain	Diverted to Behta drain	26°12'42.34" N	81°16'36.94" E	Monthly	Raebareli
5		Baheta Drain (Ganda Nala)	Mahanandpur Near Behta khurd	26°11'38.9"N	81°16'10.8" E	Monthly	Raebareli
6	Pratapgarh	City Drain	Bela Pratapgarh	25°56'4.49"N	82° 0'9.73"E	Monthly	Raebareli

6.2 MONITORING OF RIVER

The Priority-V polluted stretch of river Sai will be monitored at 06 places so as to ascertain adverse effect of pollution by various sources in the river. The details of sampling points are given below:

River Sampling Points

S.No.	District	Monitoring Point			Monitoring Frequency	Controlling Regional Office
		Place	Latitude	Longitude		
1	Raebareli	Sai River at Sirsaghat U/S	26°17'26.41"N	81° 5'27.07"E	Monthly	Raebareli
2	Raebareli	Sai River at Rajghat	26°13'39.96"N	81°13'4.76"E	Monthly	Raebareli
3	Raebareli	Sai River at Picnic Spot D/S	26°11'1.57"N	81°16'58.20"E	Monthly	Raebareli
4	Pratapgarh	Sai River at Gaighat U/S	25°56'0.53"N	81°56'50.36"E	Monthly	Raebareli
5	Pratapgarh	Sai River at Belamayee Ghat	25°56'4.62"N	82°0'7.55"E	Monthly	Raebareli
6	Pratapgarh	Sai River at Railway bridge D/S	25°56'0.53"N	82°0'23.31"E	Monthly	Raebareli

The monitoring data for the last three years is available at [Appendix-7](#)

6.3 MONITORING OF TRIBUTARIES OF RIVER SAI

There are three tributaries meeting to the river Sai in Pratapgarh district namely Loni River at Kataka Bali, Chamraura River at Sarai Veerbhadra, and Bakulahi River at Khajurani. A drain meeting to the river Loni at Kataka bali Village Pratapgarh before confluence to the river Sai. Its total discharge to the river Loni is approx. 0.2293 MLD.

S.No.	District	Name of Tributaries in Pratapgarh	Monitoring Point			Monitoring Frequency	Controlling Regional Office
			Place	Latitude	Longitude		
1	Pratapgarh	Loni River	Kataka Bali	25°55'56.48"N	81°53'54.79"E	Quarterly	Raebareli
2	Pratapgarh	Chamraura River	Sarai Veerbhadra	25°56'10.91"N	81°58'56.11"E	Quarterly	Raebareli
3	Pratapgarh	Bakulahi River	Khajurani	25°53'2.90"N	82°1'21.07"E	Quarterly	Raebareli

The monitoring data is available at [Appendix-7A](#)

6.4 MONITORING OF WATER POLLUTING INDUSTRIES

All the water polluting industries will be monitored regularly by 03 agencies namely UPPCB, District Ganga Committee/Zila Paryavaran Samiti and Third Party Institutions of repute. GPs will be monitored quarterly and other industries will be monitored randomly by District Ganga Committee/Zila Paryavaran Samiti. Third Party Institutions shall also be entrusted with the responsibility of comprehensive monitoring by CPCB and NMCG. Besides this the drive for identification and closure of illegal industries operating in non-conforming areas shall also be carried out by District Ganga Committees/Zila Paryavaran Samitis with appropriate Magisterial and Police support.

6.5 ESTABLISHMENT OF RIVER SAI POLLUTION CONTROL ROOM

A Control Room for monitoring and centralized reporting of various pollution sources shall be established in Lucknow with appropriate infrastructure and human resource. This control room will be under overall supervision of Commissioner, Lucknow and will be run by UP Pollution Control Board with the help of District Ganga Committees/Zila Paryavaran Samitis. For monitoring purpose, District Ganga Committees/Zila Paryavaran Samitis will be employing JRFs/Monitoring Assistants on contractual basis with the financial support of District Ganga Committees/Zila Paryavaran Samitis. Educational/Technical Institutions and Colleges will also be identified for taking their help in monitoring and remediation of pollution sources. Capacity building for monitoring of pollution sources of the students of such identified institutions and colleges will also be done by Pollution Control Board. For monitoring exercise 'The Control Room' with adequate infrastructure viz. LED Monitor, Desktop, Printer, Wi-Fi facility, Room rent including electricity charges etc. shall be established by UP Pollution Control Board with financial support from National Mission for Clean Ganga (NMCG).

The monitoring will be done from the Control Room with the help of Web Portal on which monitoring data from field shall be uploaded. The Web Portal will be developed by UP Pollution Control Board and login ID and Password will be provided to District Ganga Committees/Zila Paryavaran Samitis for access to the portal and uploading of monitoring data of various pollution sources.

7. POLLUTED RIVER STRETCH REJUVENATION ACTION PLAN

S. No.	Action Point	Timeline	Implementing Department/Agency	Remark
A. SEWAGE MANAGEMENT				
(a) Short Term Action Point				
1	Estimation of total sewage generation from City/Towns where sewage treatment facility does not exist and preparation of DPR for treatment of sewage	02 Months	U.P. Jal Nigam & Concerned ULBs	
2	Measurement of flow & load of all the drains contributing pollution load in River Sai	02 Months	U.P. Jal Nigam & Concerned ULBs	
3	Installation of Bar-meshes in the drains & regular cleaning & disposal of Solid Waste from them	03 Months	Concerned ULBs	The ULBs will ensure compliance in the prescribed time line as informed by Urban Development Department.
4	Untapped drains to be provided with modular treatment facilities/ In-Situ bio-remediation or Phytoid-SWAB (CSIR-NEERI) based treatment	06 Months	U.P. Jal Nigam & Concerned ULBs	The ULBs/Urban Development Department will ensure compliance in the prescribed time line as informed by Urban Development Department.
6	Formulation of Action Plan for long term use of treated water discharged from STPs	03 Months	U.P. Jal Nigam, Irrigation & Concerned ULBs in consultation with UPPCB/CPCB	
7	Installation of Web Cams & OCEEMS in	03 Month	U.P. Jal Nigam/	

S. No.	Action Point	Timeline	Implementing Department/Agency	Remark
	STPs		Operating Govt. Agencies	
8	Formulation of Action Plan for income generation of STPs including installation of Solar Power Plants, Energy Plantation & sale of sludge and treated water, bio-composting etc.	03 Months	U.P. Jal Nigam & ULBs	
9	Obtaining Consent to Operate/Establish and Hazardous Authorization from UPPCB	02 Months	U.P. Jal Nigam/ Operating Govt. Agencies	
10	Preparation of DPR for channelization including diversion of sewage generated from household / township / villages to sewer lines and interception of all drains (excluding drains carrying industrial wastewater) for ensuring proper treatment through upcoming STPs.	Within 3 Months	Jal Nigam / Nagar Nigam, Concerned Districts	
11	Septage Management in the areas where sewerage network does not exist	Within 6 Months	ULBs/Jal Nigam	The ULBs will ensure compliance in the prescribed time line as informed by Urban Development Department.
B. Long Term Action Point				
1	Laying of Sewerage Network & Connection of households to the sewer line in order to utilize the installed capacity of existing STPs	24Months from sanction of DPR	U.P. Jal Nigam & Concerned ULBs	

S. No.	Action Point	Timeline	Implementing Department/Agency	Remark
2	Establishment of Sewage Treatment Plants of adequate capacity	24 to 30 Months from sanction of DPR	U.P. Jal Nigam & Concerned ULBs	Detailed plan alongwith details of status of DPR, source of funding etc. Is given in para-3.2 as informed by Urban Development Department, U.P.
3	Tapping & diversion of the drains having high sewage load to STPs to be constructed on I&D model	24 to 30 Months from sanction of DPR	U.P. Jal Nigam & Concerned ULBs	Detailed plan alongwith details of status of DPR, source of funding etc. Is given in para-3.2 as informed by Urban Development Department, U.P.
4	Infrastructure Development in Irrigation/Horticulture/ Sprinkling/Industrial use etc. And ensuring use of treated water	24 to 30 Months from sanction of DPR	U.P. Jal Nigam & Concerned ULBs	Detailed plan alongwith details of status of DPR, source of funding etc. Is given in para-3.2 as informed by Urban Development Department, U.P.
5	Installation of Solar Power Plant & Energy Plantations in the vacant land of STPs	12 Months from sanction of DPR	U.P. Jal Nigam/ Operating Govt. Agencies	
6	Installation of supplementary/tertiary treatment system in existing STPs which are not able to achieve discharge norms in the present system	12 Months from sanction of DPR	U.P. Jal Nigam & Concerned ULBs	

S. No.	Action Point	Timeline	Implementing Department/Agency	Remark
7	Treatment of waste water in Rural areas flowing into the river by Bio-remediation/Phyto-remediation/Oxidation Pond etc.	12 Months	Gram Panchayat, Panchayati Raj, Rural Development Departments, Rastriya Swachta Mission-Gramin	The financial resources may be arranged from MNREGA/Swachh Bharat Mission – Gramin
8	Ensuring ODF in all the villages situated along the river	12 Months	Gram Panchayat, Panchayati Raj, Rural Development Departments, Rastriya Swachta Mission-Gramin	
C. INDUSTRIAL WASTE MANAGEMENT				
(a) Short Term Action Point				
1	Re-inventorisation of Water Polluting Industries in the catchment area of the drains and their status with respect to consent, installation of ETP, adequacy of ETP and final discharge point	03 Months	UPPCB, UPSIDC, ULBs & Department of Industries	
2	Monitoring of water polluting industries and ensuring closure of industries which are operating without consent or non-compliant	Quarterly	UPPCB & CPCB	
3	Installation of OCEEMS, Flow Meter & Web Cams in large and medium category of GPIs	03 Months	UPPCB	

S. No.	Action Point	Timeline	Implementing Department/Agency	Remark
	with connectivity to the server of CPCB and UPPCB			
4	Closure and legal action against the illegal water polluting industries operating in non-confirming /residential areas	Regular activity	District Level Inter-Departmental Enforcement Committee having representatives of Administration, Police, UPPCB, ULBs, Development Authority, Power Corporation, Department of Industries etc.	
(b) Long Term Action Point				
1	Adoption of cleaner technologies by water polluting industrial sectors having major impact on water quality of the river. For eg. – Electroplating, Dyeing, Pulp & Paper industries etc.	24 Months	UPPCB, CPCB & Department of Industries	
2	Imposing stringent norms in Distillery, Pulp & Paper, Slaughter House & Tannery sectors	24 Months	Departments of Environment, Industries, Excise & UPPCB	
3	Reducing abstraction of ground water by reuse/recycle of treated effluent by	12 Months	CGWA, CPCB, Department of	

S. No.	Action Point	Timeline	Implementing Department/Agency	Remark
	installation of additional treatment facilities & process improvement		Industries & UPPCB	
D. SOLID WASTE & FLOOD PRONE ZONE MANAGEMENT				
(a) Short Term Action Point				
1	Strictly ensuring prohibition of dumping of solid & other waste within 500 Meters of the banks of the river	Immediate	ULBs, Gram Panchayat Development Authorities & Urban Development Department	
2	Collection & Segregation of Solid Waste as per the provision of SWM Rules, 2016	Immediate	ULBs, Gram Panchayat Development Authorities & Urban Development Department	The ULBs will ensure compliance as per timeline given according to the Action Plan (Appendix-8) as informed by Urban Development Department, UP. Panchayati Raj Department, UP will ensure compliance in Rural Areas.
3	Disposal of Recyclable waste through registered recyclers	Immediate	ULBs, Gram Panchayat, Development Authorities & Urban Development Department	The ULBs will ensure compliance as per timeline given according to the Action Plan (Appendix-8) as informed by Urban Development Department, UP. Panchayati Raj Department, UP will ensure compliance in Rural Areas.
4	Compliance of SWM Rules, 2016 by bulk generators (onsite bio-composting, disposal of recyclable waste through	02 Months	ULBs, Development Authorities, Railways, Transport	The ULBs will ensure compliance as per timeline given according to the Action Plan (Appendix-8) as informed by

S. No.	Action Point	Timeline	Implementing Department/Agency	Remark
	registered recyclers)		Corporation, Mandi Parishad, Cantonment Board, Educational Institution, RWAs & Urban Development Department etc.	Urban Development Department, UP. Panchayati Raj Department, UP will ensure compliance in Rural Areas.
5	Upgradation & operation of existing non-operational & non-complying Solid Waste Treatment Facilities as per prescribed norms	06 Months	ULBs, Development Authorities & Urban Development Department	The ULBs will ensure compliance as per timeline given according to the Action Plan (Appendix-8) as informed by Urban Development Department, UP. Development Authorities will also ensure compliance in concerned areas.
6	Compliance of C&D Waste Management Rules, 2016 & prohibition of illegal dumping of C&D waste	Immediate	ULBs, Development Authorities & Urban Development Department	
7	Installation of Web Cams in Solid Waste & C&D Waste Treatment & Disposal Facilities with open access to UPPCB & CPCB server connectivity	03 Month of functioning of the processing plants	ULBs, Development Authorities & Urban Development Department	

S. No.	Action Point	Timeline	Implementing Department/Agency	Remark
8	Formulation of Action Plan for income generation of Solid Waste & C&D Waste Treatment & Disposal Facilities including installation of Solar Power Plants, Energy Plantation & sale of RDF, compost etc.	02 Months	ULBs, Development Authorities & Urban Development Department	The ULBs will ensure compliance as per timeline given according to the Action Plan (Appendix-8) as informed by Urban Development Department, UP. Development Authorities will also ensure compliance in concerned areas.
9	Obtaining Consent to Operate/Establish and Authorization from UPPCB	02 Months	ULBs, Development Authorities, Urban Development Department & UPPCB & CPCB	
10	Ensuring idol immersion in environmental friendly manner by creation of artificial ponds with proper lining & proper disposal of sludge & effluent	Immediate	ULBs, Development Authorities & District Administration	
11	Ensure strict prohibition of encroachments & illegal constructions in FPZ	06 Months	Development Authorities, District Administration & Police and Irrigation Department	
12	Removal of solid waste & algal growth disposed in the river by use of low cost innovative techniques with involvement of local community	06 Months	ULBs, Gram Panchayat, Development Authorities & Irrigation	

S. No.	Action Point	Timeline	Implementing Department/Agency	Remark
			Department	
(b) Long Term Action Point				
1	Establishment of new solid waste and C&D treatment & disposal facilities against the gap with respect to generation of solid waste	24 Months after sanction of DPR	ULBs, Development Authorities & Urban Development Department	The ULBs will ensure compliance as per timeline given according to the Action Plan (Appendix-8) as informed by Urban Development Department, UP. Development Authorities will also ensure compliance in concerned areas.
3	Construction of electric/fuel efficient crematorium to stop disposal of unburnt/ semi burnt corpses in the river	24 Months	ULBs, Development Authorities & Urban Development Department	The ULBs will ensure compliance as per timeline given as informed by Urban Development Department, UP. Development Authorities will also ensure compliance in concerned areas.
4	Demarcation & notification of FPZ by introducing Pillars at suitable locations in river flood plain and preventing encroachment in river bed.	24 Months	Irrigation Department	Only after sanctioning of DPR & its other formalities including sanctioning of budget under NMCG.
5	Removal of illegal encroachments & constructions from FPZ	24 Months	District Level Committee headed by D.M, with representative from concerned Departments.	

S. No.	Action Point	Timeline	Implementing Department/Agency	Remark
D. ECOLOGICAL FLOW & GROUND WATER MANAGEMENT				
(a) Short Term Action Point				
1	Identification, inventorization & geo referencing of wetlands/water bodies including their zone of influence & catchment areas within 2 Km of the river	03 Months	State Wetland Authority, Forest & Wildlife, Panchayati Raj, Revenue Department, ULBs & Gram Panchayats	
2	Identification & geo referencing of vacant lands in the vicinity of the river for development of bio-diversity parks & forest areas	03 Months	Forest & Wildlife, Panchayati Raj, Revenue Department, ULBs & Gram Panchayats	
3	Identification of external water sources like canal escapes etc. for addition of water in the river for dilution purposes	03 Months	Irrigation Department	Only surplus water after fulfilling irrigation demands will be provided to near by rivers through canal escapes.
4	Prohibition of illegal mining & diversion of river stream	Regular Activity	District Administration, Mining Department & Irrigation Department	Only diversion of river stream would be reported to District authorities in non monsoon period by concerned district irrigation officers.
5	Ensuring rain water harvesting/recharging structures/rainers wells on river banks & construction of water harvesting structures	Regular Activity	Mining, Rural Development & Minor Irrigation Department	Possible funding may be arranged through MNREGA and Central assistance by NMCG.

S. No.	Action Point	Timeline	Implementing Department/Agency	Remark
(b) Long Term Action Point				
1	Notification of E-flow of the River	12 Months	Irrigation Department, MoWR (CWC)	Notification of E-flow of the River will be done by MOWR (CWC).
2	Ecological restoration of the wetlands including plantation in the catchment area & development of community based eco-tourism in the wetland	24 Months from sanction of DPR	State Wetland Authority, Forest & Wildlife Department Tourism Department & National Mission for Clean Ganga	Possible source of funding may be from Centrally Sponsored Scheme for Development of Wetlands and from NMCG.
3	Development of Bio-diversity Parks and Riverine Forests by plantation & re-generation of native species of trees, grasses & herbs and establishment of new nurseries	24 Months from sanction of DPR	State Wetland Authority, Forest & Wildlife Department & National Mission for Clean Ganga	Funds may be arranged from NMCG.
4	Adoption of good irrigation practices, suitable crop selection, use of sprinkler/drip irrigation to minimize the water consumption through awareness & support to the farmers	12 Months	Agriculture Department, Rural Development, Minor Irrigation Department	
5	Removal of encroachment from wetlands, ponds & their restoration	24 Months	Revenue, Administration, Panchayati Raj Department, ULBs & Gram Panchayats	

S. No.	Action Point	Timeline	Implementing Department/Agency	Remark
6	Allowing flow of fresh surplus water source like canal for restoration of E-flow	18 Months	Irrigation Department	Only surplus water after fulfilling irrigation demands will be provided to near by rivers through canal escapes.
E. MONITORING & EVALUATION				
(a) Short Term Action Point				
1	Daily Monitoring of river water quality at the upstream & downstream of cities & meeting points of the major drains	Regular Activity	UPPCB, District Ganga Committee/ District Environment Committee	
2	Weekly monitoring of drains, STPs & CETPs	Regular Activity	UPPCB, District Ganga Committee/ District Environment Committee	
3	Monitoring of water polluting industries	Quarterly	UPPCB, District Ganga Committee/ District Environment Committee	
4	Monitoring of ground water quality within 500 meters of the rivers & drains	Quarterly	UPPCB, CGWA, CPCB & District Ganga Committee/ District Environment Committee	
5	Pre-monsoon & post-monsoon monitoring	Regular	CGWA & Directorate	

S. No.	Action Point	Timeline	Implementing Department/Agency	Remark
	of ground water level	Activity	of Ground Water	
6	Measurement of River flow as per the protocol	Regular	Irrigation Department & District Ganga Committee/ District Environment Committee	Annual flow discharge data of river.
7	Project formulation & funding including recurring expenses for employment of JRFs/Monitoring Assistants/Field Assistants, purchase of kits & equipments, vehicle on rental basis, development of Web Portal & establishment of Control Room, purchase of desktop computers, printers/ LED Monitor etc.	02 Months	UPPCB, District Ganga Committee/ District Environment Committee, SMCG & NMCG	
8	Development of Web Portal for reporting & centralized monitoring of water quality of the river & drains and action points with access to all concern stakeholders departments/agencies responsible for implementation of the action plan	Regular	UPPCB, NMCG & CPCB	
9	Establishment of Regional Control Rooms at District/ Division Level for monitoring &	04 Months	UPPCB, District Ganga Committee/	

S. No.	Action Point	Timeline	Implementing Department/Agency	Remark
	uploading of data related to monitoring of water quality & compliance of action points with its integration to the State Level Control Room		District Environment Committee	

APPENDICES

Appendix-1

Pollution Source Mapping of River Sai from Unnao to Jaunpur

S. No.	District	Name of Drain	Meeting Point of Drain		Domestic/ Industrial/ Mixed	Tapped/ Untapped/ Partially Tapped	Industries		Sewage Discharge (MLD)			Status of Bar-mesh
			Latitude	Longitude			Number	Treated Effluent (MLD)	Treated	Untreated	Total	
1	Raebareli	Drain at Lohanipur	26°14'1.95"N	81°13'6.53"E	Domestic	Untapped	0	--	--	1.5	1.5	No
2	Raebareli	Rajghat Nala	26°13'41.37"N	81°13'6.71"E	Domestic	Untapped	0	--	--	3.0	3.0	No
3	Raebareli	Indiranagar Nala	26°12'3.02 "N	81°14'41.29"E	Domestic	Untapped	0	--	--	3.0	3.0	No
4	Raebareli	UPSIDC Drain	26°12'42.34"N	81°16'36.94"E	Industrial	Untapped/ Dry	03*	00	--	--	--	No
5.	Raebareli	Baheta Drain	26°11'38.9"N	81°16'10.8"E	Domestic	Untapped	0	--	--	1.5	1.5	No
6.	Pratapgarh	City Drain	25°56'4.49"N	82° 0'9.73"E	Domestic	Untapped	0	--	--	8.95	8.95	No

*Out of 3 industries, only 1 is semi operation in which assembling of electronic parts is done and other 2 are either closed by self or Board.

Appendix-2

Details of Cities & Towns

S.No.	District	Name of City/ Town	Type of ULB	Population (Lakh) Census - 2011	Estimated Population (Lakh) Year - 2030
1	Raebareli	Raebareli	Nagar Palika Parishad, Nagar Panchayat	1,91,316	25,782
2	Pratapgarh	Pratapgarh	Nagar Palika, Nagar Pachayat	76,133	1,01,447
	Total			2,67,449	1,27,229

Appendix-3

Details of Industries

S. N.	District	Name and Address	Location		Type	Treatment Mechanism (ETP/CETP)	Effluent Discharge (KLD)	Effluent Discharge Drain	Compliance Status (yes/No)
			Latitude (N)	Longitude (E)					
1	Raebareli	ShriBhavani Paper Mills Ltd., Sultanpur Road, Raebareli	26°13'56.63"N	81°16'8.30"E	Pulp & Paper	Closed by Board	No discharge	Closed by Board	Closed by Board
2	Raebareli	ITI Ltd., Sultanpur Road, Industrial Area Raebareli	26°13'44.65"N	81°16'2.21"E	Engg.	--	No discharge (only assembling is done)	No effluent discharged (only assembling is done)	No effluent discharged (only assembling is done)
3	Raebareli	Thapson Chemicals, Sultanpur Road, Industrial Area Raebareli	26°13'52.24"N	81°16'34.03"E	Chemical	Self-closed	No discharge	Self-closed	Self-closed
Total							0.0	0.0	

Appendix-4

Details of Gram Panchayats & Revenue Villages on the banks of River

VILLAGE SITUATED ALONG THE RIVER SAI RIVER LEFT BANK

S. No.	District	Name of village	LAT	LONG	Distance (Km)	Population (2011)	Decadal growth rate (%)	Estimated population (2019)	Sewage Generation (MLD)	Estimated MSW (Kg/day)
1.	Unnao	Sarai Batre	26°53'39.1"N	80°25'37.4"E	0.010	877	15.11	983	0.106	246
2.	Unnao	Lodha Teekur	26°54'58.4"N	80°27'32.5"E	0.015	961	15.11	1077	0.116	269
3.	Unnao	Aoras	26°54'22.2"N	80°30'07.0"E	0.025	574	15.11	643	0.069	161
4.	Unnao	Badhwa kola	26°49'58.9"N	80°32'17.5"E	0.010	1105	15.11	1239	0.134	310
5.	Unnao	Rasulpur Bakiya	26°49'23.2"N	80°34'46.3"E	0.020	4480	15.11	5022	0.542	1255
6.	Unnao	Shekpur	26°38'30.2"N	80°48'20.8"E	0.050	1250	15.11	1401	0.151	350
7.	Unnao	Gumapur	26°37'51.4"N	80°50'11.2"E	0.050	946	15.11	1060	0.115	265
8.	Rae Bareli	Pastaur	26°24'50.2"N	81°01'59.4"E	0.080	2763	18.56	3173	0.343	793
9.	Rae Bareli	Aghaura	26°22'33.1"N	81°03'16.1"E	0.100	1836	18.56	2109	0.228	527

S. No.	District	Name of village	LAT	LONG	Distance (Km)	Population (2011)	Decadal growth rate (%)	Estimated population (2019)	Sewage Generation (MLD)	Estimated MSW (Kg/day)
10.	Rae Bareli	Takia Kalan	26°14'09.4"N	81°12'49.3"E	0.020	473	18.56	543	0.059	136
11.	Rae Bareli	Ibrahimpur	26°11'33.1"N	81°13'02.0"E	0.080	952	18.56	1093	0.118	273
12.	Rae Bareli	Bhaironpur kataili	26°10'35.5"N	81°17'46.1"E	0.080	373	18.56	428	0.046	107
13.	Rae Bareli	khurhati	26°06'52.6"N	81°20'49.3"E	0.050	4727	18.56	5429	0.586	1357
14.	Rae Bareli	baghaura	26°06'13.4"N	81°24'34.7"E	0.100	2836	18.56	3257	0.352	814
15.	Rae Bareli	Sher Nathpur	26°04'16.5"N	81°26'53.7"E	0.100	14	18.56	16	0.002	4
16.	Rae Bareli	Gangapur Kamwan	26°04'11.3"N	81°27'02.3"E	0.010	971	18.56	1115	0.120	279
17.	Pratapgarh	Mustafabad	26°02'15.8"N	81°32'48.7"E	0.100	6119	17.5	6976	0.753	1744
18.	Pratapgarh	Kanhpur urf Basantpur	26°01'09.2"N	81°34'12.7"E	0.080	6119	17.5	6976	0.753	1744
19.	Pratapgarh	Rampur kasiha	26°00'53.1"N	81°35'09.9"E	0.050	1321	17.5	1506	0.163	376

S. No.	District	Name of village	LAT	LONG	Distance (Km)	Population (2011)	Decadal growth rate (%)	Estimated population (2019)	Sewage Generation (MLD)	Estimated MSW (Kg/day)
20.	Pratapgarh	Bhojpur	26°00'07.9"N	81°40'14.0"E	0.080	3150	17.5	3591	0.388	898
21.	Pratapgarh	Pure Tula Upadhya y	26°00'23.9"N	81°41'54.6"E	0.030	392	17.5	447	0.048	112
22.	Pratapgarh	Thriya	26°00'21.8"N	81°43'31.2"E	0.080	1495	17.5	1704	0.184	426
23.	Pratapgarh	Pipari	26°00'45.1"N	81°45'13.7"E	0.070	831	17.5	947	0.102	237
24.	Pratapgarh	Mattupur Bhoji	25°56'58.3"N	81°48'30.0"E	0.030	464	17.5	529	0.057	132
25.	Pratapgarh	Tralokpur Visai	25°58'02.9"N	81°50'28.1"E	0.100	625	17.5	713	0.077	178
26.	Pratapgarh	Tejgarh	25°58'26.1"N	81°50'39.9"E	0.070	1915	17.5	2183	0.236	546
27.	Pratapgarh	Pure Keshav Rai	25°55'55.3"N	81°58'27.6"E	0.080	3391	17.5	3866	0.417	966
28.	Pratapgarh	Yahiyapur	25°52'53.0"N	82°06'13.0"E	0.100	2405	17.5	2742	0.296	685
29.	Jaunpur	Chak chitar sari	25°46'33.2"N	82°32'16.0"E	0.080	346	14.9	387	0.042	97

S. No.	District	Name of village	LAT	LONG	Distance (Km)	Population (2011)	Decadal growth rate (%)	Estimated population (2019)	Sewage Generation (MLD)	Estimated MSW (Kg/day)
30.	Jaunpur	Khana Patti	25°44'03.3"N	82°33'32.2"E	0.070	3116	14.9	3487	0.377	872
31.	Jaunpur	Pokhariyapur	25°43'21.2"N	82°34'02.3"E	0.100	2757	14.9	3086	0.333	771
Total						59,584	527.51	67,728	7.315	16,932

VILLAGE SITUATED ALONG THE RIVER SAI RIGHT BANK

S. No.	District	NAME OF VILLAGE	LAT	LONG	DISTANCE	POPULATION	Decadal growth rate	Estimated population (2019)	Sewage Generation (MLD)	Estimated MSW (Kg/day)
32.	Unnao	Khamba Mao	26°59'16.2"N	80°19'02.8"E	0.05	1682	15.11	1885	0.204	471
33.	Unnao	Ram Cote	26°59'04.3"N	80°19'40.9"E	0.08	953	15.11	1068	0.115	267
34.	Unnao	Gannipur	26°57'42.8"N	80°20'16.2"E	0.06	805	15.11	902	0.097	226
35.	Unnao	Argapur	26°57'00.2"N	80°20'18.5"E	0.01	3816	15.11	4277	0.462	1069
36.	Unnao	Gaoria	26°55'25.7"N	80°21'34.1"E	0.05	6902	15.11	7736	0.836	1934

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37.	Unnao	Kursath Rural	26°53'40.1"N	80°24'31.6"E	0.01	13484	15.11	15114	1.632	3778
38.	Unnao	Darihat	26°49'35.6"N	80°33'16.8"E	0.01	971	15.11	1088	0.118	272
39.	Unnao	Nibahari kalyanpur	26°40'04.6"N	80°47'00.1"E	0.05	794	15.11	890	0.096	222
40.	Unnao	Balhauma o	26°37'40.8"N	80°49'16.8"E	0.05	1228	15.11	1376	0.149	344
41.	Unnao	Nimaicha	26°35'18.5"N	80°53'07.4"E	0.05	488	15.11	547	0.059	137
42.	Unnao	Rampur	26°33'54.0"N	80°56'31.0"E	0.025	651	15.11	730	0.079	182
43.	Unnao	Kardaha	26°25'31.1"N	81°00'33.5"E	0.05	3873	15.11	4341	0.469	1085
44.	Unnao	Khanpur	26°22'52.8"N	81°01'45.0"E	0.05	1503	15.11	1685	0.182	421
45.	Rae Bareli	Arivar	26°17'00.6"N	81°10'08.1"E	0.05	1596	18.56	1833	0.198	458
46.	Rae Bareli	Salarpur	26°15'36.7"N	81°12'40.0"E	0.03	1462	18.56	1679	0.181	420
47.	Rae Bareli	Fakharul Hasan Khera	26°11'19.4"N	81°12'44.8"E	0.1	731	18.56	840	0.091	210
48.	Rae Bareli	korchand	26°09'13.4"N	81°18'39.3"E	0.1	4433	18.56	5091	0.550	1273

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49.	Pratapgarh	Dandoo ur	26°06'40.5"N	81°22'23.2"E	0.1	847	18.56	973	0.105	243
50.	Rae Bareli	Sarai Manik	26°06'23.8"N	81°24'25.2"E	0.08	1022	18.56	1174	0.127	293
51.	Rae Bareli	Sunga	26°04'12.3"N	81°29'09.6"E	0.08	828	17.5	944	0.102	236
52.	Pratapgarh	Barwaliya	26°02'48.4"N	81°30'29.2"E	0.08	476	17.5	543	0.059	136
53.	Pratapgarh	Ramnaga r kol	26°02'10.7"N	81°32'12.6"E	0.07	693	17.5	790	0.085	198
54.	Pratapgarh	Kalyanpu r	25°59'30.2"N	81°37'06.9"E	0.05	5134	17.5	5853	0.632	1463
55.	Pratapgarh	Amawan Khas	25°58'47.6"N	81°41'25.5"E	0.1	3971	17.5	4527	0.489	1132
56.	Pratapgarh	Deum Purab	26°00'23.6"N	81°42'12.3"E	0.04	3099	17.5	3533	0.382	883
57.	Pratapgarh	Kanjas	26°00'33.5"N	81°45'54.3"E	0.06	835	17.5	952	0.103	238
58.	Pratapgarh	Singhani	26°00'24.7"N	81°46'38.7"E	0.07	2284	17.5	2604	0.281	651
59.	Pratapgarh	Rasulpur Gulraha	25°57'01.7"N	81°47'26.6"E	0.07	1093	17.5	1246	0.135	312
60.	Pratapgarh	Sandwa sombasia	25°56'59.9"N	81°48'48.4"E	0.04	1056	17.5	1182	0.128	295

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61.	Pratapgarh	sarai Lachiman Dev	25°58'53.4"N	81°50'09.2"E	0.05	198	17.5	222	0.024	55
62.	Pratapgarh	Kamora Pure Pandey	26°00'05.2"N	81°50'55.6"E	0.1	1148	17.5	1285	0.139	321
63.	Pratapgarh	Chhatarp ur	25°59'56.5"N	81°50'10.2"E	0.07	5709	17.5	6390	0.690	1597
64.	Pratapgarh	kataka Bali	25°55'37.1"N	81°54'07.2"E	0.05	2293	17.5	2566	0.277	642
65.	Pratapgarh	Bhuwalp ur	25°53'49.8"N	81°53'58.7"E	0.03	3216	17.5	3599	0.389	900
66.	Pratapgarh	Pure Raijo	25°53'43.6"N	81°54'33.6"E	0.07	992	17.5	6922	0.748	1730
67.	Pratapgarh	khajurni	25°53'19.8"N	82°00'39.8"E	0.05	3104	17.5	16203	1.750	4051
68.	Pratapgarh	Parasram pur	25°50'06.4"N	82°03'41.7"E	0.05	1591	17.5	17815	1.924	4454
69.	Pratapgarh	Prajapati pur	25°52'04.8"N	82°06'45.9"E	0.08	520	17.5	520	0.056	130
70.	Pratapgarh	Bichhur	25°49'21.6"N	82°10'39.5"E	0.07	2786	17.5	2786	0.301	697
71.	Jaunpur	Raipur	25°47'16.7"N	82°21'57.2"E	0.07	691	14.9	691	0.075	173

72.	Jaunpur	Bodouli Ahiran	25°42'20.4"N	82°35'48.8"E	0.1	1441	14.9	1441	0.156	360
73.	Jaunpur	Pariyawa n	25°38'36.1"N	82°40'37.6"E	0.02	9223	14.9	9223	0.996	2306
74.	Jaunpur	Dhaneza	25°38'15.3"N	82°42'07.7"E	0.02	2641	14.9	2641	0.285	660
75.	Jaunpur	Nahora	25°37'51.8"N	82°44'15.8"E	0.1	5959	14.9	5959	0.644	1490
76.	Jaunpur	Izari	25°37'44.3"N	82°45'36.4"E	0.05	3702	14.9	3702	0.400	926
	Total					1,11,924	747.19	1,57,368	16.996	39,342
	Grand Total					1,71,508	1274.7	2,25,096	24.310	56,274

Appendix-5

WET LANDS / WATER BODIES ALONG THE RIVER SAI

S. No.	NAME OF DISTRICT	NAME OF TOWN	NAME OF NEARBY VILLAGE	LATITUDE	LONGITUDE	DISTANCE FROM RIVER (KM)	LOCATION OF WETLAND	
							LEFT BANK	RIGHT BANK
1.	Unnao	Unnao	Dhanni Khera Pond	26°36'36.38"N	80°49'48.59"E	0.55		Y
2.	Raebareli	Raebareli	Rampur Sudauli Pond	26°31'2.24"N	81° 1'23.76"E	1.89	Y	
3.	Unnao	Unnao	Unach Gaon Pond	26°47'32.24"N	80°37'57.19"E	0.73	Y	
4.	Unnao	Unnao	Gumapur Pond	26°37'53.68"N	80°50'33.26"E	0.71	Y	
5.	Unnao	Unnao	Bilaura Pond	26°37'13.70"N	80°51'37.97"E	1.40	Y	
6.	Unnao	Unnao	Pond Sandana	26°26'17.39"N	80°58'54.90"E	2.02		Y
7.	Raebareli	Raebareli	Pastaur Pond	26°24'54.43"N	81° 2'3.88"E	0.30	Y	
8.	Raebareli	Raebareli	Tera Baraula Pond	26°23'48.53"N	81° 2'38.57"E	1.03	Y	
9.	Raebareli	Raebareli	Rahwan Pond	26°18'21.44"N	81° 7'4.95"E	2.04	Y	
10.	Raebareli	Raebareli	Tanda Pond	26°16'45.59"N	81°13'18.73"E	1.40	Y	
11.	Raebareli	Raebareli	Shia Kaumi Qabristan Pond	26°14'16.41"N	81°14'6.40"E	1.7	Y	
12.	Raebareli	Raebareli	Jagpal Pond	26°14'8.08"N	81°14'1.81"E	1.6	Y	
13.	Raebareli	Raebareli	PNT Colony Pond	26°13'46.53"N	81°13'20.76"E	0.3	Y	

S. No.	NAME OF DISTRICT	NAME OF TOWN	NAME OF NEARBY VILLAGE	LATITUDE	LONGITUDE	DISTANCE FROM RIVER (KM)	LOCATION OF WETLAND	
							LEFT BANK	RIGHT BANK
14.	Raebareli	Raebareli	Nirala Nagar Pond	26°13'29.08"N	81°13'47.62"E	1.80	Y	
15.	Raebareli	Raebareli	Haroni Pond	26°41'47.58"N	80°44'51.40"E	0.51	Y	
16.	Raebareli	Raebareli	Ayaspur Dihi Pond	26°10'56.64"N	81°18'47.20"E	1.34	Y	
17.	Pratapgarh	Pratapgarh	Singhani pond	25°59'32.87"N	81°45'39.40"E	0.90		Y
18.	Pratapgarh	Pratapgarh	Gadhiveer Pond	26° 0'7.66"N	81°51'35.70"E	0.80	Y	
19.	Pratapgarh	Pratapgarh	Bhanpur Pond	25°57'22.98"N	81°58'10.24"E			
20.	Pratapgarh	Pratapgarh	Gaura Dand Pond	25°58'39.42"N	81°49'6.89"E	1.68	Y	
21.	Pratapgarh	Pratapgarh	Mahmadpur Pond	25°58'51.96"N	81°53'54.25"E	1.85	Y	
22.	Pratapgarh	Pratapgarh	Bhuwalpur Pond	25°53'43.05"N	81°53'38.35"E	0.70		Y

Appendix-6

Status of E-Waste Management

Status of E-waste Recycling / Collection / Generation Units in the State of U.P.

(As on 09.10.2018)

S. No.	Name & Address of Unit	Regional Office	Status of Authorisation	Status of Registration & Validity	Type	Capacity (T/Annum)
1	M/s Auctus -E Recycling Solutions Pvt. Ltd., F-637, M.G. Road, Industrial Area, Ghaziabad.	Ghaziabad	Grant	Registered 30.08.2019	Collection, Dismantle	1800
2	M/s Mahaluxmi Metal Alloys (India) Pvt. Ltd., Modinagar, Ghaziabad.	Ghaziabad	Grant	Registered 22.05.2023	Collection, Dismantle, Recyclers	30000
3	M/s N.K. Products, 58-59, M.G. Road, Ghaziabad.	Ghaziabad	Refused	Registered 22.06.2016	Collection, Dismantle	9000
4	M/s Bharat Oil Co., E-18, Site-IV, Sahibabad, Industrial Area, Ghaziabad.	Ghaziabad	Grant	Registered 16-05-18	Collection, Dismantle	4000
5	M/s Planet Green Recycling Pvt. Ltd., G-129, Phase -1, M.G. Road, Ghaziabad.	Ghaziabad	Grant	Registered 23.08.2018	Collection, Dismantle, Recyclers	1500
6	M/s Rocket Sales, Plot No. 1-12, I/A, M.G. Raod, Hapur.	Ghaziabad	Grant	Registered 27.08.2019	Collection,, Dismantle	300
7	M/s Arsh Recycling Pvt. Ltd., Plot No. 203, UPSDIC, I/A, M.G. Road, Ghaziabad.	Ghaziabad	Grant	Registered 20.06.2023	Collection, Dismantle, Recycling,	15000
8	M/s Auctus Recycling Solutions Pvt. Ltd.Habibpur, Greater Noida.	Greater Noida	Grant	Registered 06.12.2021	Dismantle, Collection	19500
9	M/s Khan Traders, B-5, site4, Panki Industrial Area, Kanpur.	Kanpur	Grant	Registered 15-11-2020	Collection, Dismantle	7190

10	M/s Green Tech Rcyling, Khasra No.-645, Acchraunds, Bahdaurpur Road, Partapur, Meerut .	Meerut	Grant	Registered 12.01.2022	Collection, Dismental	1800
11	M/s Narora Atomic Power Station, Narora, Bulandshahar.	Bulandshahar	Not Applied	-	Collection' Dismantaling & Recycling	10
12	M/s Metal Alloys, E-46, Industrial Area, Ramnagar, Varanasi	Varanasi	Grant	Registered 31-05- 2019	Collection	1825
13	M/s Comwen Information Technologies Pvt.Ltd., 127/35B, ChakRagunath, Naini, Allahabad.	Allahabad	Grant	Registered 11-08- 2017	Collection	300
14	M/s Dasia ECo E-Waste Recyclers E-160 Industrial area, Khalilabad, SantKabairnagar.	Basti	Grant	Registered 31-12- 2017	Collection, Dismantaling	720
15	M/s Sims Recycling Solutions Plot no.1 Udyog KendraII Ecotech-III Greater Noida.	Greater Noida	Grant	Registered 31.12.2019	Collection, Dismental, Recycling	1250
16	M/s J.A.O. E-Waste Recycling Co, Vill-Jaitpur,Distt-Moradabad.	Moradabad	Grant	Registered 23.11.2020	Collection	3001
17	M/s HIN Green E-waste Recycling (P) Ltd, B-19/1, Summer Garden Colony, Meerut.	Meerut	Grant	Registered 12.04.2018	Collection, Dismental,	750
18	M/s S.R. Metcast India (P) Ltd 11.8 Km.Agra Mathura Road, Agra.	Agra	Grant	Registered 02.08.2022	Collection	600
19	M/s K.M. Metals Suppliers 9/270,271,Mathura Agra.	Agra	Not Applied	-	Collection	5000
20	M/s Prakash Metal House 39/223, Karwan Lohamandi,Agra.	Agra	Grant	Registered 02.05.2023	Collection	1500
21	M/s Shree Mahaveerji Trading Company, 30/127, Chippitala, Agra.	Agra	Not Applied	Reject	Collection	4500
22	M/s E-Waste Recyclers India E-50, UPSIDC Industrial area, NH-2 Kosikalan, Mahura.	Mathura	Grant	Registered 01.03.2022	Collection, Dismantle	6000
23	M/s Supar Trading Company, Plot No.-3 Govt. Industrial Estate, Talkatora Road, Lucknow.	Lucknow	Not Applied	Registered 03.04.2016	Collection	365

24	M/s V.R. Techno Enviro Services pvt. ltd. khasra No. 440, indira Priyedarshni ward, jarhra Indira Nagar, Lucknow.	Lucknow	Not Applied	Registered 09.04.2016	Collection, Dismantle	365
25	M/s Sachin enterprises,84/1,Plot no.34-35 Fazalganj, Kanpur.	Kanpur	Grant	Registered One Time	Collection	5000 Pieces Per Annum
26	M/s Gandhi Traders, 91/103, Dalelpurwa, Kanpur.	Kanpur	Grant	Registered 04.06.2018	Collection	5000 Pieces Per Annum
27	M/s Greezon Recycling Pvt. Ltd., R 30, UPSIDC, Industrial Area, Sikandrabad, Bulandshahar.	Bulandshaha	Grant	Registered 27.08.2022	Collection Dismantal, Recycling	16.5
28	M/s Sachin Enterprises, 123/751, block-T 74 pratapganj Gadariyan Purwa, Fazalgang, Kanpur.	Kanpur	Grant	Registered 16.11.2022	Collection, Dismantling, Refurbishing	2500
29	M/s Greeniva Recycler Pvt. Ltd., Plot No. G-284, M.G. Road, Industrial Area, Hapur.	Hapur	Grant	Registered 18.06.2019	Collection, Dismantling, Recycling.	1500
30	M/s S. Malik Traders, Plot No.-93, 94 Vill-Budhera Jahidpur, Meerut.	Meerut	Grant	Registered 12.01.2022	Collection, Dismantling	365
31	M/s Royal Faiz Recycling (p) Ltd. , I-22, I.A. M.G. Road, Hapur.	Ghaziabad	Grant	Registered 29.01.2023	Collection, Dismantal, Recycling	12000
32	M/s 3 C Recycler, F-326, I/A, M.G. Road, Hapur.	Ghaziabad	Grant	Registered 31.12.2022	Collection, Dismantal, Recycling	9000
33	M/s Life E- Recycling (P) Ltd., F- 435, UPSIDC I/A, M.G. Road, Hapur.	Ghaziabad	Grant	Registered 05.06.2023	Collection, Dismantal,	9000
34	M/s Hind Recycling (P) Ltd., Plot No. F-203, M.G. Road, Hapur.	Ghaziabad	Grant	Registered 01.03.2022	Collection, Dismantal,	9000
35	M/s Hayat Recycler, F-53, 54, I/A, M.G. Road, Hapur.	Ghaziabad	Grant	Registered 21.06.2023	Collection, Dismantal, Recycling	15000

36	M/s B.R.P. Infotech Private Limited, F-394, Phase-I, M.G.Road, Industrial Area, Hapur	Hapur	Grant	Registered 28.06.2023	Recycling, Dismantling, Segregation, Collection	9000 MT/Year
37	M/s Sky Green Waste Recycling Management , Khasra No.- 174, Alipur Jijmana, Meerut, U.P.	Meerut	Grant	Registered 20.12.2023	Dismantling, Recycling	5475 MT/Y 4500 MT/A
38	M/s Swachh Bharat Recycling Company, Gali-N0-4, 2083, Saipuram Insutrial Area, Delhi Road, Meerut, U.P.	Meerut	Grant	Registered 08.05.2023	Recycling	4800 MT/A
39	M/s Rudra Interprises, Plot No. A- 96, Sector-A-4, Tronica City, Loni, Ghaziabad	Ghaziabad	Grant	Registered 03.05.2023	Disposal & Dismantling	500 MT/Month
40	M/s Avgree Recycling Pvt. Ltd. KH No. 549, Vill.-Tiyala, Meerut- Bulandshahar Road, Hapur Bypass, Hapur	Ghaziabad	Grant	Registered 10.09.2023	Dismantling & Segregation	11000 MT/A
41	M/s Faiz Recycling, G-235, MG Road, Industrial Area, Hapur	Ghaziabad	Grant	Registered 13.02.2024	Dismantling & Segregation	36.67 MT/Day
42	M/s Horizon Recycling Pvt. Ltd., Khasra no.-35, Kumarhera, 7th km Dehradun Road, Saharanpur, U.P.	Saharanpur	Grant	Registered 02.08.2022	Recycling, Dismantling, Segregation, Collection	12000 MT/A
43	M/s Golden Ewaste Recyclers Pvt. Ltd., Plot No.-12A, Gagol Road, Behind Sophia School Udyog Puram, Partapur, Meerut	Meerut	Grant	Registered 01.04.2024	Transporttion, Refurbishing, Dismantling, Segregation, Storage, Disposal	9600 MT/A

Appendix-7

River Water Quality Data Water Quality of River Sai in UP Year 2016-2018

S No	Sample Collection Point	2018			2017			2018		
		DO (mg/l)	BOD(mg/l)	Total Coliform (MPN/100m l)	DO (mg/l)	BOD(mg/l)	Total Coliform (MPN/100m l)	DO (mg/l)	BOD(mg/l)	Total Coliform (MPN/100m l)
1	Sai River at Sirsaghat, Raebareli	7.0	4.30	7,608	6.7	4.5	7,516	5.4	4.5	7,233
2	Sai River at Rajghat, Raebareli	6.20	4.82	8,400	5.7	4.9	9,450	5.5	4.5	8,716
3	Sai River at Picnic Spot, Raebareli	5.95	5.02	8,546	5.4	4.6	8,908	5.0	5.1	8,875
4	Sai River at Gaighat, Pratapgarh	6.65	4.69	8,062	5.4	4.8	8,350	5.5	4.7	8,325
5	Sai River at Belamayee Ghat, Pratapgarh	6.87	4.55	7,862	6.1	5.1	8,141	5.7	4.6	7,633
6	Sai River at Downstream,	6.07	5.05	8,538	5.4	5.0	8,825	5.1	4.95	8,758

S No	Sample Collection Point	2018			2017			2018		
		DO (mg/l)	BOD(mg/l)	Total Coliform (MPN/100m l)	DO (mg/l)	BOD(mg/l)	Total Coliform (MPN/100m l)	DO (mg/l)	BOD(mg/l)	Total Coliform (MPN/100m l)
	Pratapgarh									

Appendix-7A

River Water Quality Data of Tributaries of River Sai

S.No	Name of river (Tributaries of River Sai)	Colour (Hazen)	pH	DO (mg/l)	BOD (mg/l)	TC (MPN/100ml)	COD (mg/l)
1	Loni River at Kataka Bali, Pratapgarh	28	7.5	6.2	5.0	8,600	34.10
2	Chamraura River at Sarai Veerbhadra, Pratapgarh	20	7.8	6.9	4.8	7,900	32.32
3	Bakulahi River at Khajurani, Pratapgarh	20	7.5	7.0	4.7	7,600	33.20

CLASS OF WATER AS PER IS:2296

Classification	TYPE OF USE
ClassA	Drinking water source without conventional treatment but after disinfection
ClassB	Outdoor bathing
ClassC	Drinking water source with conventional treatment followed by disinfection.
ClassD	Fish culture and wild life propagation
ClassE	Irrigation, industrial cooling or controlled waste disposal

TOLERANCE LIMITS

TABLE-1: TOLERANCE LIMITS FOR INLAND SURFACE WATERS, CLASS – A

S. No.	Characteristic	Tolerance
(1)	(2)	(3)
(i)	pH	6.5 to 8.5
(ii)	Dissolved Oxygen, mg/l,	6.0
(iii)	Bio-chemical Oxygen Demand	2.0
(iv)	Total Coliform Organisms, MPN/100 ml, Max	50
(v)	Colour, Hazen units, Max	10
(vi)	Odour	unobjectionable
(vii)	Taste	Agreeable taste
(viii)	Total Dissolved Solids, mg/l, Max	500
(ix)	Total Hardness (as CaCO ₃), mg/l, Max	300
(x)	Calcium Hardness (as CaCO ₃), mg/l, Max	200
(xi)	Magnesium (as CaCO ₃), mg/l, Max	100
(xii)	Copper (as Cu), mg/l, Max	1.5
(xiii)	Iron (as Fe), mg/l, Max	0.3
(xiv)	Manganese (as Mn), mg/l, Max	0.5
(xv)	Chlorides (as Cl), mg/l, Max	250
(xvi)	Sulphate (as SO ₄), mg/l, Max	400
(xvii)	Nitrates (as NO ₃), mg/l, Max	20
(xviii)	Fluorides (as F), mg/l, Max	1.5
(xix)	Phenolic compounds (as C ₆ H ₅ OH), mg/l, Max	0.002
(xx)	Mercury (as Hg), mg/l, Max	0.001
(xxi)	Cadmium (as Cd), mg/l, Max	0.01
(xxii)	Selenium (as Se), mg/l, Max	0.01
(xxiii)	Arsenic (as As), mg/l, Max	0.05
(xxiv)	Cyanides (as CN), mg/l, Max	0.05
(xxv)	Lead (as Pb), mg/l, Max	0.1
(xxvi)	Zinc (as Zn), mg/l, Max	15
(xxvii)	Chromium (as Cr ³⁺), mg/l, Max	0.05
(xxviii)	Anionic detergents, (as MDAS), mg/l, Max	0.2
(xxix)	Poly-nuclear aromatic hydrocarbons (PAH),	0.2
(xxx)	Mineral oil, mg/l, Max	0.01
(xxxi)	Barium (as Ba), mg/l, Max	1.0
(xxxii)	Silver (as Ag), mg/l, Max	0.05
(xxxiii)	Pesticides	Absent
(xxxiv)	Alpha emitters, µc/ml, Max	10 ⁻⁹
(xxxv)	Beta emitters, µc/ml, Max	10 ⁻⁸

TABLE- 2: TOLERANCE LIMITS FOR INLAND SURFACE WATERS, CLASS – B

S.	Characteristic	Tolerance Limit
(1)	(2)	(3)
(i)	pH Value	6.5 to 8.5
(ii)	Dissolved Oxygen, mg/l, Max	5.0
(iii)	Biochemical Oxygen Demand (5 days at 20 °C),	3.0
(iv)	Total Coliform Organisms, MPN/100 ml, Max	500
(v)	Fluorides (as F) < mg/l, Max	1.5
(vi)	Colour, Hazen units, Max	300
(vii)	Cyanides (as CN), mg/l, Max	0.05
(viii)	Arsenic (as As), mg/l, Max	0.2
(ix)	Phenolic Compounds (as C ₆ H ₅ OH) mg/l, Max	0.005
(x)	Chromium (as Cr ⁶⁺), mg/l, Max	1.0
(xi)	Anionic detergents (as MBAS), mg/l, Max	1.0
(xii)	Alpha emitters, µc/ml, Max	10 ⁻⁸

TABLE - 3: TOLERANCE LIMITS FOR INLAND SURFACE WATERS, CLASS – C

S.No.	Characteristic	Tolerance Limit
(1)	(2)	(3)
(i)	pH Value	6.5 to 8.5
(ii)	Dissolved Oxygen, mg/l Minimum	4.0
(iii)	Biochemical Oxygen Demand	3.0
(iv)	Total coliform organisms, MPN/100 ml, Max	5000
(v)	Colour, Hazen units, Max	300
(vi)	Fluorides (as F), mg/l, Max	1.5
(vii)	Cadmium (as Cd), mg/l, Max	0.01
(viii)	Chlorides (as Cl), mg/l, Max	600
(ix)	Chromium (as Cr ⁶⁺), mg/l, Max	0.05
(x)	Cyanides (as CN), mg/l, Max	0.05
(xi)	Total Dissolved Solids, mg/l, Max	1500
(xii)	Selenium (as Se), mg/l, Max	0.05
(xiii)	Sulphates (as SO ₄), mg/l, Max	400
(xiv)	Lead (as Pb), mg/l, Max	0.1
(xv)	Copper (as Cu), mg/l, Max	1.5
(xvi)	Arsenic (as As), mg/l, Max	0.2
(xvii)	Iron (as Fe), mg/l, Max	50
(xviii)	Phenolic compounds (as C ₆ H ₅ OH), mg/l, Max	0.005
(xix)	Zinc (as Zn), mg/l, Max	15
(xx)	Insecticides, mg/l, Max	Absent
(xxi)	Anionic detergents (as MBAS), mg/l, Max	1.0
(xxii)	Oils and grease, mg/l, Max	0.1
(xxiii)	Nitrates (as NO ₃), mg/l, Max	50
(xxiv)	Alpha emitters, µc/mg, Max	10 ⁻⁹
(xxv)	Beta emitters, µc/ml, Max	10 ⁻⁸

TABLE - 4: TOLERANCE LIMITS FOR INLAND SURFACE WATERS, CLASS – D

S.No.	Characteristic	Tolerance Limit
(1)	(2)	(3)
(i)	pH value	6.5 to 8.5
(ii)	Dissolved Oxygen, mg/l, Min.	4.0
(iii)	Free Ammonia (as N), mg/l, Max.	1.2
(iv)	Electrical Conductance at 25 °C, µS, Max	1000
(v)	Free Carbon Dioxide (as CO ₂), mg/l, Max	6.0
(vi)	Oils and Grease, mg/l, Max	0.1
(vii)	Alpha emitters, µc/ml, Max	10 ⁻⁹
(viii)	Beta emitters, µc/ml, Max	10 ⁻⁸

TABLE- 5: TOLERANCE LIMITS FOR INLAND SURFACE WATERS, CLASS – E

S.No.	Characteristic	Tolerance Limit
(1)	(2)	(3)
(i)	pH value	6.0 to 8.5
(ii)	Electrical Conductance at 25°C, µS, Max	2250
(iii)	Sodium Adsorption Ratio, Max	26
(iv)	Boron (as B), mg/l, Max	2.0
(v)	Total Dissolved Solids, (inorganic), mg/l, Max	2100
(vi)	Sulphates (as SO ₄), mg/l, Max	1000
(vii)	Chlorides (as Cl), mg/l, Max	600
(viii)	Sodium Percentage, Max	60
(ix)	Alpha emitters, µc/ml, Max	10 ⁻⁹
(x)	Beta emitters, µc/ml, Max	10 ⁻⁸

Appendix-8

MSW improvement action plan time-line for the ULBs of Department of Urban Development, UP

S.N.	Key Activities	Timeline (In Months)								
		1	2	3	4	5	6	7	8	9
1	Policy Framework adoption (During the period the ULBs are required to adopt various rules /regulation in terms of bylaws for effective implementation of SWM rules)									
2	With adoption action plan the ULBs along the river will formulate IEC campaign (Specifically designing of promotional materials related to not only just for better waste management in the area but also making common people/institutions aware and sensitise about river pollution and its control measure for making an effective behaviour change. The first 2 months will be needed for preparing the material and widely spreading the message and then it's going to be a continuous effort for a sustained drive to make perceptible change among stakeholders.)									

3	Detail Gap Analysis of existing resources in terms of human resource/equipment/vehicles that are presently deployed and further required for full compliance of SWM rules. During the period each ULB shall prepare a detail micro plan (ward -wise) in sync with the action plan for effective implementation.									
4	Procurement of Required Material / Services after Gap Analysis									
5	Capacity Building. All the key stakeholders from senior officials to the level of safaikarmi is required to be sensitized and trained for the effective compliance of SWM rules and during the period intensive capacity building programmes shall be conducted.									
6	Identification of Land/ Building for waste processing shall be completed for all ULBs within 2 months (decentralised composting/MRF).									
7	Construction /Setting up of decentralised processing facility (composting for wet waste and MRF for dry waste) in all ULBs.									
8	Bulk waste Generators Identification and consultation/capacity building foronsite									

	Waste Management.									
9	Identification and integration of Informal Rag Pickers									
10	Segregation/ collection / transport / processing (10 percent) (by 4th month of Action Plan adoption)									
11	Segregation/ collection / transport / processing (20 percent)									
12	Segregation/ collection / transport / processing (35 percent)									
15	Segregation/ collection / transport / processing (50 percent)									
16	Segregation/ collection / transport / processing (65 percent)									
17	Segregation/ collection / transport / processing (80) percent)									
18	Segregation/ collection / transport / processing (100) percent) Within 12 months.									