

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

O.A. No. 735/2023

In re:

News Item titled "Ashwani Khad: The most polluted river in Himachal Pradesh" appearing in News Himachal dated 04.12.2023.

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Place:

Dated:

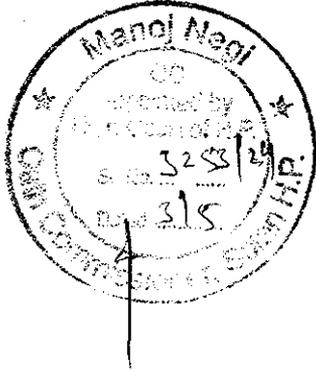

 Respondent
 Superintending
 Jal Sanstha Circle, Solan (H.P.)

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, AT NEW DELHI

O.A. No. 735/2023

In re:

News Item titled "Ashwani Khad: The most polluted river in Himachal Pradesh" appearing in News Himachal dated 04.12.2023.



Affidavit on behalf of Chief Secretary to the Government of Himachal Pradesh in compliance to order dated 26.02.2024.

May it please your lordships:

I, Sanjeev Kumar Soni, S/o Sh. Milap Chand Soni aged about 50 years, presently posted as Superintending Engineer, Jal Shakti Vibhag, Circle Solan, Government of Himachal Pradesh being well conversant with the facts of the case in my official capacity and being competent to swear this affidavit on behalf of the Chief Secretary to the Government of H.P, do hereby solemnly declare and affirm on oath as under:-

1. That the aforementioned Original Application, registered suo moto on the basis of news item published in 'News Himachal' dated 04.12.2023 is pending adjudication before this Hon'ble Tribunal.
2. That in this matter the Hon'ble NGT vide order dated 02.01.2024 had sought response from Chief Secretary, State of Himachal Pradesh which was submitted on 22.02.2024 along with the revised action plan for

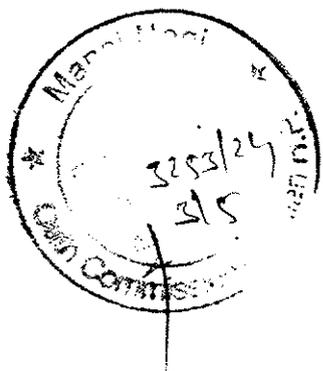
different rivers and the status of implementation of action plan was also enclosed.

3. That this matter was further listed on 26.02.2024 wherein after considering the response dated 22.02.2024, the Hon'ble NGT inter-alia directed as follows:

"...6...In the meanwhile, let the fresh affidavit on behalf of the Chief Secretary, Himachal Pradesh be filed disclosing the work completed in terms of the timeline mentioned in the report dated 22.02.2024 and also further proposed action in view of the observations made above..."

4. That in reference to the observation made in order dated 26.02.2024: *"...i. For none of the river, information about sewage discharge, has been disclosed. For interception of sewage carrying drain; the proposals are at DPR stage only..."*, it is submitted that reportedly following STPs have been commissioned/completed in the catchment area of the polluted river stretches:-

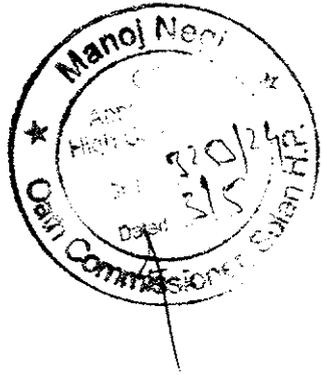
Sr. No.	Polluted River Stretch	STP Location	Status of work completed	Inflow (MLD)
1.	Sukhna at Parwanoo	Parwanoo (1.00 MLD)	STP Completed	0.30
2.	Markanda River at Kala Amb	Kala Amb and Moginand Area (1.70 MLD)	STP Completed	Applications for sewerage connections awaited.



Sr. No.	Polluted River Stretch	STP Location	Status of work completed	Inflow (MLD)
3.	Markanda River at Kala Amb	Tirlokpur and Kheri Area (1.50 MLD)	STP Completed	Applications for sewerage connections awaited.
4.	River Sirsa Stretch	STP Nalagarh (3.62 MLD)	STP Completed	2.24
5.	River Giri Stretch	STP Kotkhai Zone-II (0.306 MLD) Zone-III (0.163MLD)	STP Completed	0.06 0.04
6.	River Giri Stretch	STP Theog (1.15 MLD)	STP Completed	0.05
7.	Ashwani Khad.	STP Lalpani (11 MLD) (Capacity will be 18.10 MLD after upgradation).	Upgradation work 98% completed	14
8.	Ashwani Khad	STP Malyana (8.42 MLD)	STP Completed	4.5
9.	Ashwani Khad	STP Dhalli (2.26 MLD)	STP Completed	1
10.	Beas River*	STP Marhi in Distt. Kullu (0.20 MLD)	STP Completed	0.2
11.	Beas River*	Kullu Town Zone-I Lanka Bekar (2.57 MLD)	STP Completed	2.50
12.	Beas River*	Kullu Town Zone-II Bhootnath (2.50 MLD)	STP Completed	2.42



Sr. No.	Polluted River Stretch	STP Location	Status of work completed	Inflow (MLD)
13.	Beas River*	Kullu Town Zone-III Badah (0.38 MLD)	STP Completed	0.29
14.	Beas River*	Bhunter Zone-III (0.87 MLD)	STP Completed	0.81
15.	Beas River*	Nadaun (1.69 MLD)	STP Completed	0.76
16.	Beas River*	Dehra (1.38 MLD)	STP Completed	1.05

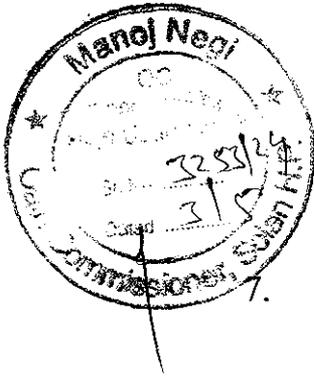


*Upon the implementation of Action Plan and subsequent improvement in water quality, the Beas River Stretch has been delisted from the polluted river stretches as CPCB report titled "*Polluted River Stretches For Restoration Of Water Quality*", November 2022.

5. That in reference to the observation made in order dated 26.02.2024: "...ii. *Water quality criteria has been matched with respect to BOD only and no mention has been made about Fecal Coliform...*", it is submitted that as per Table-1, "Primary Water Quality Criteria For Bathing Water" of the notification dated 25.09.2000 of MoEF &CC, the criteria for Fecal Coliform MPN/100 ml; 500 is desirable and 2500 is Maximum Permissible limit. (copy of notification dated 25.09.2000 is annexed as **Annexure-I**). The data on surface water quality of the river stretches in question for the year of 2023 is annexed as **Annexure-II**. It is submitted that as per the data, the presence of

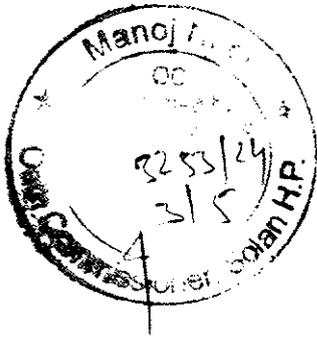
Fecal Coliform (F.C.) in the surface water of the river stretches is substantially within the desirable limits.

6. That in reference to the observation made in order dated 26.02.2024: “...iii. Performance data of existing STPs has not been furnished particularly with reference to Fecal Coliform...”, the details of the STPs falling in the catchment of the polluted river stretches including data with reference to Fecal Coliform (F.C.) from the period of Nov. 2023 to March 2024 is annexed as **Annexure-III**.



7. That in reference to the observation made in order dated 26.02.2024: “....iv. For rivers like Sukhna, Markarda, Sirsa, Beas (at Mandi), channelization of river stretches has been indicated. This needs to be properly checked that they do not cause hydrological disturbances and in line with MoEF&CC approvals as required.....”, it is submitted that the Jal Shakti Vibhag (formerly known as Irrigation & Public Health Department) has recommended to drop the plan for channelization of river stretches, as the channelization may affect the cross drainage and hamper the natural drainage system of the State.

8. That in reference to the observation made in order dated 26.02.2024 regarding disclosure of the work completed in terms of the timeline mentioned in the report dated 22.02.2024, the latest status of work completed with respect to the activities envisaged in



the action plan formulated for the rejuvenation of the 7 polluted river stretches namely Sukhna, Markanda, Sirsa, Ashwani, Beas, Giri, Pabbar (formulated in 2019) is annexed as **Annexure-IV**. The implementation status of the action plan formulated for the rejuvenation of the newly formed Priority-I polluted river stretches namely Ashwani Khad, Bald, Sirsa & Sukhana is annexed as **Annexure-V**. It is submitted that there has been some delay in meeting the timelines at few places due to unprecedented flash floods in the year 2023. The flash floods have also damaged the existing infrastructure. Nonetheless, it is submitted that the entire work on the points of the action plan will be completed, tentatively by May, 2025.

[Signature]
Superintending Engineer,
Jal Shakti Circle, Solan (H.P.)

Verification:-

I, the above named deponent, do hereby further solemnly affirm that the contents of paras 1-8 are true and correct to the best of my knowledge, derived from official record and no part of it is believed to be false and nothing material has been concealed therefrom.

Signed and Verified at Solan on 3rd day of May, 2024.

[Signature]
Superintending Engineer,
Jal Shakti Circle, Solan (H.P.)

Sh. Vikas Chaudhary
I identify the deponent who has signed in my presence

Certified that the above was declared on oath affirmation before me on 3/5 day of May 2024 at Solan in the district Solan by Deponent personally known to me or identified to me by 9/30 by Shri. Vikas Chaudhary who is personally known to me.

certified that the affidavit have been read over and explained to Deponent who seemed perfectly to understand and admitted to be correct.

Oath Commissioner
[Signature]
Oath Commissioner

MINISTRY OF ENVIRONMENT AND FORESTS

NOTIFICATION

New Delhi, the 25th September, 2000

G.S.R. 742(E).— In exercise of the powers conferred by sections 6 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby makes the following rules further to amend the Environment (Protection) Rules, 1986, namely.

1. (1) These rules may be called the Environment (Protection) Amendment Rules, 2000.
(2) Save as otherwise provided in this notification, they shall come into force on the date of their publication in the Official Gazette.
2. In the Environment (Protection) Rules, 1986,—
 - (1) In Schedule I, after serial number 39 relating to Noise standards for fire crackers and the entries relating thereto, the following serial numbers and entries shall be inserted, namely:—

“90. Standards for coal mines**1. Air Quality Standards**

The Suspended Particulate Matter (SPM), Respirable Particulate Matter (RPM), Sulphur dioxide (SO₂) and Oxides of Nitrogen (NO_x) concentration in downwind direction considering predominant wind direction, at a distance of 500 metres from the following dust generating sources shall not exceed the standards specified in the Tables I, II and III given below:

Dust Generating Sources

Loading or unloading, Haul road, coal transportation road, Coal handling plant (CHP), Railway siding, Blasting, Drilling, Overburden dumps, or any other dust generating external sources like coke ovens (hard as well as soft), briquette industry, nearby road etc.

343 93. Primary Water Quality Criteria for Bathing Waters.

In a water body or its part, water is subjected to several types of uses. Depending on the types of uses and activities, water quality criteria have been specified to determine its suitability for a particular purpose. Among the various types of uses there is one use that demands highest level of water quality or purity and that is termed as "Designated Best Use" in that stretch of water body. Based on this, water quality requirements have been specified for different uses in terms of primary water quality criteria. The primary water quality criteria for bathing water are specified along with the rationale in table 1.

Table 1.

PRIMARY WATER QUALITY CRITERIA FOR BATHING WATER (Water used for organised outdoor bathing)

CRITERIA		RATIONALE
1. Fecal Coliform MPN/100 ml:	500 (desirable) 2500 (Maximum Permissible)	To ensure low sewage contamination. Fecal coliform and fecal streptococci are considered as they reflect the bacterial pathogenicity.
2. Fecal Streptococci MPN/100 ml:	100 (desirable) 500 (Maximum Permissible)	The desirable and permissible limits are suggested to allow for fluctuation in environmental conditions such as seasonal change, changes in flow conditions etc.
2. pH.	Between 6.5 -8.5	The range provides protection to the skin and delicate organs like eyes, nose, ears etc. which are directly exposed during outdoor bathing.
3. Dissolved Oxygen:	5 mg/l or more	The minimum dissolved oxygen concentration of 5 mg/l ensures reasonable freedom from oxygen consuming organic pollution immediately upstream which is necessary for preventing production of anaerobic gases (obnoxious gases) from sediment.
4. Biochemical Oxygen demand 3 day, 27°C:	3 mg/l or less	The Biochemical Oxygen Demand of 3 mg/l or less of the water ensures reasonable freedom from oxygen demanding pollutants and prevent production of obnoxious gases";

WATER QUALITY STATUS OF ASHWANI KHAD DURING JANUARY TO DECEMBER 2023												
Sr. No.	Name of Location	Sample Code	January 2023					February 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	Ashwani Khad U/s Yashwant Nagar	2620	8.16	7.8	0.1	5	32	7.90	7.9	0.4	5	33
2	U/s of weir site of WTP near Ashwani Khad	4428	8.01	7.8	1.4	110	540	7.57	7.8	1.2	70	350
3	D/s Ashwani Khad after confl. of lift nallaha	4429	8.02	7.7	1.9	220	920	7.71	7.6	1.3	110	540
4	Lift Nala before conf. to Ashwani Khad near Dogrha bridge	4430	7.90	7.5	2.1	350	1600	7.38	7.4	2.2	170	920
5	Ashwani Khad D/S Vill Sadhupul	4461	7.91	9.5	0.3	14	49.0	7.31	7.4	0.2	2	24.0
6	Ashwani Khad @ Sadhupul (U/S Bridge Towards Chail)	4479	8.10	9.3	0.2	11	46.0	7.34	7.8	0.8	4	46.0
Sr. No.	Name of location	Sample Code	March 2023					April 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	Ashwani Khad U/s Yashwant Nagar	2620	7.76	8.1	1.4	21	540	8.11	7.6	0.1	2	21
2	U/s of weir site of WTP near Ashwani Khad	4428	7.75	7.2	1.0	49	240	7.45	7.6	1.5	170	540
3	D/s Ashwani Khad after confl. of lift nallaha	4429	7.68	6.9	1.2	79	350	8.28	7.5	BDL	26	140
4	Lift Nala before conf. to Ashwani Khad near Dogrha bridge	4430	7.91	6.4	12.0	220	1600	7.56	7.4	BDL	7	17
5	Ashwani Khad D/S Vill Sadhupul	4461	7.89	7.2	0.9	4	220.0	7.65	7.0	0.4	4.5	79.0
6	Ashwani Khad @ Sadhupul (U/S Bridge Towards Chail)	4479	7.94	6.8	1.0	7	170.0	7.62	6.8	0.4	6.8	63.0
Sr. No.	Name of location	Sample Code	May 2023					June 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	Ashwani Khad U/s Yashwant Nagar	2620	8.48	7.8	0.4	4	34	8.18	8.0	0.4	2	26
2	U/s of weir site of WTP near Ashwani Khad	4428	8.23	7.8	BDL	17	1600	8.23	7.2	2.8	21	540
3	D/s Ashwani Khad after confl. of lift nallaha	4429	8.24	7.6	2.0	9	920	8.24	7.4	4.2	79	920
4	Lift Nala before conf. to Ashwani Khad near Dogrha bridge	4430	8.23	7.4	2.4	17	1600	8.26	7.1	9.5	220	1600
5	Ashwani Khad D/S Vill Sadhupul	4461	7.72	7.5	0.4	4.5	39.0	7.70	7.7	0.6	6.8	39
6	Ashwani Khad @ Sadhupul (U/S Bridge Towards Chail)	4479	7.69	7.5	1.0	11	170.0	8.04	7.6	0.2	4.5	26
Sr. No.	Name of location	Sample Code	July 2023					August 2023				
			pH	D.O. mg/l	BOD mg/l	T.C. MPN /100ml	F.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	Ashwani Khad U/s Yashwant Nagar	2620	7.98	7.8	0.5	4	39	8.11	7.8	0.2	4	47

2	U/s of weir site of WTP near Ashwani Khad.	4428	7.96	8.9	0.4	2	26	7.48	7.3	BDL	94	920
3	D/s Ashwani Khad after confl of lift nallaha	4429	7.79	7.1	1.1	17	350	7.71	7.1	1.3	140	1600
4	Lift Nala before conf. to Ashwani Khad near Dogra bridge	4430	5.92	7.0	1.5	20	1600	7.79	7.2	2.4	220	1600
5	Ashwani Khad D/S Vill Sadhupul	4461	7.71	7.5	0.4	2	21.0	8.17	8.2	0.3	4	47.0
6	Ashwani Khad @ Sadhupul (U/S Bridge Towards Chail)	4479	7.72	7.2	0.3	2	34.0	8.06	7.8	0.6	11	130.0
			September 2023					October 2023				
Sr. No.	Name of location	Sample Code	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	Ashwani Khad U/s Yashwant Nagar.	2620	8.12	7.8	0.4	9	350	8.44	6.7	0.3	4.5	39
2	U/s of weir site of WTP near Ashwani Khad.	4428	7.61	6.9	2.8	21	1600	7.38	7.5	BDL	47	350
3	D/s Ashwani Khad after confl of lift nallaha	4429	7.41	7.1	1.4	17	350	7.17	7.4	BDL	540	1600
4	Lift Nala before conf. to Ashwani Khad near Dogra bridge	4430	7.61	6.9	2.8	21	1600	7.29	7.6	10.6	40	920
5	Ashwani Khad D/S Vill Sadhupul	4461	7.18	7.5	0.2	9.2	140.0	7.92	6.7	0.2	2	34
6	Ashwani Khad @ Sadhupul (U/S Bridge Towards Chail)	4479	7.10	7.8	0.3	4.5	220.0	7.53	7.9	0.2	4	34
			November 2023					December 2023				
Sr. No.	Name of location	Sample Code	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	Ashwani Khad U/s Yashwant Nagar	2620	7.98	7.8	0.3	4.0	39	8.20	8.5	0.4	4	39
2	U/s of weir site of WTP near Ashwani Khad.	4428	7.32	8.2	3.1	33	350	7.74	8.7	1.8	7.8	70
3	D/s Ashwani Khad after confl of lift nallaha	4429	6.78	7.6	6.6	47	1600	7.17	8.2	6.8	21	350
4	Lift Nala before conf. to Ashwani Khad near Dogra bridge.	4430	6.58	6.8	8.0	79	1600	7.33	8.1	9.5	170	1600
5	Ashwani Khad D/S Vill Sadhupul	4461	7.64	11.0	0.2	4.5	49	7.48	6.9	0.6	4	110
6	Ashwani Khad @ Sadhupul (U/S Bridge Towards Chail).	4479	7.58	10.0	0.3	4.5	39	7.58	6.2	1	5	140

WATER QUALITY STATUS OF RIVER MARKANDA DURING JANUARY TO SEPTEMBER 2023												
Sr. No.	Name of location	Sample Code	January 2023					February 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Markanda at Paonta Sahib	1871	7.8	8.8	1.90	40	220	7.3	8.5	2.70	70	350
2	River Markanda U/s Kala Amb	2624	8.05	8.7	2.3	130	350	7.92	8.4	2.6	94	350
3	River Markanda D/s Kala Amb	2625	8.01	8.9	2.4	170	280	7.97	8.3	2.7	94	430
4	Markanda R. D/s of Salani Khad	3862	7.99	8.8	2.1	94	280	7.95	8.4	2.6	70	350
5	Markanda R. D/s of Moginand Nallah	3864	7.86	8.8	2.4	70	350	7.85	8.3	2.8	170	540
Sr. No.	Name of location	Sample Code	March 2023					April 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Markanda at Paonta Sahib	1871	8.1	8.0	2.30	170	350	7.9	7.8	2.10	46	280
2	River Markanda U/s Kala Amb	2624	8.12	7.9	2.5	280	430	8.07	7.7	2.5	170	350
3	River Markanda D/s Kala Amb	2625	7.94	7.7	2.7	350	540	7.96	7.6	2.7	280	540
4	Markanda R. D/s of Salani Khad	3862	8.02	7.9	2.2	130	350	7.90	7.6	2.8	240	920
5	Markanda R. D/s of Moginand Nallah	3864	8.13	7.8	2.6	220	540	7.99	7.7	2.0	79	280
Sr. No.	Name of location	Sample Code	May 2023					June 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Markanda at Paonta Sahib	1871	8.1	7.5	1.90	46	350	7.0	7.6	1.20	40	220
2	River Markanda U/s Kala Amb	2624	8.26	7.6	2.3	110	280	7.81	7.4	1.6	70	280

3	River Markanda D/s Kala Amb	2625	8.20	7.5	2.4	170	350	7.90	7.2	1.8	140	350
4	Markanda R. D/s of Salani Khad	3862	8.02	7.6	1.9	94	220	7.71	7.2	1.4	46	280
5	Markanda R. D/s of Moginand Nallah	3864	8.06	7.4	2.4	170	540	7.93	7.3	2.0	110	350
July 2023												
Sr. No.	Name of location	Sample Code	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Markanda at Paonta Sahib	1871	7.7	7.5	1.80	70	240	8.0	7.6	1.60	33	220
2	River Markanda U/s Kala Amb	2624	7.95	7.4	2	110	350	8.16	7.4	2.7	94	280
3	River Markanda D/s Kala Amb	2625	7.49	7.3	2.1	150	540	8.21	7.4	2.8	140	350
4	Markanda R. D/s of Salani Khad	3862	7.51	7.6	2.0	94	350	8.11	7.5	1.8	46	220
5	Markanda R. D/s of Moginand Nallah	3864	7.36	7.4	1.9	150	920	8.25	7.5	2.7	130	350
August 2023												
Sr. No.	Name of location	Sample Code	pH	D.O. mg/l	BOD mg/l	T.C. MPN /100ml	F.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Markanda at Paonta Sahib	1871	8.0	7.7	1.20	150	33	8.1	7.9	1.20	46	220
2	River Markanda U/s Kala Amb	2624	7.96	7.6	1.8	280	94	8.15	8.2	1.5	33	170
3	River Markanda D/s Kala Amb	2625	7.99	7.6	1.9	350	110	7.36	7.7	1.9	130	540
4	Markanda R. D/s of Salani Khad	3862	8.05	7.6	1.3	210	40	7.27	7.9	1.3	79	220
5	Markanda R. D/s of Moginand Nallah	3864	8.08	7.5	2.0	350	110	7.99	7.8	1.7	240	920
September 2023												
Sr. No.	Name of location	Sample Code	pH	D.O. mg/l	BOD mg/l	T.C. MPN /100ml	F.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Markanda at Paonta Sahib	1871	8.0	7.7	1.20	150	33	8.1	7.9	1.20	46	220
2	River Markanda U/s Kala Amb	2624	7.96	7.6	1.8	280	94	8.15	8.2	1.5	33	170
3	River Markanda D/s Kala Amb	2625	7.99	7.6	1.9	350	110	7.36	7.7	1.9	130	540
4	Markanda R. D/s of Salani Khad	3862	8.05	7.6	1.3	210	40	7.27	7.9	1.3	79	220
5	Markanda R. D/s of Moginand Nallah	3864	8.08	7.5	2.0	350	110	7.99	7.8	1.7	240	920
October 2023												
Sr. No.	Name of location	Sample Code	pH	D.O. mg/l	BOD mg/l	T.C. MPN /100ml	F.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Markanda at Paonta Sahib	1871	8.0	7.7	1.20	150	33	8.1	7.9	1.20	46	220
2	River Markanda U/s Kala Amb	2624	7.96	7.6	1.8	280	94	8.15	8.2	1.5	33	170
3	River Markanda D/s Kala Amb	2625	7.99	7.6	1.9	350	110	7.36	7.7	1.9	130	540
4	Markanda R. D/s of Salani Khad	3862	8.05	7.6	1.3	210	40	7.27	7.9	1.3	79	220
5	Markanda R. D/s of Moginand Nallah	3864	8.08	7.5	2.0	350	110	7.99	7.8	1.7	240	920
November 2023												
Sr. No.	Name of location	Sample Code	pH	D.O. mg/l	BOD mg/l	T.C. MPN /100ml	F.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Markanda at Paonta Sahib	1871	8.0	7.7	1.20	150	33	8.1	7.9	1.20	46	220
2	River Markanda U/s Kala Amb	2624	7.96	7.6	1.8	280	94	8.15	8.2	1.5	33	170
3	River Markanda D/s Kala Amb	2625	7.99	7.6	1.9	350	110	7.36	7.7	1.9	130	540
4	Markanda R. D/s of Salani Khad	3862	8.05	7.6	1.3	210	40	7.27	7.9	1.3	79	220
5	Markanda R. D/s of Moginand Nallah	3864	8.08	7.5	2.0	350	110	7.99	7.8	1.7	240	920
December 2023												
Sr. No.	Name of location	Sample Code	pH	D.O. mg/l	BOD mg/l	T.C. MPN /100ml	F.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml

1	River Markanda at Paonta Sahib	1871	8.1	8.1	1.00	33	170	7.9	8.0	1.00	32	140
2	River Markanda U/s Kala Amb	2624	7.95	7.9	1.5	47	220	7.6	7.8	1.3	40	280
3	River Markanda D/s Kala Amb	2625	8.26	7.8	1.6	47	220	8.31	7.8	1.6	46	350
4	Markanda R. D/s of Salani Khad	3862	7.90	7.9	1.2	33	140	8.06	8.1	1.2	46	220
5	Markanda R. D/s of Moginand Nallah	3864	6.81	7.8	1.5	130	350	7.94	8.0	1.2	220	920

WATER QUALITY STATUS OF RIVER GIRI DURING JANUARY TO DECEMBER 2023												
Sr. No.	Name of location	Sample Code	January 2023					February 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	Giri River D/s Yashwant Nagar	2621	8.20	8.5	0.1	7.8	34	7.91	8.5	0.2	2	32
2	River Giri U/s CCI mines	2622	7.94	8.3	1.8	32	94	8.18	8.0	1.7	34	94
3	River Giri D/s Sataun	2623	7.97	8.1	2.6	49	350	7.86	8.0	2.1	40	140
4	Giri River at Village Maryaog after confluence of R, giri and Ashwani	3876	8.33	8.8	0.5	11	110	7.93	8.8	0.4	5	33
5	River Giri D/s Rajgarh Town	4027	7.65	7.8	BDL	14	220	7.80	8.4	2.0	49	170
6	River Giri D/s Kalgidhar Trust, Baru Sahib	4028	8.29	7.9	2.0	33	280	7.79	8.2	2.1	49	220
7	River Giri U/S Chailla	4427	7.65	7.8	BDL	14	220	7.55	7.8	BDL	14	140
8	River Giri at Kotkhai	5292	7.70	8.0	BDL	24	220	7.72	7.8	BDL	14	39
Sr. No.	Name of location	Sample Code	March 2023					April 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	Giri River D/s Yashwant Nagar	2621	7.72	8.7	0.9	4	130	7.83	7.8	0.2	4	26
2	River Giri U/s CCI mines	2622	7.97	8.6	1.9	22	130	8.15	8.0	1.2	39	94
3	River Giri D/s Sataun	2623	7.98	8.2	2.4	46	220	8.08	7.9	1.5	70	140
4	Giri River at Village Maryaog after confluence of R, giri and Ashwani	3876	7.94	8.9	0.7	4	130	7.98	8.5	0.2	5	27
5	River Giri D/s Rajgarh Town	4027	8.37	7.9	2.0	40	220	8.31	8.2	1.7	70	220
6	River Giri D/s Kalgidhar Trust, Baru Sahib	4028	8.20	7.8	1.9	39	170	8.30	8.1	1.5	49	170
7	River Giri U/S Chailla	4427	7.70	7.6	BDL	14	70	7.44	7.5	BDL	9	33
8	River Giri at Kotkhai	5292	7.50	7.3	BDL	17	47	7.76	7.9	BDL	<1.8	9
Sr. No.	Name of location	Sample Code	May 2023					June 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml

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Sr. No.	Name of location	Sample Code	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	Giri River D/s Yashwant Nagar	2621	8.35	8.8	0.2	2	33	8.16	8.5	0.2	<1.8	21
2	River Giri U/s CCI mines	2622	8.15	8.0	1.0	26	94	8.14	7.9	1.0	39	140
3	River Giri D/s Sataun	2623	8.06	7.9	1.3	40	170	8.16	7.8	1.3	46	280
4	Giri River at Village Maryaog after confluence of R, giri and Ashwani	3876	8.32	8.5	0.1	2	26	8.06	8.3	0.1	<1.8	12
5	River Giri D/s Rajgarh Town	4027	8.25	8.0	1.4	34	140	8.26	7.9	1.4	49	220
6	River Giri D/s Kalgidhar Trust, Baru Sahib	4028	8.19	7.9	1.5	33	130	8.35	7.7	1.3	46	170
7	River Giri U/S Chaila	4427	7.88	7.6	BDL	12	140	7.86	7.4	BDL	26	140
8	River Giri at Kotkhai	5292	7.94	7.7	BDL	17	70	8.02	7.9	BDL	7	47

		July 2023						August 2023					
Sr. No.	Name of location	Sample Code	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	
1	Giri River D/s Yashwant Nagar	2621	7.93	8.2	0.4	2	21	8.02	7.1	0.2	6.8	49	
2	River Giri U/s CCI mines	2622	7.31	7.5	2.6	70	280	8.05	6.5	2.3	39	140	
3	River Giri D/s Sataun	2623	8.08	7.5	2.8	130	350	7.94	6.5	3.2	94	350	
4	Giri River at Village Maryaog after confluence of R, giri and Ashwani	3876	7.96	8.9	0.4	2	26	8.02	7.6	0.4	5	39	
5	River Giri D/s Rajgarh Town	4027	7.97	7.9	2.8	110	240	8.14	8.1	2.1	49	280	
6	River Giri D/s Kalgidhar Trust, Baru Sahib	4028	7.64	7.7	2.1	130	280	8.03	8.0	2.2	79	350	
7	River Giri U/S Chaila	4427	7.23	7.6	BDL	14	70	7.74	7.7	BDL	14	47	
8	River Giri at Kotkhai	5292	7.19	7.8	BDL	14	140	7.83	8.0	BDL	12	920	

WATER QUALITY STATUS OF RIVER GIRI DURING SEPTEMBER TO DECEMBER 2023

		September 2023	October 2023
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Sr. No.	Name of location	Sample Code	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	Giri River D/s Yashwant Nagar	2621	8.16	7.9	0.2	4.5	140	8.36	6.7	0.2	4	39
2	River Giri U/s CCI mines	2622	7.83	7.5	1.0	21	94	8.24	8.0	1.0	26	70
3	River Giri D/s Sataun	2623	7.95	7.5	1.2	33	170	8.15	8.2	1.5	33	170
4	Giri River at Village Maryaog after confluence of R, giri and Ashwani	3876	8.18	7.6	0.2	4	220	7.53	7.9	0.2	4	34
5	River Giri D/s Rajgarh Town	4027	8.19	7.9	2.0	26	140	8.33	7.8	1.5	27	150
6	River Giri D/s Kalgidhar Trust, Baru Sahib	4028	8.23	7.8	1.6	34	130	8.32	7.8	1.3	26	140
7	River Giri U/S Chailla	4427	8.01	7.6	BDL	5	170	7.89	7.6	BDL	22	220
8	River Giri at Kotkhai	5292	7.59	7.8	BDL	11	70	7.98	7.9	BDL	220	1600
			November 2023					December 2023				
Sr. No.	Name of location	Sample Code	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	Giri River D/s Yashwant Nagar	2621	8.14	7.9	0.2	2	26	8.18	8.8	0.2	2	26
2	River Giri U/s CCI mines	2622	8.03	8.6	1.1	13	33	7.69	8.6	1.0	22	70
3	River Giri D/s Sataun	2623	7.93	8.4	1.1	33	140	8.26	8.5	1.1	33	110
4	Giri River at Village Maryaog after confluence of R, giri and Ashwani	3876	8.16	7.6	0.1	2	26	8.12	9.3	0.1	2	26
5	River Giri D/s Rajgarh Town	4027	8.26	7.9	1.2	22	130	8.24	7.9	1.8	23	220
6	River Giri D/s Kalgidhar Trust, Baru Sahib	4028	8.27	7.8	1.1	32	140	8.08	7.8	1.2	70	170
7	River Giri U/S Chailla	4427	8.08	8.3	BDL	22	170	7.41	8.1	BDL	4	17
8	River Giri at Kotkhai	5292	7.82	8.4	BDL	17	94	7.83	9.0	BDL	110	540

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WATER QUALITY STATUS OF RIVER RATTA DURING JANUARY TO DECEMBER 2023												
Sr. No.	Name of location	Station Code	January 2023					February 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Ratta before Conf. to River Sirsa	4488	7.67	5.7	2.3	13	94	7.60	6.1	10.0	>1600	>1600
Sr. No.	Name of location	Station Code	March 2023					April 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Ratta before Conf. to River Sirsa	4488	7.73	7.1	2.8	21	920	-	-	-	-	-
Sr. No.	Name of location	Station Code	May 2023					June 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Ratta before Conf. to River Sirsa	4488	-	-	-	-	-	7.44	6.9	2.5	130	920
Sr. No.	Name of location	Station Code	July 2023					August 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Ratta before Conf. to River Sirsa	4488	7.74	6.9	0.4	10	140	7.96	7.1	0.9	5	34
Sr. No.	Name of location	Station Code	September 2023					October 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Ratta before Conf. to River Sirsa	4488	7.98	6.9	1.2	110	920	7.52	5.9	3.0	110	920
Sr. No.	Name of location	Station Code	November 2023					December 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Ratta before Conf. to River Sirsa	4488	7.76	6.0	1.6	24	920	7.75	6.0	2.1	24	540

WATER QUALITY STATUS OF SHIKRI KHAD DURING JANUARY TO DECEMBER 2023												
Sr. No.	Name of location	Sample Code	January 2023					February 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	Shikari Khad before Conf. to R. Pabbar near HRTC Bus Stand Rohru	4431	7.63	7.8	BDL	22	240	7.58	7.6	BDL	17	110
Sr. No.	Name of location	Sample Code	March 2023					April 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	Shikari Khad before Conf. to R. Pabbar near HRTC Bus Stand Rohru	4431	7.63	8.0	BDL	27	170	7.88	7.6	BDL	14	140
Sr. No.	Name of location	Sample Code	May 2023					June 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	Shikari Khad before Conf. to R. Pabbar near HRTC Bus Stand Rohru	4431	7.87	7.4	BDL	14	70	7.56	7.0	BDL	11	140
Sr. No.	Name of location	Sample Code	July 2023					August 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	Shikari Khad before Conf. to R. Pabbar near HRTC Bus Stand Rohru	4431	8.29	7.3	BDL	17	920	7.47	7.4	BDL	220	1600

WATER QUALITY STATUS OF SHIKRI KHAD DURING SEPTEMBER TO DECEMBER 2023												
Sr. No.	Name of location	Sample Code	September 2023					October 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	Shikari Khad before Conf. to R. Pabbar near HRTC Bus Stand Rohru	4431	7.66	7.6	BDL	110	11	8.33	7.8	BDL	22	110
November 2023						December 2023						

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Sr. No.	Name of location	Sample Code	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	Shikari Khad before Conf. to R. Pabbar near HRTC Bus Stand Rohru	4431	7.82	7.9	BDL	33	350	7.96	8.0	BDL	6.8	34

WATER QUALITY STATUS OF RIVER PABBAR DURING JANUARY TO DECEMBER 2023												
Sr. No.	Name of location	Sample Code	January 2023					February 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Pabbar U/s Dhambari	2617	7.32	8.8	BDL	17	170	7.84	8.9	BDL	17	47
2	River Pabbar U/s Rohru	2618	7.43	8.7	BDL	21	110	7.74	8.2	BDL	9.2	46
3	River Pabbar at Snail D/s of TRT of Swara Kuddu	2619	7.6	8.5	BDL	21	220	7.62	8.0	BDL	14	70
4	River Pabbar U/s Hatkoti	4039	7.54	8.2	BDL	14	140	7.67	7.3	BDL	8	32
Sr. No.	Name of location	Sample Code	March 2023					April 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Pabbar U/s Dhambari	2617	7.96	8	BDL	14	47	7.63	8.6	BDL	<1.8	9
2	River Pabbar U/s Rohru	2618	7.79	8.0	BDL	17	94	7.76	8.5	BDL	<1.8	5
3	River Pabbar at Snail D/s of TRT of Swara Kuddu	2619	7.68	8.0	BDL	14	70	7.75	8.1	BDL	7	26
4	River Pabbar U/s Hatkoti	4039	7.74	7.9	BDL	11	40	7.73	8.0	BDL	7	11
Sr. No.	Name of location	Sample Code	May 2023					June 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Pabbar U/s Dhambari	2617	7.96	8.4	BDL	17	220	7.48	8.2	BDL	17	130
2	River Pabbar U/s Rohru	2618	7.94	8.0	BDL	7	170	7.43	8.1	BDL	27.0	170
3	River Pabbar at Snail D/s of TRT of Swara Kuddu	2619	7.86	7.8	BDL	7	170	8.38	7.8	BDL	17	40

4	River Pabbar U/s Hatkoti	4039	7.78	7.2	BDL	7	47	7.23	7.6	BDL	220	920
			July 2023					August 2023				
Sr. No.	Name of location	Sample Code	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Pabbar U/s Dhambari	2617	7.97	8	BDL	6.8	33	7.65	8.6	BDL	17	280
2	River Pabbar U/s Rohru	2618	8.21	7.9	BDL	11	170	7.39	8.5	BDL	20.0	350
3	River Pabbar at Snail D/s of TRT of Swara Kuddu	2619	7.03	7.9	BDL	9	140	7.52	8.0	BDL	17	220
4	River Pabbar U/s Hatkoti	4039	7.36	7.8	BDL	7	110	7.54	7.6	BDL	9	94
			September 2023					October 2023				
Sr. No.	Name of location	Sample Code	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Pabbar U/s Dhambari	2617	7.75	8.1	BDL	9.2	70	7.24	8.4	BDL	11	70
2	River Pabbar U/s Rohru	2618	7.76	8.0	BDL	11	94	7.21	8.3	BDL	14.0	220
3	River Pabbar at Snail D/s of TRT of Swara Kuddu	2619	7.92	7.7	BDL	7	110	7.80	7.9	BDL	47	350
4	River Pabbar U/s Hatkoti	4039	7.76	7.8	BDL	7	49	8.23	8.1	BDL	11	49
			November 2023					December 2023				
Sr. No.	Name of location	Sample Code	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Pabbar U/s Dhambari	2617	7.83	8.5	BDL	6.8	17	7.74	9.2	BDL	4	26
2	River Pabbar U/s Rohru	2618	7.75	8.4	BDL	9	26	8.25	9.1	BDL	4.5	70

3	River Pabbar at Snail D/s of TRT of Swara Kuddu	2619	7.82	8.0	BDL	47	140	7.69	8.9	BDL	21	350
4	River Pabbar U/s Hatkoti	4039	7.82	8.0	BDL	32	94	7.49	8.7	BDL	2	39

WATER QUALITY STATUS OF RIVER SIRSA DURING JANUARY TO DECEMBER 2023												
Sr. No.	Name of location	Sample Code	January 2023					February 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Sirsa U/s Sitomajri Nalla	1551	8.14	6.4	2.5	21	70	7.99	6.4	2.4	27	540
2	River Sirsa U/s Sandholi Nallah	4485	7.98	6.4	1.7	9	47	7.81	6.0	3.8	33	920
3	River Sirsa D/s Nalagarh Bridge	1552	7.80	6.9	2.8	8	94	7.95	6.8	2.6	21	540
4	River Sirsa D/s Housing Board Nalla	4487	8.01	5.6	12.0	>1600	>1600	7.82	5.5	9.0	>1600	>1600
5	River Sirsa D/s Nalagarh Town	1868	8.07	7.1	2.4	12	49	7.84	6.5	2.0	17	350
6	River Sirsa D/s River Ratta	4489	7.92	6.4	3.2	17	140	7.87	7.0	3.0	46	920
Sr. No.	Name of location	Sample Code	March 2023					April 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Sirsa U/s Sitomajri Nalla	1551	7.78	5.8	7.2	920	1600	7.94	6.9	2.2	33	540
2	River Sirsa U/s Sandholi Nallah	4485	7.59	7.1	2.4	21	350	8.05	6.1	2.5	46	540
3	River Sirsa D/s Nalagarh Bridge	1552	7.32	7.1	2.0	11	350	7.68	6.1	6.0	920	>1600
4	River Sirsa D/s Housing Board Nalla	4487	7.69	5.9	6.6	540	1600	7.6	6.2	5.2	540	1600.00
5	River Sirsa D/s Nalagarh Town	1868	7.97	6.9	2.5	33	920	8.14	6.6	2.4	33	540
6	River Sirsa D/s River Ratta	4489	7.73	7.1	2.8	21	920	7.77	5.2	5.6	540	>1600
Sr. No.	Name of location	Sample Code	May 2023					June 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Sirsa U/s Sitomajri Nalla	1551	7.60	7.1	1.6	12	170	7.70	6.8	0.4	5	39
2	River Sirsa U/s Sandholi Nallah	4485	7.79	6.9	1.9	7	220	7.74	6.6	1.0	9	350
3	River Sirsa D/s Nalagarh Bridge	1552	7.88	6.9	2.0	9	350	7.76	6.8	0.8	12	170
4	River Sirsa D/s Housing Board Nalla	4487	7.9	5.7	4.8	110	920.00	7.68	6.1	1.4	33	540

5	River Sirsa D/s Nalagarh Town	1868	7.76	6.4	1.4	7	140	7.80	6.9	0.5	6.8	170
6	River Sirsa D/s River Ratta	4489	7.71	6.5	4.9	140	1600	7.89	6.6	0.4	4	33
			July 2023					August 2023				
Sr. No.		Sample Code	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Sirsa U/s Sitomajri Nalla	1551	7.89	7.1	0.2	2	26	8.22	6.9	1.0	12	350
2	River Sirsa U/s Sandholi Nallah	4485	7.84	6.9	0.3	4	34	8.23	6.9	0.5	4	170
3	River Sirsa D/s Nalagarh Bridge	1552	7.71	7.1	0.4	4	39	8.11	6.7	0.4	4.5	21
4	River Sirsa D/s Housing Board Nalla	4487	7.75	6.7	0.6	7	39	8.24	6.3	0.3	9.2	350
5	River Sirsa D/s Nalagarh Town	1868	7.92	7.1	0.3	2	26	8.13	6.9	0.8	4	34
6	River Sirsa D/s River Ratta	4489	7.72	6.9	0.5	11	210	8.26	6.8	0.3	9.2	140
			September 2023					October 2023				
Sr. No.	Name of location	Sation Cod	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Sirsa U/s Sitomajri Nalla	1551	8.00	7.1	1.2	70	540	7.44	6.4	0.8	12	170
2	River Sirsa U/s Sandholi Nallah	4485	7.85	6.8	0.6	6.8	350	7.63	6.7	1.0	9.2	220
3	River Sirsa D/s Nalagarh Bridge	1552	7.89	6.8	1.8	350	>1600	7.71	5.5	2.0	12	350
4	River Sirsa D/s Housing Board Nalla	4487	7.76	6.9	2.1	1600	>1600	7.76	3.0	2.9	140	920
5	River Sirsa D/s Nalagarh Town	1868	7.85	6.7	1.5	140	>1600	7.12	3.4	2.2	10	540
6	River Sirsa D/s River Ratta	4489	7.90	6.4	0.9	110	920	7.69	5.5	2.8	110	920
			November 2023					December 2023				
Sr. No.	Name of location	Sation Cod	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Sirsa U/s Sitomajri Nalla	1551	7.67	6.8	0.3	4.5	49	7.65	5.8	1.2	6.8	540
2	River Sirsa U/s Sandholi Nallah	4485	7.72	6.1	0.8	24	540	7.50	6.2	1.6	4.5	540
3	River Sirsa D/s Nalagarh Bridge	1552	7.74	6.2	2.8	110	>1600	7.75	6.0	2.4	110	920

4	River Sirsa D/s Housing Board Nalla	4487	7.70	5.2	4.4	920	>1600	7.59	4.9	16.0	>1600	>1600
5	River Sirsa D/s Nalagarh Town	1868	7.78	5.9	1.2	24	540	7.58	6.1	3.9	540	>1600
6	River Sirsa D/s River Ratta	4489	7.93	5.8	4.0	540	>1600	7.71	5.7	1.6	5	140

WATER QUALITY STATUS OF RIVER SUKHNA DURING JANUARY TO DECEMBER 2023												
Sr. No.	Name of location	Sation Code	January 2023					February 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Sukhna at Parwanoo	1870	7.89	6.20	1.8	8	70	7.81	6.10	1.2	33	540
Sr. No.	Name of location	Sation Code	March 2023					April 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Sukhna at Parwanoo	1870	7.60	5.90	12.0	1600	>1600	7.92	5.80	1.5	70	540
Sr. No.	Name of location	Sation Code	May 2023					June 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Sukhna at Parwanoo	1870	8.09	5.90	3.0	49	920	7.73	5.80	10.0	920	>1600
Sr. No.	Name of location	Sation Code	July 2023					August 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Sukhna at Parwanoo	1870	7.76	5.70	0.1	2	21	8.23	8.70	0.2	4	34
Sr. No.	Name of location	Sation Code	October 2023					November 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Sukhna at Parwanoo	1870.00	8.28	7.7	0	7	220	7.35	7.20	12.0	>1600	>1600
Sr. No.	Name of location	Sation Code	December 2023					December 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Sukhna at Parwanoo	1870	7.74	4.30	26.0	>1600	>1600	8.04	7.00	2.2	24	540

WATER QUALITY STATUS OF RIVER BALD DURING JANUARY TO DECEMBER 2023												
Sr. No.	Name of location	Sample Code	January 2023					February 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Bald D/s Land fill site at Baddi	4486	7.53	6.1	24.0	>1600	>1600	7.89	4.0	2.8	40	920
Sr. No.	Name of location	Sample Code	March 2023					April 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Bald D/s Land fill site at Baddi	4486	7.40	6.4	5.8	170	920	7.63	5.6	2.4	33	540
Sr. No.	Name of location	Sample Code	May 2023					June 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Bald D/s Land fill site at Baddi	4486	7.54	5.9	10.2	>1600	>1600	7.18	5.9	1.8	94	920
Sr. No.	Name of location	Sample Code	July 2023					August 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Bald D/s Land fill site at Baddi	4486	7.99	6.8	0.2	<1.8	12	7.98	7.6	1.4	7	170
Sr. No.	Name of location	Sample Code	September 2023					October 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Bald D/s Land fill site at Baddi	4486	7.97	6.8	1.2	350	1600	7.28	5.9	0.9	12	220
Sr. No.	Name of location	Sample Code	November 2023					December 2023				
			pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml	pH	D.O. mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
1	River Bald D/s Land fill site at Baddi	4486	7.65	6.4	0.8	39	540	8.06	6.5	0.2	4	34

STPs in the catchment area of Sukhana Khad in Parwanoo

STP	Capacity	Sampling	pH	TSS (Mg/l)	BOD(mg/l)	FC (MPN/100 ml)	Status
STP Parwanoo	1 MLD	31.10.2023	7.62	32	15	1600	Non complying
		30.11.2023	7.47	30	10	-	Compliant
		29.12.2023	7.35	71	14	1600	Non complying
		24.01.2024	7.67	32	18	1600	Non complying

STPs in the catchment area of Ashwani Khad in Shimla

STP	Capacity	Sampling	pH	TSS (Mg/l)	BOD(mg/l)	FC (MPN/100 ml)	Status
STP Lalpanti	19.35 MLD ASP + 7.1 MLD SBR	14-11-2023	7.45	108	150	540	Non-Compliant
		30-11-2023	7.19	134	71	24000	Non-Compliant
		14-12-2023	7.30	270	200	12000	Non-Compliant
		30-12-2023	7.35	274	225	11000	Non-Compliant
		09-01-2024	7.46	220	230	350	Non-Compliant
		29-01-2024	7.76	270	195	350	Non-Compliant
		16-02-2024	7.42	205	175	920	Non-Compliant
		28-02-2024	7.43	175	150	920	Non-Compliant
15-03-2024	7.16	223	280	280	Non-Compliant		

STP	Capacity	Sampling	pH	TSS (Mg/l)	BOD(mg/l)	FC (MPN/100 ml)	Status
STP Dhali	0.76 MLD ASP + 1.5 MLD SBR	15-11-2023	6.75	34	8	350	Compliant
		30-11-2023	7.10	11	7	9300	Non-Compliant
		14-12-2023	6.82	12	5	6100	Non-Compliant
		29-12-2023	6.95	12	7.3	540	Compliant
		09-01-2024	6.89	10	6	540	Compliant
		29-01-2024	7.41	54	22	350	Compliant
		16-02-2024	7.38	15	6.1	130	Compliant
		28-02-2024	7.25	107	78	280	Compliant
15-03-2024	7.16	72	42	920	Non-Compliant		

STP	Capacity	Sampling	pH	TSS (Mg/l)	BOD(mg/l)	FC (MPN/100 ml)	Status
STP Malayana	4.44 MLD ASP + 5.2 MLD SBR	15-11-2023	7.71	8	3	220	Compliant
		30-11-2023	10.72	149	2.8	7800	Non-Compliant
		29-12-2023	2.22	7	1.4	<1.8	Non-Compliant
		09-01-2024	7.41	36	4.6	280	Compliant
		29-01-2024	7.64	6	8.4	280	Compliant
		16-02-2024	2.62	9	2.7	2.62	Compliant
		28-02-2024	7.30	26	18.2	540	Compliant
		15-03-2024	7.08	19	20.6	350	Compliant

STPs in the catchment area of Pabbar River in Rohru

STP	Capacity	Sampling	pH	TSS (Mg/l)	BOD(mg/l)	FC (MPN/100 ml)	Status
STP Rohru	1.75 MLD	18-11-2023	7.08	241	225	170	Non-Compliant
		08-12-2023	7.17	235	225	9300	Non-Compliant
		12-01-2024	8.34	16	8	>1.8	Compliant
		09-02-2024	7.07	18	2.3	540	Compliant
		07-03-2024	7.37	178	94	540	Compliant

STP	Capacity	Sampling	pH	TSS (Mg/l)	BOD(mg/l)	FC (MPN/100 ml)	Status
STP Jubbal	0.65 MLD	17-11-2023	8.61	48	1.6	540	Compliant
		08-12-2023	7.18	43	12	33000	Non-Compliant
		11-01-2024	7.61	27	4.7	280	Compliant
		07-02-2024	8.07	10	2.7	49	Compliant
		06-03-2024	8.35	44	18	>1.8	Compliant

STP in the catchment of River Sirsa & River Ratta in Nalagarh and River Bald in Baddi

STP	Capacity	Sampling	pH	TSS (Mg/l)	BOD(mg/l)	FC (MPN/100 ml)	Status
STP Nalagarh	3.62	25-11-2023	8.18	9	5.2	920	Compliant
		22-12-2023	8.37	16	1.8	6.8	Compliant
		30-01-2024	7.68	14	9.2	920	Compliant
		22-02-2024	8.23	46	14	1600	Non-Compliant
		30-03-2024					Result Awaited

STPs in the catchment area of River Beas of Mandi

STP	Capacity	Sampling	pH	TSS (Mg/l)	BOD(mg/l)	FC (MPN/100 ml)	Status
Raghunath Ka Padhar	3.83	26.10.2023	7.82	6	1.6	<1.8	Compliant
		25.11.2023	7.27	17	4.5	<1.8	Compliant
		05.12.2023	7.63	25	8	23	Compliant
		30.01.2024	7.35	48	10.3	<1.8	Compliant
		11.03.2024	6.65	21	8	540	Compliant
Khaliar	0.47	26.10.2023	7.32	46	9	920	Compliant
		25.11.2023	7.05	128	40	540	Non-Compliant
		05.12.2023	6.72	66	14	920	Compliant
		30.01.2024	7.58	21	0.6	110	Compliant
		15.02.2024	7.61	14	0.5	70	Compliant
		11.03.2024	6.68	15	7	920	Compliant
Sarkaghat Zone B	0.7	26.10.2023	7.68	5	3.6	79	Compliant
		25.11.2023	6.74	11	2.4	920	Compliant
		29.12.2023	7.78	15	2.4	<1.8	Compliant
		18.01.2024	7.3	192	7	<1.8	Non-Compliant
		21.02.2024	7.98	20	2.3	120	Compliant
STP Joginder Nagar	1.74	30.12.2023	8.9	64	4	<1.8	Compliant
		30.01.2024	7.05	26	15.5	140	Compliant
		01.03.2024	11.73	290	0.8	<1.8	Non-Compliant
STP Sundernagar	3.55	27.10.2023	8.8	90	0.6	<1.8	Compliant
		15.11.2023	11.4	634	0.5	<1.8	Non-Compliant
		05.12.2023	7.31	13	1.4	<1.8	Compliant
		03.01.2024	7.79	12	0.9	<1.8	Compliant
		02.02.2024	7.82	3	0.2	<1.8	Compliant
		12.03.2024	7.85	2	0.2	<1.8	Compliant
BBMB, BSL, Sundernagar	1.0 MLD	27.10.2023	7.40	11	2.2	920	Compliant
		15.11.2023	7.48	11	1.4	94	Compliant
		05.12.2023	6.89	20	3.2	210	Compliant
		03.01.2024	7.19	35	1	110	Compliant
		02.02.2024	7.02	83	47	1600	Non-Compliant
		12.03.2024	7.26	78	1.4	540	Compliant

List of Polluted River Stretches

<u>Sr. No.</u>	<u>River Name</u>	<u>River Stretch</u>	<u>Criteria for categorization</u>	<u>CPCB, Results (mg/l)</u> 2016-17	<u>Priority</u>
1.	Sukhna	Sukhna to Parwanoo District – Solan	BOD \geq 30 (all points)	54.0	I
2.	Markanda	Kala Amb to Narayanpur District - Sirmour	BOD = (20-30) all points)	3.2 – 24	II
3.	Sirsa	Nalagarh to Solan District – Solan (Baddi-Nalagarh)	BOD = (10-20) all points)	8 - 16	III
4.	Ashwani	Along Yashwant Nagar District – Shimla / Sirmour	BOD = (03-06) all points)	3.2	V
5.	Beas	Kullu to Dehragopipur Disriect- Kullu, Mandi, Hamirpur, Kangra	BOD = (03-06) all points)	6.0	V
6.	Giri	Along Sainj , District- Shimla	BOD = (03-06) all points)	4.4-6	V
7.	Pabbar	Along Rohru, District- Shimla	BOD = (03-06) all points)	3.6-4	V

**Polluted River Stretch Priority-I
(Sukhna at Parwanoo Town, District -Solan, H.P)**

Sr. No.	Organization Responsible	Work proposed for Execution (In the Catchment Area)	Status
1.	Irrigation and Public Health Department	-Laying of Sewerage Network,	Under Progress
		-Setting up of Sewage Treatment Plants,	
		-Installation of Continuous Water Quality Monitoring Station	Completed
		-Radar System for Depth and Flow Measurement	Completed
2.	HIMUDA, Municipal Council, Parwanoo	Cleaning and Overhauling of Existing Septic Tanks and setting up of Sewage treatment Plant	Completed
3.	Department of Urban Development	Waste Recovery and Reprocessing of Existing Dumped Waste	Completed
		Kiosk for Domestic Hazardous Waste Management	Completed
4.	BBNDA, MC Parwanoo & HPSPCB	For collection, Transportation, Processing and disposal of fresh waste at Baddi Cluster	Completed and continuous process
5	Forest Department	Plantation Proposal	Completed
6.	MC Parwanoo	Phyto-remediation proposal on Samtel nallah	Under Repair

**Polluted River Stretch Priority-I
(Sukhna at Parwanoo Town, District –Solan, H.P)**

Action Plan	Status
<p>Laying of Sewerage Network Sewage Treatment Plant Proposal (2 No of 1 MLD capacity each) including laying of sewerage lines in Zone-I and Zone-II in Parwanoo Town. Timeline for STP Zone-II: - June, 2023</p>	<p>STP -Zone – I: STP of 1.0 MLD commissioned and functioning properly. House Hold Sewerage Connections: Total 2137 connections, 1867 connections released. 7 no. septic tanks has been connected in Zone-I. 14 existing septic tanks in 6 sectors of Parwanoo Town covers all households. Out of these 14 septic tanks, 7 have been connected to STP- Zone I. Remaining 7 septic tanks will be connected to STP II. Total pipe networking for the town proposed : DI pipe 150 mm – 33522 m and 200 mm-6808 m. Till date 150 mm – 22908 m and 200 mm -5319 m has been completed. Network for Zone I is complete. The OCEMS system has been connected with HPSPCB Server.</p> <p>STP – Zone – II: An alternative site in village Kamli has been identified for STP due to NHAI observations. The overall work of STP is 75% completed. The work was stalled due to delay in acquisition of the land but the issue of the same has now been resolved.</p>
<p>Phyto-remediation proposal on Samtel nallah Timeline: - 31.03.2024</p>	<p>Phyto-remediation on Samtel Nallah was completed however got damaged due to heavy rains and flood during monsoon.</p>

**Polluted River Stretch Priority-II
(River Markanda at Kala Amb, District -Sirmour, H.P)**

Sr. No.	Organization Responsible	Work proposed for Execution (In the Catchment Area)	Status
1.	Jal Shakti Vibhag	Kala Amb and Moginand Area: Laying of Sewerage Network and Pre-treatment of Sewage	In progress
		Trilokpur Area: Laying of Sewerage Network & Setting up of Sewage Treatment Plants	In progress
		Installation of Continuous Water Quality Monitoring Station	In progress
2.	HP State Industrial Development Corporation, Department of industries	Kala Amb Area: Proposal for setting up of CETP	In progress
3.	Special Area Development Authority, Kala Amb, District Administration	Proposal for setting up of Solid Waste Management Facility	Completed
4.	Forest Department	Plantation Proposal	Completed
5.	JSV	Phytoremediation proposal on Jattanwala Nallah	In progress

**Polluted River Stretch Priority-II
(River Markanda at Kala Amb, District -Sirmour, H.P)**

Action Plan	Status
<p>Trilokpur Area: Laying of Sewerage Network & Setting up of Sewage Treatment Plant</p> <p>Timeline: - April, 23</p>	<ul style="list-style-type: none"> • As per estimate there was a provision of construction of 1.5 MLD STP and laying of 8500 m of sewer network. • As of now, the work of STP has been completed and trial run has also successfully done on 30.09.2022. 8000 m sewer network has already been laid. • A part of sewer line approximately 700 Rmt laid along HT line is required to be passed through Nallah near Jai Bharat factory which will eventually connect with already laid sewer line in Jhiriwala till STP, but while doing work the authorities of the Jai Bharat informed that the portion of Nallah has been purchased by them and they can't allow laying of sewer line in that portion. • They also suggested some alternative roots for laying of sewer line but the same has not been found technical feasible. • To keep the work in smooth flow, the laying of sewer line from other side i.e Jhiriwala was started but the same was stopped by people of Haryana as they claimed the land to be in Haryana. • Keeping in view the urgency of work, the alignment of sewer line has been changed and about 600 m sewer pipe has been relaid. Now, about 500 m pipe is to be laid. • Currently, the work has been halted for want of 200 mm DI pipe whose requirement was already sent. • Sewage of 1.5 KLD volume had started flowing from Trilokpur Temple Complex to STP . • People of Trilokpur, Kheri and Johron have been informed to take connection through news published on 15-06-2023. • 25 Nos connections of Trilokpur temple area are connected and functioning properly. The overall work is completed except the work of sewer line which is required to be passed through Nallah near Jai Bharat factory which is in progress.

Polluted River Stretch Priority-II
(River Markanda at Kala Amb, District -Sirmour, H.P)

Action Plan	Status
<p>Kala Amb and Moginand Area:</p> <p>Laying of Sewerage Network and Pre-treatment of Sewage.</p> <p>Timeline: -</p>	<ul style="list-style-type: none">• As per estimate there was a provision of 21645 m of sewer network .• So far, 20500 m pipe stand laid (including HIMUDA) and the work of balance 1145 m is in progress. Primary treatment unit is complete in all respect.• CETP is already functional under Department of Industries.• HIMUDA colony in Moginand area has been connected to CETP and HIMUDA has been asked to provide sewerage load which is still awaited from HIMUDA Authorities.• The construction of pumping station near Sabu steel has been completed. A portion of sewer line (trunk sewer) of about 4000 m is to be laid along Markanda river work on pillars which is completed But a portion of this trunk sewer have severely damaged during flood caused by heavy rainfall from 7 to 10 July, 2023.• People of Kala Amb and Moginand have been informed to take connection through news published on 15-06-2023.• Till date 52 application for sewerage connection has been received.• The work is expected to be completed by June, 2024 keeping in view of excessive damages caused by heavy rains subject to availability of funds
<p>Proposal for setting up of CETP at Kala Amb</p> <p>Completed</p>	<ul style="list-style-type: none">• Construction work of CETP Kala Amb stand completed and Machinery and Equipments have also been installed and commissioned.• The CETP cum STP is based upon physio-chemical with MBBR technology and is comprises of primary treatment (Receiving Chamber, Coarse screen, Grit Removal Unit, Equalization), secondary treatment (MBBR, Secondary Clarifier, Chlorine Contact Tank, Chlorination System) and tertiary treatment (Filter Feed Tank, Activated Carbon Filter, Multi grade filter).• The sewage from existing manpower of 6 no's is also treated in this CETP cum STP. CCTV camera, Real time online continuous effluent monitoring system at final outlet, water meter at inlet and final outlet points, separate energy meter for blower of MBBR tank have been provided.

Polluted River Stretch Priority-II
(River Markanda at Kala Amb, District -Sirmour, H.P)

Action Plan	Status
<p>Phyto-remediation Proposal on Jattan Wala Nallah</p> <p>Timeline: -</p>	<ul style="list-style-type: none"> • Damages sustained during monsoon in 2022 could not be restored due to stiff resistance by local people as well as Sabu Steel Industry who allege damage to their property due to resultant diversion of flow. • The matter was also taken up during meeting under the Chairmanship of Member Secretary, HPSPCB on 27-03-23 where representatives of Sabu Steel Industries were also present but they didn't agreed for any change in the structure of plant. Hence, It was decided that atleast plantation be restored at plant. • Accordingly, Plantation has been done both on upstream and downstream of the Plant. But without diversion of water via obstructing its flow (which can only be done by raising the height of check dam/weir of structure to which Sabu Industries clearly denied), the main purpose of this phytoremediation plant cannot be achieved. • During meeting under the Chairmanship of DC Sirmaur on dated 18-10-2023 in his chamber. JSV has been directed to restore the Phytoremediation plant again for which a sum of about Rs. 7.00 Lakh is required.
<p>Installation of Continuous Water Quality Monitoring Station</p> <p>Timeline: -</p>	<ul style="list-style-type: none"> • The instrument was earlier installed however due to heavy rainfall in the same got damaged.

**Polluted River Stretch Priority-III
(River Sirsa, Baddi, Nalagarh, District- Solan)**

Sr. No.	Organization Responsible	Work proposed for Execution (In the Catchment Area)	Status
1.	Irrigation and Public Health Department and BBNDA	Execution of Project Proposal for Sewage Management by laying of pipelines and installation and commissioning of STP at Nalagarh.	Completed
		Proper design, execution of Sewerage Lines to be incorporated in proposed CETP at Baddi.	Under Progress
2.	M/s Baddi Infrastructure (CETP) Baddi, District- Solan. Department of Industries	Improvement in Function of existing CETP at Baddi w.r.t connecting the near about areas with Conveyance Pipeline (6,945 Meter Stretch) to treat the 1.10 MLD wastewater from Industries falling in River Sirsa Catchment.	Completed
3.		Improvement in functioning of Common Effluent Treatment Plant, Baddi	Under Progress
4.		Cleaning Sewage Tanks for Industrial Areas of Baddi, Jharmajri, Lodhimajra, Davni, Thana.	Completed
5.	Forest Department	Plantation Proposal	Completed
6.	IPH	Real Time water Water Quality Monitoring Station	Completed

**Polluted River Stretch Priority-III
(River Sirsa, Baddi, Nalagarh, District- Solan)**

Action Plan	Status
<p>Proper design, execution of Sewerage Lines to be incorporated in CETP at Baddi.</p> <p>Timeline: - Dec, 2024</p>	<p>Household Sewerage Connections : Total Connections 5492 (3744 DPR + 1748 afterwards), 4684 connection released. Balance connections being released on demand.</p> <p>The A/A & ES for construction of Sewerage scheme to Baddi Town in Tehsil Baddi District Solan have been accorded vide Pr. Secretary (JSV) office letter No. IPH-B(F)5-6/2017-I dated 02.09.2023 amounting to Rs. 3709.71 Lakh under " Special Assistance to the State for Capital Expenditure 2023-24". The award of the work has been issued by EE Baddi on 14.03.2024 to M/S national India Construction Company Pathankot(PB) for Rs. 31,64,53,794/- only. The work is targeted for completion by December 2024.</p>
<p>Improvement in functioning of CETP Baddi.</p> <p>Timeline: - May, 2025</p>	<ul style="list-style-type: none"> • 3 MLD Effluent Refractory Management & TDS Reduction in in the CETP is proposed. • The Revised DPR for Phase-I – API Removal as part of Refractory Management, has been approved by the Govt. of HP & Govt. of India. • The technology as per the Revised DPR for the Project "Phase-I –API Removal as part of Refractory Management" has been duly verified and validated, by the technical experts of IIT Ropar & PU Chandigarh after conducting Final Pilot Plant trials at Ahmedabad and the same has been submitted to the Govt. of India and Govt. of HP for their information and records. • Tendering process of Inviting Bids will commence soon. • Target to Award of Contract is expected by April/May 2024 and date of completion of the project is May/June 2025.

**Polluted River Stretch Priority-V
(River Ashwani, District- Shimla HP)**

Sr. No.	Organization Responsible	Work proposed for Execution (In the Catchment Area)	Estimated Cost (In Rs.)
1.	Shimla Jal Prabandhan Nigam Limited (SJPNL)	The up-gradation of existing 3 STPs by providing Sequencing Batch reactor (SBR) technology at Lalpani, Malyana, Dhalli	Under Progress
		Installation of a new STP of 3.1 MLD capacity for Panthaghatti area.	Under Progress
		Proposal for Septage Management under AMRUT-mission for the management of Faecal Sludge and Septage Management including drains contributing sewage into Ashwani Khad	Completed
		Proposal for improving the water quality of Ashwani Khad by installing various components, for the rejuvenation of water sources by improving the purity of water of Natural Nallahs by Phytoid Treatment at Ashwani Khad, Sanjuli-Malyana-Chamyana Khad, Shimla project.	Under Progress
2.	Forest Department	Proposal for Plantation and construction of Check Dams	Completed

**Polluted River Stretch Priority-V
(River Ashwani, District- Shimla HP)**

Action Plan	Status
<p>The up-gradation of existing 3 STPs by providing Sequencing Batch Reactor (SBR) technology at Lalpani, Malyana, Dhalli</p> <p align="center">Timeline STP Lalpani: -30.11.2023</p>	<p align="center">STP Malyana:</p> <ul style="list-style-type: none"> • Work has been completed <p align="center">STP Lalpani:</p> <ul style="list-style-type: none"> • 98% work completed. • Building components completed. • Primary treatment unit has been completed. • SBR Basin – I of 7.10 MLD has been completed and testing and stabilization process with sewage has been initiated. • The civil work of SBR Basin_II has been completed and mechanical installation is in progress after court stay got vacated on 21.1.23. <p align="center">STP Dhalli:</p> <ul style="list-style-type: none"> • Work has been completed.
<p>Installation of a new STP of 3.1 MLD capacity for Panthaghatti area.</p> <p align="center">Timeline: - 31.12.2024</p>	<ul style="list-style-type: none"> • FCA case is in progress • 1st stage approval has been accorded for GoI • Final approval is in progress
<p>Proposal for improving the water quality of Ashwani Khad by installing various components, for the rejuvenation of water sources by improving the purity of water of Natural Nallahs by Phytoid Treatment at Ashwani Khad, Sanjauli-Malyana-Chamyana Khad, Shimla project.</p> <p align="center">Timeline: - -</p>	<ul style="list-style-type: none"> • The matter has been submitted to Finance Department and approval is awaited.

Polluted River Stretch Priority-V

(River Beas from Kullu to Dehra-Gopipur at District- Kullu, Mandi, Hamirpur and Kangra of Himachal Pradesh)

Sr. No.	Organization Responsible	Work proposed for Execution (In the Catchment Area)	Status
1.	Jal Shakti Vibhag and MC Kullu	Proposal for Sewerage Scheme in Rangri, Manali, District- Kullu	Under Progress
		Proposal for Sewerage Scheme in Marhi, District- Kullu.	Completed
		Proposal for the expansion of existing STPs in Manali, installation of New STPs in Manali.	Under Progress
		Proposal for Sewerage Scheme in Kullu Town, District- Kullu (Zone-I)	Completed
		Proposal for Sewerage Scheme in Kullu Town, District- Kullu (Zone-II)	Completed
		Proposal for Sewerage Scheme in Kullu Town, District- Kullu (Zone-III)	Completed
		Proposal for Sewerage Scheme in Bhunter Town, District- Kullu (Zone-III)	Completed
		Proposal for the expansion of existing STPs and installation of New STPs (District- Mandi).	Under Progress

Polluted River Stretch Priority-V
(River Beas from Kullu to Dehra-Gopipur at District- Kullu, Mandi, Hamirpur and Kangra of Himachal Pradesh)

Sr. No.	Organization Responsible	Work proposed for Execution (In the Catchment Area)	Status
		Proposal for sewer connection and sewer line up gradation (District- Hamirpur)	Under Progress
		Proposal for installation of STP at Dehra, District- Kangra	Under Progress
2.	Department of Industries	Proposal for installation of STP (20 KLD) at Industrial area, Kullu	Under Progress
		De-sludging of Septic Tanks for Industrial Area, Mandi (District- Mandi)	Completed
3.	Urban Development	Proposal for up gradation of solid waste management facility at Mandi	Completed and processing under progress
4.	Forest Department	Proposal for Plantation (Kullu)	Completed
		Proposal for Soil Conservation and Plantation (District- Mandi)	Completed
		Proposal for Plantation (District- Hamirpur)	Completed
		Proposal for Plantation (District- Kangra)	Completed

Polluted River Stretch Priority-V
(River Beas from Kullu to Dehra-Gopipur at District- Kullu, Mandi, Hamirpur and Kangra)

Action Plan	Status
<p>1. Proposal for Sewerage Scheme in Rangri, Manali, District- Kullu. Timeline: -</p>	<p>1. The work has been included under AFD as per GoHP direction dated 08.01.2021. The tender for STP is under process in the office of CE PMU Mandi and the work of distribution network awarded to M/s R.G. Industries. Survey work has been completed & part of design is under preparation.</p>
<p>2. Proposal for the expansion of existing STPs in Manali, installation of New STPs in Manali.</p>	<p>2. Expansion of existing STP (1.8 MLD capacity) to 3.00 MLD capacity is complete and functioning.</p> <ul style="list-style-type: none"> In respect of installation of new STP Manali- Discharge of Manali town is considered in the proposed sewerage scheme Rangri. STP Rangri will also handle the discharge of Manali Town which is under AFD project.
<p>3. Proposal for Sewerage Scheme in Kullu Town, District- Kullu (Zone-I)</p>	<p>3. Up gradation of the existing STP and sewer network expansion has been completed. Online Effluent Monitoring Station has been installed and functioning since, March 2022 and the same has been connected with HPSPCB on dated 06.05.2023. Item proposed to be dropped from future agenda.</p>
<p>4. Proposal for Sewerage Scheme in Kullu Town, District- Kullu (Zone-II)</p>	<p>4. Up gradation of the existing STP and sewer network expansion has been completed. Online Effluent Monitoring Station has been installed and functioning since, July 2022 and the same has been connected with HPSPCB on dated 06.05.2023.</p>

Polluted River Stretch Priority-V
(River Beas from Kullu to Dehra-Gopipur at District- Kullu, Mandi, Hamirpur and Kangra)

Action Plan	Status
<p>Proposal for the expansion of existing STPs and installation of New STPs (District- Mandi).</p> <p>Timeline: - April, 23</p>	<ul style="list-style-type: none"> • The laying of sewer line is in progress. • Main Line: 7850 m out of 18172 m (43% work completed) • Network: 23400 m out of 44253 m (54% work completed) • [4 Jobs- ₹. 26,52,03,048.00] • Up gradation and Expansion of STPs : • STP Raghunath ka Padhar (From 3.83 MLD to 9.08MLD) - 75% work completed • STP Khaliyar (From 0.47 MLD to 1.5 MLD) - 72% work completed • [1 Job- ₹ 237820800.00 including O & M] Work is in progress • Household Sewerage Connections : Out of total 8004 connections (i.e. Original connections 4509+ Connections proposed in Expansion 3495), 5397 connections sanctioned and 5390 connections released. • The work of expansion is likely to be completed by Dec. 25
<p>Proposal for sewer connection and sewer line up gradation at Nadaun (District- Hamirpur).</p> <p>Timeline: - April, 23</p>	<ol style="list-style-type: none"> 1. STP commissioned and work of main line completed. 2. The work of network laying is in progress. 3. 10225 m out of 12816 m pipe has been laid. <p>The work of C/o 2 No. wet well and Pump House is in progress</p> <ol style="list-style-type: none"> 1. Wet Well near Dhiyanu Samadhi- 100 % work completed. <ul style="list-style-type: none"> • Balance 30m Rising Main to be laid, dispute has been sortout. • Pumping Machinery not received. • SOP not applied. 2. Wet Well near PWD Rest House- 35% work completed (Site Development).
	<p>Transfer of the land in the name of department is in progress and payment for land acquisition is being to the applicant.</p> <p>Household Sewerage Connections: Out of total 1566 connections, 735 connections sanctioned and 700 connections released. Releasing of balance connection is in progress.</p>

Polluted River Stretch Priority-V
(River Beas from Kullu to Dehra-Gopipur at District- Kullu, Mandi, Hamirpur and Kangra)

Action Plan	Status
<p>Proposal for installation of STP at Dehra, District- Kangra.</p>	<p>STP commissioned and running smoothly.</p> <p>Household Sewerage Connections : Out of total 850 connections, 745 connections sanctioned and 720 connections released. Releasing of connection is in progress.</p>
<p>Proposal for installation of STP (60 KLD) at Industrial area, Kullu.</p> <p>Timeline: - April, 23</p>	<ul style="list-style-type: none"> • 80% laying of Sewerage line • 95% Plant and Machinery of MBBR unit including c/o screening chamber, O&G trap etc. • 35% work of c/o JE Room-control panel building. • The HPSIDC has imposed penalty of Rs. 3,94,343/- only vide letter dated 16.12.2022 with the directions to complete the work within 10 days failing which action as per clause of agreement will be initiated and work will be rescinded and fresh tender of remaining work will be invited But contractor has again not complete the said work till date. • HPSIDC has again written a letter on 11.10.2023 to the Contractor to complete the work immediately failing which action as deemed fit will be initiated against the Contractor as per contract agreement.
<p>Proposal for up gradation of Solid Waste Management Facility for Mandi.</p>	<ul style="list-style-type: none"> • Legacy waste processed 19936.78 Tons out of 45000 Tons. • The processing of fresh waste is being processed done through M/s. Shudh Sustainable Solution.

**Polluted River Stretch Priority-V
(River Giri at Sainj, District- Shimla HP)**

Sr. No.	Organization Responsible	Work proposed for Execution (In the Catchment Area)	Status
1.	Jal Shakti Vibhag	Installation of three STPs in these areas i.e. one at Theog and two at Kotkhai	Under Progress
2.	Forest Department	Plantation Over 10 Hectare Forest Land In The Polluted Giri River Stretches And Flood Plains Within The Jurisdiction Of Theog Forest Division In District Shimla, HP	Completed

**Polluted River Stretch Priority-V
(River Giri at Sainj, District- Shimla HP)**

Action Plan	Status
<p>Installation three STPs in these areas i.e. one at Theog and two at Kotkhai.</p>	<p align="center"><u>STP Kotkhai (Zone 2nd and 3rd)</u></p> <p>STP Zone II and III completed & commissioned.</p> <p>Household Sewerage Connections : At present department has sanctioned 92 Nos. connections out of 143 Nos. total connections. Total 68 connections released (i.e. Private =54 Nos. & Govt.=14 Nos.) with 301 Nos. toilet seats out of 578 Nos. toilet seats .</p> <p align="center"><u>STP Theog</u></p> <p>As per provisions of estimate 1 No. STP and 2 nos. septic tanks were to be constructed in Theog town. Though STP has been constructed and commissioned but beneficiary of the area did not allow the construction of these septic tanks. Now an alternate proposal of compact sewerage Treatment Plant based on RMBR (Reverse Membrane Bio Reactor) technology is proposed for which land has been identified and tendering process initiated.</p> <p>In addition to this a separate sewer line along the Theog bypass road having length of 2200 m has also proposed to be laid to cover part of left out area of Theog town which will cover approximately 300 household. Tender has been awarded and work is in progress.</p> <p>The STP is commissioned and functional.</p> <p>Total connections to be provided :- 1088</p> <p>Connections sanctioned :- 48</p> <p>Connections released :-16</p> <p>Releasing of connections is in progress as per demand.</p> <p>Laying work of DI pipes (in Theog by pass road phase 2nd) is in progress. Connections of that area shall be released after completion of laying work and connectivity).</p>

Polluted River Stretch Priority-V
(River Pabbar along Rohru, District- Shimla HP)

Sr. No.	Organization Responsible	Work proposed for Execution (In the catchment Area)	Status
1.	Forest Department	Plantation over 10 hectare forest land in the polluted giri river stretches and flood plains within the jurisdiction of theog forest division in district shimla, hp	Completed
2.	Urban Development	Solid Waste Management in MC Rohru, NP Jubbal and nearby areas	Continuous activity

Polluted River Stretch Priority-V
(River Pabbar along Rohru, District- Shimla HP)

Action Plan	Status
Solid Waste Management in MC Rohru, NP Jubbal and nearby areas	<p style="text-align: center;">Jubbal-</p> <ul style="list-style-type: none">• MRF facility has already been set up in Jubbal.• Process of purchasing shredder is under process through GeM portal.• Wet waste disposed in composting pits and also provided to the locals having cattles. Some time provided to dairy farm. <p style="text-align: center;">Rohru-</p> <ul style="list-style-type: none">• FCA case of solid waste management is pending at regional office (copy attached).• Two sites have been identified for temporary management of waste and letter has also been written to the Vice Chairman, Shri Bhima Kali Ji Temple Trust and private party regarding the same and response for the same is awaited.• Work order has been placed for shredder in MC Rohru.• Wet waste is being provided to the gau sadan and also being disposed in temporary composting pits near new bus stand.

Action Plan for Rejuvenation of Sukhna Nallah

Action Plan with timelines including the organization agency responsible for its implementation for Rejuvenation of Sukhna Nallah in compliance with Hon'ble NGT order in O.A. 673 of 2018

Sr. No.	Action taken Points for Rejuvenation of Sukhna Nallah	Agency Responsible for Execution of Task	Timeline	Remarks
I	Industrial Effluent Management			
(a)	Inventorization of the water polluting industries in the catchment of Sukhna Nallah covering assessment on aspects relating to status of Consents under Water & Air Acts and authorization, Effluent Generation, ETP Capacities and final mode of effluent discharge. <ul style="list-style-type: none"> Regular inspections as per schedule notified. 	HPSPCB	Continuous activity.	<ul style="list-style-type: none"> Completed Total 56 no's of water Polluting industries located at the stretch of Sukhna Nallah. All the units are being regularly inspected by HPPSPCB RO Parwanoo. Actions are initiated as and when violations are observed in the units.
(b)	Action against the identified industries in operation without Consent under Water & Air Act/Authorization under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. <ul style="list-style-type: none"> To ensure all units have valid consent. 	HPSPCB	Continuous activity.	State Board is regularly conducting inspections and taking action against the defaulters.
(c)	Actions against the industries who have not installed ETPs or ETPs exist but not operating or treated effluent is not meeting the prescribed standards. <ul style="list-style-type: none"> Routine inspections. 	HPSPCB	Continuous activity.	
(d)	Prohibition of Burning of any kind of waste including agro residue. <ul style="list-style-type: none"> Complete ban on Open Burning and littering. Installation of CCTV cameras at SWM site Parwanoo and at 05 No. of hotspot locations. 	MC Parwanoo and HPSPCB	31.12.2023	Directions have been issued to the EO MC Parwanoo and advisory has also been issued to the industries through The President Industries Association Parwanoo (PIA) in this regard. Regular Challaning drives such as Plastic uses, Littering etc. are being organized and challans were issued against defaulting units for non-compliance of the provisions of SWM Rules 2016 as per HP Non-Biodegradable Garbage Control Act.

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Sr. No.	Action taken Points for Rejuvenation of Sukhna Nallah	Agency Responsible for Execution of Task	Timeline	Remarks
(e)	Estimation of industrial effluent generation. <ul style="list-style-type: none"> • Inventorization of all water polluting industries and known-point sources. 	State Govt., Deptt. of Industries, District Administration	Continuous Activity	All the water polluting industries have installed necessary PCD's for treatment of waste water. Estimation of quantum of effluent generation in Parwanoo area has already been completed.
(f)	Setting up of Solid Waste Management Site. <ul style="list-style-type: none"> i. 100% Source Segregation of solid waste. ii. Installation of weigh bridge at SWM site Sect-5. iii. Installation of Fire Hydrant and firefighting equipment's at SWM site Sect-05. iv. Extension of shed for RDF storage and loading and unloading shed. v. Setting up of own Material Recovery Facility and Composting facility 	Executive Officer, MC Parwanoo	i. 90 days. ii. 31.12.23 iii. 31.03.24 iv. 31.03.24 v. 31.03.24	In Parwanoo Town, MC Parwanoo has signed MOU with M/s JBR Technologies Pvt. Ltd for disposal of Solid waste.
(g)	Conversion of industrial units to ZLD.	HPSPCB	31.03.2024	Currently 05 Number of red category units are meeting Zero Liquid Discharge i.e. <ol style="list-style-type: none"> 1. M/s Electrowave Electronics 2. M/s Daljeet Electroplating 3. M/s Premier Electroplating 4. M/s Him Metal Processing M/s Himachal Fastener

Sr. No.	Action taken Points for Rejuvenation of Sukhna Nallah	Agency Responsible for Execution of Task	Timeline	Remarks
II	Domestic Sewer Management			
(a)	<p>Area wise estimation of total population, water requirement and sewage generation.</p> <ul style="list-style-type: none"> Installation of remaining 01 STP of capacity 01 MLD out of 02 proposed) is under Process at Tipra. 	HIMUDA, JSV, Urban Development, Rural Development Department	31.03.2024	<p>As per Census 2011, the population of Parwanoo area is 8758 persons and the present population including the floating population for employment and non-permanent residents is around 20,000 persons.</p> <p>As per the information provided by the HIMUDA Parwanoo the water supplied is about 2.5 MLD and the Sewage Load of Parwanoo comes around about 02 MLD.</p> <p>In Parwanoo Town 02 No. of 01 MLD, STP's are proposed to be installed. Out of which 01 number has been installed and is operational at Sector-2 Parwanoo. Remaining 01 No. STP is under process.</p>
(b)	<p>Repair/Improvement of existing phyto-remediation system installed in Sental Nallah.</p> <ul style="list-style-type: none"> To repair the root zone bed and improvement in design to improve its efficiency. 	MC Parwanoo	31.03.2024	<p>01 No. of Phyto-remediation system was installed in Sental Nallah for in-situ treatment.</p> <p>Due to heavy rains the working and root zone bed got disturbed.</p>

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Sr. No.	Action taken Points for Rejuvenation of Sukhna Nallah	Agency Responsible for Execution of Task	Timeline	Remarks
III	Ground Water Management			
(a)	Sampling of Tube wells, Bore wells, Hand Pumps.	JSV and HPSPCB	Continuous Activity	Regular sampling is being conducted.
IV	Miscellaneous			
(a)	Regular monitoring and sampling of water quality of Sukhna Nallah and various drains on monthly basis.	HPSPCB	Continuous Activity	10 No's of Sample are collected from on the stretch of Sukhna Nallah and its tributaries every Month.
(b)	Detection and removal of encroachment on forest land	Dept. of Forest	Continuous activity	<p>The concerned field officers of the Forest Department, in whose jurisdiction this stretch falls, have been instructed to detect and remove encroachments on forest land in this stretch on priority.</p> <p>The concerned field officers of the Forest Department have been instructed to ensure that there is no illegal dumping of muck in to the forest land falling in this stretch.</p>
(c)	Impact of water pollution on health of public by organizing Health camp.	State Health Deptt.	Continuous Activity	Health camps are being regularly organized in Sukhna Catchment to check water borne diseases.
(d)	Involvement of Civil Society <ol style="list-style-type: none"> i. 01 Public Awareness Drive a month. ii. Installation of LED/Digital display boards for public advisories. 	MC Parwanoo	<ol style="list-style-type: none"> i. Continuous Activity ii. 31.03.2024 	Cleanliness drives are being regularly organized in Parwanoo town by involving various Stake Holders, Institutions, Industrial Units of Parwanoo, and agencies.

Sr. No.	Action taken: Points for Rejuvenation of Sukhna Nallah	Agency Responsible for Execution of Task	Timeline	Remarks
(e)	Complaints redressal system	HPSPCB	Continuous Activity	There are complaint redressal systems available for filing complaints like E-samadhan, CM Seva Sankalp, Him Pragati, 24x7 helpline of HPSPCB etc.
(f)	Prevention of solid waste dumping in water bodies. <ul style="list-style-type: none">• Installation of solid waste catch-nets at 05 locations.	MC Parwanoo	31.03.2024	Currently routine inspections are conducted in Parwanoo area.

**Action Plan for Rejuvenation of
River Sirsa, Baddi- Nalagarh,
District Solan H.P.**

Action Plan with timelines (Short, Medium and Long Term Plan) including the organization/agency responsible for Rejuvenation of River Sirsa, Baddi- Nalagarh, District Solan H.P.

I. Industrial Sewage Management:-

Sr. No.	Action Points	Responsible Agency	Timeline for completion of action plan	Remarks
(a)	Inventorization of the Water Polluting Industries in the catchment of River Sirsa covering assessment on aspects relating to status of Consents under Water & Air Acts and Authorization, Effluent Generation, ETP Capacities and final mode of effluent discharge.	HPSPCB	Completed	The inventorization of the water polluting industries has been completed.
(b)	Action against the identified industries in operation without Consent under Water & Air Act /Authorization under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.	HPSPCB	Continuous Activity	Action as per relevant provisions of Water Act, 1974 and Air Act, 1981 is taken against any unit found operating without mandatory consent of the HPSPCB.
(c)	Actions against the industries who have not installed ETPs or ETPs exist but not operating or treated effluent is not meeting the prescribed standards.	HPSPCB	Continuous Activity	Inspection and Sampling of unit is conducted on regular basis and action is initiated against the defaulting units as per relevant provisions of Water Act, 1974 and Air Act, 1981
(d)	Prohibition of Disposal of Municipal Solid Waste, Plastic Waste, Bio-medical Waste, Hazardous Waste and Burning of any kind of Solid Waste.	BBNDA Municipal Council Baddi, Municipal Council, Nalagarh, District Administration	Continuous Activity	-
(e)	Improvement in functioning of existing CETP at Baddi w.r.t connecting the near about areas with Conveyance Pipeline	JSV, Baddi Infrastructure (SVP)- CETP, Department of Industries		The average flow of Sewage in the month of January, February and March 2024 is 1034 KLD, 1209 KLD and 1126 KLD respectively. It is still much below against a minimum agreed quantity of 3000 KLD and the plant capacity of 5500 KLD. Household Sewerage Connections Total Connections 5492 (3744 DPR + 1748)

				<p>afterwards), 4684 connection released.</p> <p>The A/A & ES for construction of Sewerage scheme to Baddi Town in Tehsil Baddi District Solan have been accorded vide Pr. Secretary (JSV) office letter No. IPH-B(F)5-6/2017-1 dated 02.09.2023 amounting to Rs. 3709.71 Lakh under "Special Assistance to the State for Capital Expenditure 2023-24". The award of the work has been issued by HE Baddi on 14.03.2024 to M/S national India Construction Company Pathankot(PB) for Rs. 31,64,53,794/- only. The work is targeted for completion by December 2024.</p>
(f)	Conducting Surprise inspections and Water Audit to reduce the Gap in Effluent generation and Treatment with CETP at Baddi.	HPSPCB	Continuous Activity	Regular inspections are being carried out by HPSPCB.
(g)	Detection of leakages in conveyance pipelines of CETP, Baddi.	HPSPCB, Baddi Infrastructure	Continuous Activity	-
(h)	Detection of leakages in sewage pipeline	JSV	Continuous Activity	-
(i)	Identification of industries falling in the catchment Zone of CETP, Baddi and not connected with CETP and Action to be taken thereafter.	HPSPCB	Completed	-
(j)	Proposal for improvement in functioning of CETP by modification in treatment process to improve the discharge effluent quality.	Baddi Infrastructure	May 2025	<ul style="list-style-type: none"> • 3 MLD Effluent Refractory Management & TDS Reduction in the CETP is proposed. • The Revised DPR for Phase-I – API Removal as part of Refractory Management, has been approved by the Govt. of HP & Govt. of India. • The technology as per the Revised DPR for the Project "Phase-I – API Removal as part of Refractory Management" has been duly verified and validated, by the technical experts of IIT Ropar & PU Chandigarh after conducting Final Pilot Plant trials at Ahmedabad and the same has been submitted to the Govt. of India and Govt.

				<p>of HP for their information and records.</p> <ul style="list-style-type: none"> • Tendering process of Inviting Bids will commence soon. • Target to Award of Contract is expected by April/May 2024 and date of completion of the project is May/June 2025.
(k)	Installation of Real Time Online Effluent Monitoring System on category 17 units.	HPSPCB	Completed	The Real Time Online Effluent Monitoring System has been installed on the category 17 units.
(l)	Sludge Management from Industrial Effluent Treatment.	HPSPCB		Sludge generated is being sent toSSWML Dabhota
(m)	Setting up & operation of a Solid Waste Management facility at Kenduwal, Baddi	State Govt., Deptt. of Industries, District Administration, BBNDA and Deptt. of Urban Development	Completed	Solid Waste Management facility at Kenduwal, Baddi has been completed and is operational.

2. Domestic Sewage Management

Sr. No.	Action Points	Responsible Agency	Timeline for completion of action plan	Remarks
(a)	Area-wise estimation of total population, water requirement, and sewage generation of Baddi-Nalagarh Area.	BBNDA, J.S.V., Department of Rural Development, District Administration, Statistical Department	31.12.2023	-
(b)	Measurement of Flow of Drains, Pollution Load contributing to River Sirsa.	J.S.V. & HPSPCB	Continuous process	-
(c)	Execution of Project Proposal for Sewage Management through State of Art-Technology for Sewage Treatment Plant at Nalagarh.	J.S.V.	Completed	-
(d)	Installation of continuous Real Time Water Quality Monitoring Station on River Sirsa.	J.S.V.	Completed	The Real Time Water Quality Monitoring Station has been installed and operational.
(e)	Sewage Management for Industrial Areas of Baddi, Jharmajri, Lodhimajra, Davni, & Thana.	HPSIDC, DIC	Completed	-
(f)	Sewage/Septage management for Rural Areas with low-cost treatment technologies along with Construction of drains and cleaning thereof	Rural Development/ Block Development Office, Nalagarh.	31.03.2024	-
(g)	Identification of Un-authorized Jhuggis in the BBN area and management of Solid waste/sewage management and lifting of Jhuggis/Slum dwellers along the catchment of River Sirsa and its rivulets. Identification bulk sewage generator i.e. rental properties for migrated labor in the BBN area.	BBNDA, J.S.V., And MC baddi and nalagarh	31.12.2023	-
(h)	Implementation of phyto remediation project in the Sandholi Nallah and Housing Board Nallah w.r.t. Hotspot of Water Contamination : Sandholi Nallah, Housing Board Nallah and Un-authorized Jhuggis in the catchment	District Administration/ HPSPCB	31.03.2024	Work to be executed by Indorama India limited and Morepen Laboratories Limited w.r.t. Condition imposed in the Environmental Clearance granted from SEIAA.

3. Ground Water Management

Sr. No.	Action Points	Responsible Agency	Timeline for completion of action plan	Remarks
(a)	Sampling of Tube wells, Bore wells, HandPumps in BBN area.	J.S.V., HPSPCB	Continuous activity	-
(b)	Sampling and analysis of Drinking Water Supply Schemes in and around Baddi Nalagarh Area	J.S.V.	Continuous activity	-
(c)	Sealing of contaminated hand pumps and found to be unfit for drinking purpose by the public.	J.S.V., HP GWA	Continuous activity	-
(d)	Carrying assessment of ground water survey for quality and to identify over exploited and critical areas.	J.S.V., HP GWA	Completed	-
(e)	To conduct periodic surprise inspection of the industries to rule-out any forceful injection of industrial effluents into ground water sources	HPSPCB	Continuous activity	State Board is regularly conducting inspections.
(f)	All the industries should be directed to obtain NOC from HPGWA/ CGWA and action against the units in operation without obtaining NOC from PGWA/ CGWA.	J.S.V.	Continuous activity	-
(g)	Remedial measures for de-contamination of Highly Polluted Ground Water resources within Jurisdiction of Baddi - Nalagarh Area.	J.S.V. & HPSPCB	Not identified	-

4. Miscellaneous

(a)	Regular monitoring and sampling of water quality of River Sirsa and various drains on monthly basis.	HPSPCB	Continuous activity	State Board conducts Regular monitoring and sampling on monthly basis.
(b)	Impact of water pollution on health of public by organizing Health camp	State Health Deptt.	Every 3 Month	-
(c)	Plantation in Flood Plain Zone, Setting up of Bio-diversity Parks	Forest Department		-
(d)	Checking Encroachment in FPZ of River Sirsa by Notifying the Flood plain Area.	District Local Administration/ BBNDA/ J.S.V.		-
(e)	Setting up of website for public participation.	HPSPCB	Completed.	Website alongwith public grievance portal are already in place.
(f)	Monitoring of the Executing the Action Plans	BBNDA, HPSPCB	Continuous activity	-
(g)	Cleanliness Drive along the Stretch of River Sirsa	HPSPCB, BBNDA, Ind. Deptt, Urban Local Body Rural Development, Industries Association and other stakeholders.	Continuous activity	-
(h)	Identification and regulation of un authorized the tankers engaged in illegal discharge of sewage in river/nallahs	RTO Nalagarh, Police, BBNDA, MC Baddi, MC Nalagarh, HPSPCB, Distt. Administration	31.12.23 and thereafter continuous	

5. Other Aspects as NGT Order dated 20.09.2018 and 19.12.2018

(a)	Rain Water Harvesting/ Ground Water Recharge aspects	J.S.V.		10 Sites identified, DPR preparation is under process. Implementation is subject to the availability of funds from the Central Government.
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**Action Plan for Rejuvenation of
Balad Khad
(Non perennial water Body),
Tehsil Baddi, District Solan, H.P.**

Action Plan with timelines (Short, Medium and Long Term Plan) including the organization/agency responsible for Rejuvenation of Balad Khad (Non perennial water Body), Tehsil Baddi, District Solan, H.P.

1. Industrial Sewage Management:-

Sr. No.	Action Points	Responsible Agency	Time Line for completion of action plan	Remarks
(a)	Inventorization of the Water Polluting Industries in the catchment of Balad Khad covering assessment on aspects relating to status of Consents under Water & Air Acts and Authorization, Effluent Generation, ETP Capacities and final mode of effluent discharge.	HPSPCB	Completed	Completed
(b)	Action against the identified industries in operation without Consent under Water & Air Act /Authorization under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.	HPSPCB	Continuous Activity	Action as per relevant provisions of Water Act, 1974 and Air Act, 1981 is taken against any unit found operating without mandatory consent of the HPSPCB.
(c)	Actions against the industries who have not installed ETPs or ETPs exist but not operating or treated effluent is not meeting the prescribed standards.	HPSPCB	Continuous Activity	Inspection and Sampling of unit is conducted on regular basis and action is initiated against the defaulting units as per relevant provisions of Water Act, 1974 and Air Act, 1981
(d)	Prohibition of Disposal of Municipal Solid Waste, Plastic Waste, Bio-medical Waste, Hazardous Waste and Burning of any kind of Solid Waste.	BBNDA Municipal Council Baddi, District Administration	Continuous Activity	-
(e)	Improvement in functioning of existing CETP at Baddi w.r.t connecting the near about areas with Conveyance Pipeline	JSV, Baddi Infrastructure (SVP)- CETP, Department of Industries		Household Sewerage Connections Total Connections 5492 (3744 DPR + 1748 afterwards), 4684 connection released. The A/A & ES for construction of Sewerage scheme to Baddi Town in Tehsil Baddi District Solan have been accorded vide Pr. Secretary (JSV) office letter No. IPH-B(F)5-6/2017-I dated 02.09.2023 amounting to Rs. 3709.71 Lakh under "Special Assistance to the State for Capital Expenditure 2023-24". The award of the work has been issued by EE Baddi on 14.03.2024 to M/S national India Construction Company

				Pathankot(PB) for Rs. 31,64,53,794/- only. The work is targeted for completion by December 2024.
(f)	Conducting Surprise inspections and Water Audit to reduce the Gap in Effluent generation and Treatment with CETP at Baddi.	HPSPCB	Continuous Activity	State Board is regularly conducting the surprise inspections.
(g)	Detection of leakages in conveyance pipelines of CETP. Baddi.	HPSPCB, Baddi Infrastructure	Continuous Activity	-
(h)	Detection of leakages in Sewage pipeline	JSV	Continuous activity	
(i)	Identification of industries falling in the catchment Zone of CETP. Baddi and not connected with CETP and Action to be taken thereafter.	HPSPCB	Completed	Completed
(j)	Installation of Real Time Online Effluent Monitoring System on category 17 units.	HPSPCB	Completed	Completed
(k)	Sludge Management from Industrial Effluent Treatment.	HPSPCB	Sludge generated is being sent to SSWML Dabhota	Sludge generated is being sent to SSWML Dabhota

2. Domestic Sewage Management

Sr. No.	Action Points	Responsible Agency	Time Line for completion of action plan	Remarks
(a)	Area-wise estimation of total population, water requirement, and sewage generation of Balad Catchment Area.	BBNDA, J.S.V., Department of Rural Development, District Administration, Stastical Department	31.12.2023	-
(c)	Measurement of Flow of Drains, Pollution Load contributing to Balad Khad.	J.S.V. & HPSPCE	Continuous process	-
(d)	Proper design, execution of sewerage Lines to be incorporated in proposed CETP at Baddi.	J.S.V., Industry Department		Household Sewerage Connections : Total Connections 5492 (3744 DPR + 1748 afterwards), 4684 connections released. Balance connections being released on demand. The A/A & ES for construction of Sewerage scheme to Baddi Town in Tehsil Baddi District Solan have been accorded vide Pr. Secretary (JSV) office letter No. IPH-B(F)5-6/2017-I dated 02.09.2023 amounting to Rs. 3709.71 Lakh under "Special Assistance to the State for Capital Expenditure 2023-24". The award of the work has been issued by EE Baddi on 14.03.2024 to M/S national India Construction Company Pathankot(PB) for Rs. 31,64,53,794/- only. The work is targeted for completion by December 2024.
(e)	Sewage Management for Industrial Areas of Baddi, EPIP Phase-I and II Jharmajri of DIC, Hilltop Jhramajri and HIMUDA industrial area at Bhatolikalan.	DIC and HIMUDA	Completed	-
(f)	Sewage/Septage management for Rural Areas with low cost treatment technologies along with Construction of drains and cleaning thereof	Rural Development/Block Development Office, Nalagarh.	31.03.2024	-
	Identification of Un-authorized	BBNDA,	31.12.2023	-

(g)	Jhuggis in the Balad area and management of Solid waste/sewage management and lifting of Jhuggis/Slum dwellers along the catchment of Balad Khad and its rivulets. Identification bulk sewage generator i.e. rental properties for migrated labor in the BBN area.	J.S.V., And MC Baddi.		
(h)	Hotspot of Water Contamination: Jharmajri, Kunjhal, Kotla Nallah and Unauthorized Jhuggis in the Balad catchment.	BBNDA, J.S.V., And MC Baddi.	Continuous activity	Hotspot Identified.

3. Ground Water Management

(a)	Sampling of Tube wells Bore wells, Hand Pumps in BBN area.	J.S.V. , HPSPCB	Continuous activity	-
(b)	Sampling and analysis of Drinking Water Supply Schemes in and around Baddi Area	J.S.V.	Continuous activity	-
(c)	Sealing of contaminated hand pumps and found to be unfit for drinking purpose by the public.	J.S.V. , HP GWA	Continuous activity	-
(d)	Carrying assessment of ground water survey for quality and to identify over exploited and critical areas.	J.S.V. , HP GWA	Completed	-
(e)	To conduct periodic surprise inspection of the industries to rule-out any forceful injection of industrial effluents into ground water sources	HPSPCB	Continuous activity	-
(f)	All the industries should be directed to obtain NOC from HPGWA/ CGWA and action against the units in operation without obtaining NOC from PGWA/ CGWA.	J.S.V	Continuous activity	-
(g)	Remedial measures for de-contamination of Highly Polluted Ground Water resources within Jurisdiction of Baddi – Nalagarh Area.	J.S.V. HPSPCB	&Not identified	-

4. Miscellaneous

(a)	Regular monitoring and sampling of water quality of Balad Khad.	HPSPCB	Continuous activity	Regular monitoring and sampling is being conducted on monthly basis
(b)	Plantation in Flood Plain Zone, Setting up of Bio-diversity Parks	Forest Department		-
(c)	Checking Encroachment in FPZ of Balad Khad by Notifying the Flood plain Area.	District Local Administration/ BBNDA JSV		-
(d)	Setting up of website for public participation.	HPSPCB	Completed.	-
(e)	Monitoring of the Executing the Action Plans.	BBNDA, HPSPCB	Continuous activity	-
(f)	Cleanliness Drive along the Stretch of Balad Khad.	HPSPCB, BBNDA, Ind. Deptt. Urban Local Body Rural Development, Industries Association and other stakeholders.	Continuous activity	-
(g)	Identification and regulation of un authorized the tankers engaged in illegal discharge of sewage in river/nallahs	RTO Nalagarh, Police, BBNDA, MC Baddi, MC Nalagarh, HPSPCB, Distt. Administration	31.12.23 and thereafter continuous	

5. Other Aspects as NGT Order dated 20.09.2018 and 19.12.2018

(a)	Rain Water Harvesting/ Ground Water Recharge aspects	J.S.V.		10 Sites identified, DPR preparation is under process. Implementation is subject to the availability of funds from the Central Government.
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**Action Plan for Rejuvenation of
Ashwani Khad.**

Action Plan with timelines including the organization/agency responsible for its implementation for Rejuvenation of Ashwani Khad.

1. Domestic Sewage Management:-

Sr. No.	Action points	Responsible agency	Timeline for completion of action plan	Remarks
1.	Area wise estimation of total population, water requirement and sewage generation.	SJPNL	Completed	Data regarding total population has been taken by SJPNL from Census 2011 and the projected waste water calculations has been done taking into account the decadal growth rate of the area.
2.	Connectivity of left out areas through conveyance pipeline to existing common sewage treatment Plants (STPs) operational along the stretch of Ashwani	SJPNL	Continuous Activity	Area under common STPs is continuously increasing and more no. of households are being provided the facility of connectivity through common STPs.
3.	Upgradation of existing Sewage Treatment Plants (STPs)	SJPNL	STP Malyana:- 31.07.2023 STP Lalpani: 30.11.2023 STP Dhalli:- 31.07.2023	<p>STP Malyana:</p> <ul style="list-style-type: none"> • Work has been completed <p>STP Lalpani:</p> <ul style="list-style-type: none"> • 98% work completed. • Building components completed. • Primary treatment unit has been completed. • SBR Basin - I of 7.10 MLD has been completed and testing and stabilization process with sewage has been initiated. • The civil work of SBR Basin- II has been completed and mechanical installation is in progress after court stay got vacated on 21.1.23. <p>STP Dhalli:</p> <ul style="list-style-type: none"> • Work has been completed.
4.	Sewage Treatment Plants (STPs) proposed.	SJPNL	31.12.2024	<p>There is 1 No. of Common STP proposed in the catchment of River Ashwani i.e. STP Panthaghati (3.1 MLD)</p> <p>Land transfer case has been submitted for 2nd stage approval to Regional Office, M-EP&CC</p>

				Chandigarh.
5.	Setting up of Faecal Sludge Treatment Plant (FSTP)	SJPNL	Already Completed	Already Completed
6.	Channelization of LiftNallah	SJPNL	31.03.2024	Channelization of lift nallah and its landscaping from Indira Gandhi Sports Complex to Lalpani bridge is under progress which will help in collection of solid waste dumped along the nallah. Main RCC channel from congress Bhawan to Lalpani Bridge has been constructed. One secondary drain has been connected with main channel. The work to connect other secondary drains into main drain is in progress
7.	Installation of Real Time Continuous Effluent Monitoring Stations at outlet of STPs.	SJPNL	31.12.2023	Real time continuous effluent monitoring station has been set up at the outlet of STP Malyana and STP Dhalli. The Real time continuous effluent monitoring station has been procured for STP Lalpani.

2. Industrial Effluent Management:-

Sr. No.	Action points	Responsible agency	Timeline for completion of action plan	Remarks
1.	Inventorization of the water polluting Industries and Hotels in the catchment of Ashwani Khad.	HPSPCB	Completed	There are 9 water polluting industries and approx. 166 hotels situated in the catchment of Ashwani Khad.
2.	Action against the identified industries/hotels which are not connected with common STPs or who have not installed requisite PCDs i.e. ETPs/STPs or whose treated effluent is not meeting the prescribed standards.	HPSPCB	Continuous Activity	Regular inspection is being carried out by the State Board.

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3. Ground Water Management:-

Sr. No.	Action points	Responsible agency	Timeline for completion of action plan	Remarks
1.	Sampling of Bore Wells and Hand Pumps from area falling under the catchment of Ashwani Khad.	HPSPCB, SJPNL & JSV	Continuous Activity	HPSPCB is carrying out sampling of onehand pump falling under the catchment of Ashwani Khad on monthly basis.
2.	Sampling and analysis of drinking water supply schemes from area falling under the catchment of Ashwani Khad.	HPSPCB, SJPNL & JSV	Continuous Activity	HPSPCB is carrying out sampling of three drinking water supply schemes falling under the catchment of Ashwani Khad on monthly basis.
3.	Sealing of contaminated hand pumps found to be unfit for drinking purpose by the public.	HPSPCB, MC Shimla, SJPNL & JSV	Continuous Activity	

4. Surface Water Quality Management: -

Sr. No.	Action points	Responsible agency	Timeline for completion of action plan	Remarks
1.	Regular monitoring and sampling of water quality of Ashwani Khad and its tributaries on monthly basis.	HPSPCB	Continuous Activity	HPSPCB is monitoring the water quality of Ashwani Khad and its tributaries at 8 locations on monthly basis and 2 additional locations on quarterly basis.
2.	Hotspots of water contamination.	MC Shimla, & SJPNL	Completed.	Already Identified. 1. Krishna Nagar area downstream Lift at Shimla City contributes the BOD load to the Lift Nallah and degrades the water quality of Ashwani Khad. Left out household of Krishna Nagar have been connected with sewer line 2. STPs (Dhalli, Lalpani and Malyana):- STP Dhalli and Malyana have been upgraded and functional. For STP Lalpani, one SBR tank will be functional before 31.01.24 and second SBR will be functional before 31.03.24.
3.	Installation of continuous Real Time Water Quality Monitoring Station at Ashwani Khad.	SJPNL		Shall be installed by SJPNL.
4.	Regular checking of muck dumping in catchment of Ashwani.	Forest department, Police and Local bodies	Continuous Activity	

5. Solid Waste Management:-

Sr. No.	Action points For villages / blocks/ town municipalities / City corporations	Responsible agencies	Timeline for completion of action plan	Remarks
1.	Arrangement for door to door collection.	MC Shimla	31.12.2023	Door to door collection has been started in all the 34 wards of MC Shimla. Collected waste is being transported in segregated form in separate compartmentalized vehicles.
2.	Wet-waste Management: Facility (i.e.) for central Bio- methanation/ Composting of wet waste.	MC Shimla	31.12.2023	MC Shimla has provided 1 MT/day bio-methnation plant at Lalpani. Also 5 TPD composting plant is to be installed near IGMC at old incinerator premises.
3.	Dry-Waste Management: Material Recovery for dry-waste fraction.	MC Shimla	31.12.2023	MC Shimla has provided a Material Recovery Facility at Bhariyal.
4.	Waste to Energy Plant	MC Shimla	Completed.	MC Shimla has provided a waste to energy plant at Bhariyal where mixed solid waste having calorific value more than 1500 Kcal is converted into RDF (Re-derived Fuel) which in turn is used to generate electricity.
5.	Disposal of inert and non-recyclable wastes: Sanitary Landfill	MC Shimla	31.12.2023	MC Shimla has provided sanitary land fill site at Bhariyal for disposal of inert waste.
6.	Remediation of historic / legacy dumpsite	MC Shimla	Completed.	MC Shimla has bio-remediated the legacy waste site at 'Darni Ka Bagicha'. In rest of the

				ULBs, there is no legacy waste sites.
7.	Authorization of Waste Pickers	MC Shimla	Completed.	MC Shimla has authorized 144 waste pickers.
8.	Preparation of own by-laws to comply with SWM Rules 2016.	MC Shimla	Completed.	Shimla has framed their own by laws to comply with Solid Waste Management Rules, 2016.
9.	Regular Cleaning Drives and Mass Awareness Programs	MC Shimla, Rural local bodies, HPSPCB	Continuous Activity	

6. Miscellaneous:-

Sr. No.	Action points For villages / blocks/ town municipalities / City corporations	Responsible agencies	Timeline for completion of action plan	Remarks
1.	Complaints redressal system	HPSPCB	Completed.	There are several complaint redressal systems available for filing complaints like E-samadhan, CM Seva Sankalp, Him Pragati, 24x7 helpline of HPSPCB etc.
2.	Plantation activity in the catchment of Ashwani Khad	Forest department, Local bodies and HPSPCB	Continuous activity	
3.	Proposal for improving the water quality of Ashwani Khad by installing various components, for the rejuvenation of water sources by improving the purity of water of Natural Nallahs by Phytoid Treatment at Ashwani Khad, Sanjauli-Malyana-Chamyana Khad, Shimla project.	SJPNL		The matter has been submitted to Finance Department and approval is awaited.