



**HEAD OFFICE**  
**CHHATTISGARH ENVIRONMENT CONSERVATION BOARD**  
**PARYAWAS BHAWAN, SECTOR- 19**  
**NAVA RAIPUR ATAL NAGAR, RAIPUR (C.G.)**  
Email - hocecb@gmail.com

No. 8374 / TECH / H.O. / CECB / 2023 Atal Nagar Raipur, Dated: 28/ 2 / 2023  
To,

**Secretary,**  
Government of India,  
Ministry of Jal Shakti,  
Department of Water Resources,  
River Development & Ganga Rejuvenation,  
Shram Shakti Bhawan, Rafi Marg,  
**New Delhi - 110 001**

Sub. :- Submission of information by the states in the matter of Hon'ble NGT O.A. No. 673/2018.

Ref. :- 1. Minuts of the 1<sup>st</sup> meeting of Central Monitoring Committee held on 08/01/2020.  
2. Your letter no. D.O. No. Legal / OA / 673/ 2018/ NMCG / 2019 Dated 22/01/2020.

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With reference to your letter on the above subject, the compliance report of action plan prepared in the matter of Hon'ble NGT O.A. No. 673/2018 in prescribed format for the month of January, 2023 is enclosed with this letter for your information and necessary action please.

**Enclosed :- As above.**

**Member Secretary**

Chhattisgarh Environment Conservation Board  
Nava Raipur Atal Nagar, Raipur (C.G.)

Endt. No. / TECH / H.O./CECB /2023 Atal Nagar Raipur, Dated: / / 2023  
Copy to :-

1. Additional Chief Secretary, Govt. of Chhattisgarh, Housing and Environment Department, Mantralaya, Mahanadi Bhawan, Nava Raipur Atal Nagar for information please.
2. Member Secretary, Central Pollution Control Board, 'Parivesh Bhawan' C.B.D.Cum-Office Complex, East Arjun Nagar, Shahdara, Delhi for information please.

**Member Secretary**

Chhattisgarh Environment Conservation Board  
Nava Raipur Atal Nagar, Raipur (C.G.)



**Monthly Progress Report for the month of January, 2023 in  
the matter of Hon'ble NGT OA No. 673 of 2018 order Dated  
24/09/2020 for the State of Chhattisgarh**

**Overall status of the State**

- I. **Total Population** : Urban Population – 57,16,555 (as per 2011 census)  
Rural Population – 1,96,07,961 (as per 2011 census)

II. **Estimated Sewage Generation (MLD)** :

- a. In the state of Chhattisgarh having 169 ULBs, sewerage network is only available in 01ULB i.e., Bilaspur Municipal Corporation. There are 02 functional STPs in Bilaspur with 71 MLD capacity. In addition to that. 3STPs are under construction with combined capacity of 22 MLD. As there is no sewerage system in other ULBs of the State, so the sewage generations have been calculated considering the sewage flow in the major drains of the ULBs. Raipur Municipal Corporation has developed 04 STPs of combined capacity 206 MLD based on SBR technology at Chandandih-75 MLD, Kara-35 MLD, Nimora-90 MLD and Bhatagaon-06 MLD near River kharun to treat the waste water from 17 major drains of 70 wards of Raipur. In Kawardha, one STP of 2.1MLD capacity is operational at Mini Mata Chowk. State has developed 04 STPs of 63.2 MLD capacity under AMRUT mission, 06 STPs of 45.8 MLD capacity from the state budget. State is developing 01 STP of 20.5 MLD capacity in co-ordination with M/s NTPC at Korba.
- b. The state has developed about 759.5 MLD capacity of STP for the treatment of used water from the urban households through
  - i. 14 Operational STPs (360.5 MLD),
  - ii. 11 Under Construction STPs (87.8 MLD) and
  - iii. 10 STPs (311.2 MLD) under planning stage.
- c. In Chhattisgarh, most of the urban households are relied on on-site sanitation systems such as Septic Tanks, Pits latrines and twins pits. So, all ULBs have established Faecal sludge treatment facility for the treatment for the treatment of septage generated from the households of the ULBs. A total number of 160 ULBs have Faecal Sludge Treatment Plants(FSTP) based on Low-cost gravity based planted drying beds for the treatment of black water generated in these ULBs namely Raipur, Bilaspur, Durg, Bhilai, Kawardha, Korba, Raigarh, Kirodimal and Badibacheli are using nearby STPs for co-treatment of septage.
- d. 5 STPs in ULBs namely Kumhari (80 MLD), Sakti (4MLD), Shivrinarayan (2.2 MLD), Dantewada (2.8 MLD) and Chandrapur (1.7 MLD) are proposed and under AMRUT 2.0, STPs in 04 AMRUT cities namely Durg (60 MLD), Bhilai (100), Risali (15) and Ambikapur (25 MLD) are proposed for 200 which will further reduce the gap and

strengthen the waste water management facilities in the State of Chhattisgarh.

- e. Therefore, there is zero gap in wastewater management in Urban areas of Chhattisgarh and the total sewage & septage generated from all the households of the ULBs is being treated by the STPs and FSTPs respective.

### **III. Details of Sewage Treatment Plant**

- **Existing no. of STPs and Treatment Capacity (in MLD) :** 14 STPs with total treatment capacity of 360.5 MLD
- **Capacity Utilization of existing STPs :** 150.9 MLD, Trunk line laying work of about 0.73 km has been completed and 3.43 km will be completed by June, 2023.
- **No. of Under Construction STPs and Treatment Capacity (in MLD):** 11 STPs with total treatment capacity of 87.8 MLD.
- **No. of Proposed STPs and Treatment Capacity (in MLD):** 10 STPs with total treatment capacity of 311.2 MLD.
- **MLD of sewage being treated through Alternate technology :** 3.95 MLD of septage from all the 169 ULBs is being treated through FSTPs (Low-cost gravity based Planted Drying Bed) and co-treatment with STPs. The details pertaining utilization of FSTP's and STP (cotreatment) in treatment of Septage generated is attached as **Annexure – 1**.
- **Gap in Treatment Capacity in MLD :** NIL
- **No. of Operational STPs :** 14
- **No. of Complying STPs :** 14
- **No. of Non-complying STPs :** 0



**Details of each existing STP in the State**

| No.          | Location                    | Existing STP Capacity | Capacity Being Utilization | Operational Status of STP | Compliance Status of STP |
|--------------|-----------------------------|-----------------------|----------------------------|---------------------------|--------------------------|
| 1.           | Chilhathi (Bilaspur)        | 17 MLD                | 16 MLD                     | Operational               | Complied                 |
| 2.           | Domuhani (Bilaspur)         | 54 MLD                | 7.6 MLD                    | Operational               | Complied                 |
| 3.           | Mini Mata Chowk (Kawardha)  | 2.1 MLD               | 1.6 MLD                    | Operational               | Complied                 |
| 4.           | Bhatagaon (Raipur)          | 6 MLD                 | 5.8 MLD                    | Operational               | Complied                 |
| 5.           | Kara (Raipur)               | 35 MLD                | 21 MLD                     | Operational               | Complied                 |
| 6.           | Nimora (Raipur)             | 90 MLD                | 54 MLD                     | Operational               | Complied                 |
| 7.           | Chandandih (Raipur)         | 75 MLD                | 6.2 MLD                    | Operational               | Complied                 |
| 8.           | Nava Raipur-Zone 2(Raipur)  | 10 MLD                | 3.5 MLD                    | Operational               | Complied                 |
| 9.           | Nava Raipur-Zone 3(Raipur)  | 7 MLD                 | 1.0 MLD                    | Operational               | Complied                 |
| 10.          | Nava Raipur-Zone 19(Raipur) | 1.2 MLD               | 1.2 MLD                    | Operational               | Complied                 |
| 11.          | Banjipali (Raigarh)         | 25 MLD                | 15 MLD                     | Operational               | Complied                 |
| 12.          | Bade Atarmoda (Raigarh)     | 07 MLD                | 07 MLD                     | Operational               | Complied                 |
| 13.          | Balikota (Jagdalpur)        | 25 MLD                | 8 MLD                      | Operational               | Complied                 |
| 14.          | Mohad (Rajnandgaon)         | 6.2 MLD               | 3 MLD                      | Operational               | Complied                 |
| <b>Total</b> |                             | <b>360.5 MLD</b>      | <b>150.9 MLD</b>           | <b>Operational</b>        |                          |

**Details of under construction STPs in the State**

| No.   | Location                   | Capacity of the plant in MLD | Physical Progress in %         | Status of I&D or House sewer connections                    |                                                               |
|-------|----------------------------|------------------------------|--------------------------------|-------------------------------------------------------------|---------------------------------------------------------------|
| 1.    | Nava Raipur-Zone 1(Raipur) | 10 MLD                       | 98% completed                  | 0% construction work of diversion weir has been completed.  |                                                               |
| 2.    | Nava Raipur-Zone 4(Raipur) | 10 MLD                       | 60% completed                  | 0% construction work of diversion weir has been completed.  |                                                               |
| 3.    | Kanker                     | 7.8 MLD                      | 37% completed                  | 19% construction work of diversion weir has been completed. | 30.06.2023 (i.e., 3years after approval of DPR)               |
| 4.    | Dhamtari                   | 19.6 MLD                     | 36% completed                  | 22% construction work of diversion weir has been completed. | 30.06.2023 (i.e., 3years after approval of DPR)<br>30.06.2024 |
| 5.    | Nawapara                   | 7.5 MLD                      | 59% completed                  | 57% construction work of diversion weir has been completed. |                                                               |
| 6.    | Rajim                      | 2.8 MLD                      | 39% completed                  | 65% construction work of diversion weir has been completed. |                                                               |
| 7.    | Simga                      | 2.8 MLD                      | 23% completed                  | 4% construction work of diversion weir has been completed.  |                                                               |
| 8.    | Champa                     | 5.3 MLD                      | 15% completed                  | 1% construction work of diversion weir has been completed.  |                                                               |
| 9.    | Mangla B (Bilaspur)        | 10 MLD                       | Work awarded to the contractor |                                                             | 31.03.2024                                                    |
| 10.   | Mangla D (Bilaspur)        | 6 MLD                        |                                |                                                             |                                                               |
| 11.   | Koni C (Bilaspur)          | 6 MLD                        | 10% completed                  | 0% construction work of diversion weir has been completed.  |                                                               |
| Total |                            | 87.8 MLD                     |                                |                                                             |                                                               |



**Details of proposed STPs in the State**

| Sr.No. | Location | Capacity of the STP proposed in MLD | Status of Project (at DPR Stage/ Under Tendering/ Work to be Awarded)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Likely Date of Completion                                            |
|--------|----------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| 1      | Korba    | 20.5 MLD                            | <p>➤ A meeting has been conducted under the Chairmanship of Additional Chief Secretary, Govt. of Chhattisgarh on 12/01/2021. In this meeting, it has requested to M/s NTPC Korba to follow the tariff policy published in the Gazette of India and enter into an agreement with Municipal Corporation Korba, so the Hon'ble NGT order may be complied.</p> <p>➤ In this context, a letter has been sent to Ministry of Power, Govt. of India &amp; Ministry of Jal Shakti, Govt. of India for their intervention on this matter and kindly direct M/s NTPC Korba to take immediate action, so the</p> | 31.03.2024<br>(i.e. 3 years after approval of DPR by NTPC Authority) |

|  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |
|--|--|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|  |  |  | <p>direction of Hon'ble N.G.T. can be complied with.</p> <p>➤ In the 2<sup>nd</sup> meeting under the chairmanship of Secretary, CGUAD through video conferencing on 19.08.2021, M/s NTPC has agreed with the new proposal of STP with capacity of 20.5 MLD. With the new proposal all the above mentioned issues raised by M/s NTPC were resolved. M/s NTPC has given its confirmation about the fund allocation (25% of project cost) for the construction of STP. DPR preparation for the 20.5 MLD STP in Fixed Cost Model is in progress.</p> |  |
|--|--|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|



### **Detail of other under construction/proposed STPs in the State**

| Sr. No.      | Location      | Capacity of the plant in MLD | Current Status                  |
|--------------|---------------|------------------------------|---------------------------------|
| 1            | Korba         | 20.5 MLD                     | Administrative sanction awaited |
| 2            | Kumhari       | 80 MLD                       | Administrative sanction awaited |
| 3            | Sakti         | 04 MLD                       | Technical Sanction obtained     |
| 4            | Shivrinarayan | 2.2 MLD                      |                                 |
| 5            | Dantewada     | 2.8 MLD                      |                                 |
| 6            | Chandrapur    | 1.7 MLD                      |                                 |
| 7            | Durg          | 60 MLD                       | Proposed under AMRUT 2.0        |
| 8            | Bhilai        | 100 MLD                      |                                 |
| 9            | Risali        | 15 MLD                       |                                 |
| 10           | Ambikapur     | 25 MLD                       |                                 |
| <b>Total</b> |               | <b>311.2 MLD</b>             |                                 |

#### **IV. Details of Industrial Pollution :**

- **No. of industries in the State :** 6475
- **No. of water polluting industries in the State :** 1040
- **No. of water polluting industries in the polluted river stretches :** 178
- **Quantity of effluent generated from the industries in polluted river stretches in MLD :** 132.42 MLD
- **Quantity of ETP Sludge generated from the Industries in TPD :** 138.5 kg per tonnes of production in plant where ETP has been provided
- **Number of industrial units having ETPs :** 947
- **Number of industrial units connected to CETP :** There is no CETP is in the state of Chhattisgarh. All the water polluting industries have their own ETPs.
- **Compliance status of the ETPs :** All the ETPs which are operational are complying with the effluent standards.
- **Number and total capacity of CETPs (details of existing/ under construction / proposed) :** Presently there is no CETP is under construction.
- **Status of compliance and operation of the CETPs :** Not Applicable

| Town | No. of industries | Industrial discharge | Status of ETPs | Status of CETPs (existing, under construction & proposed) |
|------|-------------------|----------------------|----------------|-----------------------------------------------------------|
| NA   | NA                | NA                   | NA             | NA                                                        |

#### **V. Solid Waste Management**

- **Total number of Urban Local Bodies and their Population :** There are total 169 Urban Local Bodies with a population of 57,16,555 as per census 2011.
- **Current municipal solid waste generation :** 1820 TPD of solid waste is generated and treated daily.



- **Number, installed capacity and utilization of existing MSW processing facilities in TPD (bifurcated by type of processing eg- Waste to Energy (Tonnage and Power Output), Compost Plants (Windrow, Vermi, decentralized pit composting), biomethanation, MRF etc :** In 167 ULBs (360 MRFs, 175 decentralized composting unit) and in Raipur & Bilaspur ULBs (2 Integrated Solid Waste Management facility) are operational. Under Mission Clean City (MCC), 164 ULBs in the State are collecting segregated waste separately and transport the same on daily basis in compartmentalized tricycles and mini tippers. The dry fraction is being segregated at SLRM centres into various usable fractions and sold to waste recyclers. The wet fraction is being converted in compost.

#### **Details of Solid Waste Management in Chhattisgarh**

|          |                 |                              |                                                                            |                                                                  |                                                                        |
|----------|-----------------|------------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------|------------------------------------------------------------------------|
| 169 ULBs | 360 Nos. of MRF | 175 Nos. of Composting Units | 02 Nos. of Integrated Solid Waste Management facility in Raipur & Bilaspur | 100% Door to Door collection of waste in all 3255 wards of state | 169 C&D waste collection facility in existing SLRM centres of each ULB |
|----------|-----------------|------------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------|------------------------------------------------------------------------|

- **Action plan to bridge gap between Installed Capacity and Current Utilization of processing facilities (if Gap > 20%) :** The MSW treatment facilities are designed considering future population growth of the ULBs and there is no gap in municipal solid waste management in the ULBs.
- **No. and capacity of C&D waste processing plants in TPD (existing, proposed and under construction) :** As per the short-term plan, C&D waste management facilities have been established in the existing SLRM centres of all 169 ULBs of Chhattisgarh and approx. 230 ton per day (TPD) is processed.
- **Status of Construction and Demolition Waste Management in the polluted river stretches :**
- **Total no. of wards, no. of wards having door to door collection service, no. of wards practicing segregation at source :** There are 3217 wards with 100% door to door collection services and 100 % source segregation.
- **Details of MSW treatment facilities proposed and under construction (no., capacity, and technology) :** MSW treatment facilities are constructed and operational in all the ULBs and there is no such MSW treatment facilities proposed or under construction at present.
- **No. and area (in acres) of uncontrolled garbage dumpsites and Sanitary Landfills :** NIL  
(As Mission Clean City (MCC) model is implemented in all the ULBs of the state)



- **No. and area (in acres) of legacy waste within 1km buffer of both sides of the rivers :**

| Sr. No. | River Name | ULB     | No. of Legacy waste dump site | Area of Legacy Waste |
|---------|------------|---------|-------------------------------|----------------------|
| 1       | Kharun     | Raipur  | 1                             | 28.85 Acre           |
| 2       | Kelo       | Raigarh | 1                             | 06.65 Acre           |
| 3       | Hasdeo     | Korba   | 1                             | 10.20 Acre           |

- **No. of drains falling into rivers and no. of drains having floating racks/screens installed to prevent solid waste from falling into the rivers:** 63 drains are falling into the 5 river stretches from 8 ULBs and a total of 133 screens are installed covering all the 5 rivers to prevent falling of solid waste into them.

#### Status of ULB wise Management of Solid Waste

| ULB      | Total MSW generation in TPD | Total MSW being processed in TPD | Existing MSW Facilities (No.s) | Utilization Capacity of the existing MSW facilities | Proposed MSW Facilities & Completion Timeline                                                                                                                              |
|----------|-----------------------------|----------------------------------|--------------------------------|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Raipur   | 575 TPD                     | 575 TPD                          | 1                              | 575 TPD                                             | Complied MSW treatment facilities are construction and operational in all the ULBs and there is no such MSW treatment facilities proposed or under construction at present |
| Dhamtari | 22.82 TPD                   | 22.82 TPD                        | 11                             | 29.5 TPD                                            |                                                                                                                                                                            |
| Raigarh  | 41.6 TPD                    | 41.6 TPD                         | 11                             | 44.5 TPD                                            |                                                                                                                                                                            |
| Korba    | 100 TPD                     | 100 TPD                          | 27                             | 121.5 TPD                                           |                                                                                                                                                                            |
| Kanker   | 4.2 TPD                     | 4.2 TPD                          | 4                              | 16.5 TPD                                            |                                                                                                                                                                            |
| Nawapara | 5.9 TPD                     | 5.9 TPD                          | 4                              | 16.5 TPD                                            |                                                                                                                                                                            |
| Rajim    | 1.63 TPD                    | 1.63 TPD                         | 2                              | 9.5 TPD                                             |                                                                                                                                                                            |
| Simga    | 3 TPD                       | 3 TPD                            | 2                              | 9.5 TPD                                             |                                                                                                                                                                            |

#### VI. Bio-medical Waste Management :-

- **Total Bio-medical generation:** 19.83 Tonnes per day
- **No. of Hospitals and Health Care Facilities :** Government HCFs – 1020  
Private HCFs – 3562
- **Status of Treatment Facility/ CBMWTFs :** Out of 19.83 TPD of Bio-Medical Wastes, about 9.75 TPD wastes is being disposed off in the CBWTF operating in the State. Remaining wastes i.e. 10.08 TPD is disposed off in the premises of HCFs only.



04 new CBWTFs are to be established in the State. After their installation and commissioning all the Bio-Medical Wastes generated in the State is expected to be disposed off fully in the CBWTF itself only.

**Ambikapur and Bastar :** Environmental Clearance and Consent to Establish issued for CBWTFs facility at Kondagaon, Bastar Division. Facility is under construction. For CBWTFs facility at Ambikapur, TOR for conduction of EIA study was issued on 11/09/2019 and public hearing has been conducted on 24/11/2020. After receipt of application for environmental clearance and Consent to Establish, the same shall be issued. Earlier expected date of completion was December 2020. Due to COVID-19 Pandemic, delay has been occurred. CECB has requested Hon'ble NGT, Principal Bench, New Delhi for the grant of extension of timelines as per above vide letter dated 10/12/2020. Expected date of completion: June 2022.

**Raigarh and Korba :** For CBWTFs facility at Korba and Raigarh, TORs for conduction of EIA study were issued on 27/08/2020 and 30/09/2020 respectively. After receipt of application for environmental clearance and Consent to Establish, the same shall be issued. Due to COVID-19 Pandemic, delay has been occurred. CECB has requested Hon'ble NGT, Principal Bench, New Delhi for the grant of extension of timelines as per above vide letter dated 10/12/2020. Expected date of completion: June 2022.

#### **VII. Hazardous Waste Management :**

- **Total Hazardous Waste generation per year :** 172437.78 Metric Tonnes
- **No. of Industries generating Hazardous waste :** 413
- **Treatment Capacity of all TSDFs :** NIL
- **Avg. Quantity of Hazardous waste reaching the TSDFs and Treated :** NIL
- **Details of on-going or proposed TSDF :** Owing to the continuous follow up and pursuance of CECB, the setting-up of Common Hazardous Waste TSDF has been initiated by Chhattisgarh State Industrial Development Corporation (CSIDC) under the guidance of Department of Commerce and Industry, Govt. of Chhattisgarh. As per the information received from CSIDC the expected timelines are as follows:
  - Execution of the Agreement between the operator (M/s Ramky Enviro Engineers) and CSIDC by 15/12/2020.
  - Incorporation of the JV Company by 30/12/2020.
  - Execution of the Concession Agreement by 11/01/2021.
  - Handling over of the possession of the land to JV by 18/01/2021.

The JV will establish TSDF facility within 15 months from the date of handling over the possession of land.

#### **VIII. Plastic Waste Management**

- **Total Plastic Waste generation:** 140 TPD (Plastic waste is being treated in all the 169 ULBs of Chhattisgarh).



- **Treatment/ Measures adopted for reduction or management of plastic waste :** Recyclable plastic waste is being sold to authorized recycles and the non-recyclable plastic waste is being sent to Cement industries for coprocessing in Cement Kiln.

**IX. Details of Alternate Treatment Technology being adopted by the State/UT :** FSTP based on Low-cost gravity based Phytoid technology are operational in all ULBs for treatment of Septage generated in the ULBs.

**X. Identification of polluting sources including drains contributing to river pollution and action as per NGT order on insitu treatment:** All the polluting sources under the ULB limits have been identified and installation of floating racks/screens to prevent solid waste from falling into the rivers has been done.

| <b>Progress by UAD</b> |                      |                                     |                                |
|------------------------|----------------------|-------------------------------------|--------------------------------|
| <b>ULB Name</b>        | <b>No. of Drains</b> | <b>No. of Drains having screens</b> | <b>No of screens Installed</b> |
| Raipur                 | 6                    | 6                                   | 29                             |
| Dhamtari               | 4                    | 4                                   | 7                              |
| Raigarh                | 12                   | 12                                  | 35                             |
| Korba                  | 19                   | 19                                  | 35                             |
| Kanker                 | 7                    | 7                                   | 7                              |
| Nawapara               | 7                    | 7                                   | 12                             |
| Rajim                  | 4                    | 4                                   | 4                              |
| Simga                  | 4                    | 4                                   | 4                              |
| <b>TOTAL</b>           | <b>63</b>            | <b>63</b>                           | <b>133</b>                     |

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

- The following Secretaries are responsible for the compliance of order dated 06/12/2019 in the matter of Hon'ble NGT 673/2018.
  1. Secretary, Agriculture Department
  2. Secretary, Urban Administration and Development
  3. Secretary, Department of Forest
  4. Secretary, Department of Water Resource
  5. Secretary, Department of Housing and Environment
  6. Secretary, Department of Home (Transport)
  7. Member Secretary, Chhattisgarh Environment Conservation Board.
- Also, Chief Secretary has formed Implementation Cell in their office vide order dated 25/05/2019 for implementation of orders and action plans prepared.



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

Chief Secretary takes review meeting of the secretaries of the concerned department from time to time. Last meeting under the Chairmanship of Chief Secretary, Government of Chhattisgarh has been held on 08/12/2020.

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

Attached as **Annexure – 2**.

**XIV. Ground water regulation:** State Government has adopted a unique scheme Narwa, Garuwa, Ghuruwa and Badi in which under the Narwa component Water Resource Department has proposed various structures on small and big nallahs of all the 146 blocks of the state for recharging ground water.

**XV. Good irrigation practices being adopted by the State:**

- Water Resource Department is encouraging practices for optimum utilization of irrigation water and adopting micro irrigation schemes which results in more crop per drop as per available resources.
- An action plan has been prepared with the help of Agricultural Scientists. The use of water per hectare will be reduced by installation of drip in 1606 hectare area and sprinkler in 3800 hectare area in selected river stretches. Presently, 66.30 hectare area is covered by drip and 257.21 hectare area is covered by sprinkler system for different crops.

**XVI. Rainwater Harvesting:**

| Progress by UAD |              |             |             |               |
|-----------------|--------------|-------------|-------------|---------------|
| ULB Name        | Target       | Completed   | In Progress | Timeline      |
| Raipur          | 9766         | 5222        | 4544        | March - 2023  |
| Dhamtari        | 577          | 534         | 43          | June - 2023   |
| Raigarh         | 579          | 579         | 0           | Achieved      |
| Korba           | 1535         | 1353        | 182         | June - 2023   |
| Kanker          | 108          | 108         | 0           | Achieved      |
| Nawapara        | 147          | 147         | 0           | Achieved      |
| Rajim           | 224          | 200         | 24          | June - 2023   |
| Singa           | 175          | 100         | 75          | August - 2023 |
| <b>Total</b>    | <b>13111</b> | <b>8243</b> | <b>4868</b> |               |

- Installation of rain water harvesting structure is under progress. Status of installation is as follows:-
- **By industries:** CECB has imposed condition regarding rain water harvesting by industries within their premises and the same is being followed by the concerned industries. Regular monitoring is being carried out for verification of the same. As per information available with CECB rain water harvesting system has been installed 425 large/medium industries and 1420 small scale industries. In addition, it has been decided to keep space (5% of total areas / minimum 05 plots) for rain water harvesting in future industrial areas.



**XVII. Demarcation of Floodplain and removal of illegal encroachments:**

| Progress by UAD                          |          |                         |                      |
|------------------------------------------|----------|-------------------------|----------------------|
| River Stetch                             | ULB Name | Encroachment identified | Encroachment removed |
| River Kharoon (Bhatagaon of Bendri) P-IV | Raipur   | Nil                     | Nil                  |
|                                          | Dhamtari | Nil                     | Nil                  |
| River Kelo (Raigarh of Kanaktora) P-V    | Raigarh  | 14                      | 11                   |
| River Hasdeo (Korba to Urga) P-IV        | Korba    | 8                       | 8                    |
| River Mahanadi (Sihawa to Arang) P-IV    | Kanker   | 1                       | 1                    |
|                                          | Nawapara | Nil                     | Nil                  |
|                                          | Rajim    | Nil                     | Nil                  |
| River Seonath (Bemta to Simga) P-IV      | Simga    | 4                       | 4                    |
| <b>TOTAL</b>                             |          | <b>27</b>               | <b>24</b>            |

**XVIII. Maintaining minimum e-flow of river :** There is no mandatory law specifying the level of e-flow to be maintained in the river. Water resource department is maintaining e-flow depending on the availability of water in the structure and conditional requirement. Also Water Resource Department had prepared standard operating procedures (SOP) for the five rivers Seonath, Mahanadi, Kharun, Kelo and Hasdeo for maintaining e-flow in the rivers and the same is being followed.

**XIX. Plantation activities along the rivers :** The present status of plantation is as follows :-

**Hasdeo:** 6.50 hectare (7150 no. of plants) has been covered with plantation in Korba to Urga river Stretch of Hasdeo.

**Kharun:** 141.160 hectare (248602 no. of plants) has been covered with plantation in Kharun river stretches.

**Mahanadi:** 13 hectare (14300 no. of plants) has been covered with plantation in Sihawa to Aarang river stretch.

**Kelo:** 8.50 hectare (16388 no. of plants) has been covered with plantation in Raigarh to Kankatora river Stretch.

**Seonath:** Area not available for plantation between Bemta to Simga river stretch of Seonath.



| Progress by UAD                          |          |                                               |                                                    |
|------------------------------------------|----------|-----------------------------------------------|----------------------------------------------------|
| River Stetch                             | ULB Name | Identified area (Flood zone) along the rivers | Plantation activities done by ULBs                 |
| River Kharoon (Bhatagaon of Bendri) P-IV | Raipur   | 10                                            | Nil<br>All the flood zones are in low lying places |
|                                          | Dhamtari | Nil                                           | Nil                                                |
| River Kelo (Raigarh of Kanaktora) P-V    | Raigarh  | 1                                             | 7600                                               |
| River Hasdeo (Korba to Urga) P-IV        | Korba    | 4                                             | 3150                                               |
| River Mahanadi (Sihawa to Arang) P-IV    | Kanker   | 5                                             | 250                                                |
|                                          | Nawapara | 6                                             | 1600                                               |
|                                          | Rajim    | 2                                             | 520                                                |
| River Seonath (Bemta to Simga) P-IV      | Simga    | 2                                             | 250                                                |
| <b>TOTAL</b>                             |          | <b>30</b>                                     | <b>13370</b>                                       |

- XX. **Development of biodiversity park on flood plains by removing encroachments** : Status of Identification and removal of encroachment from banks of the river is given above. After removal of all encroachments the plantation shall be done along the banks of the river.
- XXI. **Reuse of Treated Water** : All the proposed STPs in the 5 polluted river stretches are under construction & tender phase. Treated waste water will be utilized after the completion of construction works of STPs.
- XXII. **Model River being adopted by the State & Action Proposed for achieving the bathing quality standards** : State government has prepared action plan for 05 identified polluted river stretches of Chhattisgarh State. Actions as per the action plan are being implemented to achieve the bathing quality standards for the polluted river Stretches.
- XXIII. **Status of Preparation of Action Plan by the 13 Coastal States** : Not applicable for the State of Chhattisgarh.
- XXIV. **Regulation of Mining Activities in the State/UT** : At present Double carbon printed copies of the Transit Passes are checked by the field staff and members of Flying Squad. In cases where the Transit Passes are tempered in anyways viz, cutting or overwriting, the vehicles are seized for Illegal Mining/Transportation. However, the State would like to submit that for effective monitoring of Sand Mines, amply equipped Modernized Check Posts and Departmental Monitoring Units with new Departmental Officers/Inspectors and new Departmental technical staff at all levels is needed. As per MMDR, 1957 Act 21, cases of Illegal Mining and Transportation are registered.

XXV. **Action against identified polluters, law violators and officers responsible for failure for vigorous monitoring :** Urban local bodies are regularly registering cases and imposing fines/penalties against identified polluters and law violators for disposal of waste in rivers as well as in municipal drains.

Details of case registered, and amount of fines/penalties collected are as follows: -

| Progress by UAD |                         |                                |
|-----------------|-------------------------|--------------------------------|
| ULB Name        | No. of Cases registered | Amount of fine collected (INR) |
| Raipur          | 2795                    | 6,80,630                       |
| Dhamtari        | 394                     | 1,03,700                       |
| Raigarh         | 5064                    | 11,02,100                      |
| Korba           | 377                     | 3,42,050                       |
| Kanker          | 475                     | 1,02,650                       |
| Nawapara        | 104                     | 86,100                         |
| Rajim           | 75                      | 17,250                         |
| Simga           | 14                      | 2190                           |
| TOTAL           | 9298                    | 24,36 ,670                     |



# Annexure 1

Utilization capacity of STP's (Co treatment) in treatment of Septage.

| Sr No. | ULB Name     | Type of Treatment plant | Permissible Capacity for treatment of STP (in KLD) | Capacity Utilized (in KLD) |
|--------|--------------|-------------------------|----------------------------------------------------|----------------------------|
| 1      | Bhujal Nagar | Co treatment with STP   | 144                                                | 110                        |
| 2      | Bilaspur     | Co treatment with STP   | 7100                                               | 965                        |
| 3      | Durg         | Co treatment with STP   | 70                                                 | 65                         |
| 4      | Kawardha     | Co treatment with STP   | 210                                                | 10                         |
| 5      | Korba        | Co treatment with STP   | 100                                                | 80                         |
| 6      | Raigarh      | Co treatment with STP   | 50                                                 | 41                         |
| 7      | Rajnagar     | Co treatment with STP   | 957                                                | 854                        |
| 8      | Risali       | Co treatment with STP   | 50                                                 | 15                         |
| TOTAL  |              |                         | 8681 KLD                                           | 1271.5 KLD                 |

Utilization capacity of FSIP's in treatment of Septage.

| Sr No. | ULB Name       | Type of Treatment Plant | Capacity of FSIP (KLD) | Capacity Utilized (in KLD) |
|--------|----------------|-------------------------|------------------------|----------------------------|
| 1      | Aamadi         | FSIP                    | 3.0                    | 2.7                        |
| 2      | Abhanpur       | FSIP                    | 3.0                    | 2.7                        |
| 3      | Adhar          | FSIP                    | 3.0                    | 2.0                        |
| 4      | Ahiwara        | FSIP                    | 5.0                    | 4.5                        |
| 5      | Ajajoda        | FSIP                    | 5.0                    | 4.1                        |
| 6      | Ambagan Chowid | FSIP                    | 3.0                    | 1.4                        |
| 7      | Ambikapur      | FSIP                    | 20.0                   | 18.5                       |
| 8      | Antagan        | FSIP                    | 3.0                    | 2.7                        |
| 9      | Arang          | FSIP                    | 5.0                    | 4.5                        |
| 10     | Ajajoda        | FSIP                    | 3.0                    | 2.7                        |
| 11     | Bade Bacheli   | FSIP                    | 5.0                    | 4.5                        |
| 12     | Bagbahara      | FSIP                    | 15.0                   | 13.5                       |
| 13     | Bagicha        | FSIP                    | 3.0                    | 3.0                        |
| 14     | Balkumbpur     | FSIP                    | 3.0                    | 3.0                        |
| 15     | Balod          | FSIP                    | 5.0                    | 4.5                        |
| 16     | Baloda         | FSIP                    | 3.0                    | 1.4                        |
| 17     | Baloda Bazar   | FSIP                    | 8.0                    | 7.2                        |
| 18     | Balrampur      | FSIP                    | 3.0                    | 3.0                        |
| 19     | Baramkela      | FSIP                    | 3.0                    | 1.2                        |
| 20     | Barsur         | FSIP                    | 3.0                    | 2.7                        |
| 21     | Basna          | FSIP                    | 3.0                    | 2.7                        |
| 22     | Bastar         | FSIP                    | 3.0                    | 2.7                        |
| 23     | Bemetara       | FSIP                    | 5.0                    | 4.5                        |



| Sr No. | ULE Name       | Type of Treatment Plant | Capacity of FSTP (KLD) | Capacity Utilized (in KLD) |
|--------|----------------|-------------------------|------------------------|----------------------------|
| 24     | Berla          | FSTP                    | 3.0                    | 2.7                        |
| 25     | Bhairamgarh    | FSTP                    | 3.0                    | 2.7                        |
| 26     | Bhakhara       | FSTP                    | 3.0                    | 2.7                        |
| 27     | Bhanupratappur | FSTP                    | 3.0                    | 2.7                        |
| 28     | Bhatapara      | FSTP                    | 8.0                    | 7.2                        |
| 29     | Bhatgaon       | FSTP                    | 3.0                    | 2.7                        |
| 30     | Bhatgaon       | FSTP                    | 3.0                    | 3.0                        |
| 31     | Bhilai Charoda | FSTP                    | 40.0                   | 35.0                       |
| 32     | Bhopalpattanam | FSTP                    | 3.0                    | 2.7                        |
| 33     | Bijapur        | FSTP                    | 5.0                    | 3.8                        |
| 34     | Bilalgarh      | FSTP                    | 3.0                    | 2.7                        |
| 35     | Bilha          | FSTP                    | 3.0                    | 2.7                        |
| 36     | Birgaon        | FSTP                    | 63.0                   | 25.0                       |
| 37     | Bishrampur     | FSTP                    | 3.0                    | 3.0                        |
| 38     | Bodla          | FSTP                    | 3.0                    | 2.7                        |
| 39     | Bodri          | FSTP                    | 3.0                    | 2.9                        |
| 40     | Champa         | FSTP                    | 5.0                    | 3.8                        |
| 41     | Chandrapur     | FSTP                    | 3.0                    | 2.2                        |
| 42     | Charama        | FSTP                    | 3.0                    | 2.7                        |
| 43     | ChhuiKhadan    | FSTP                    | 3.0                    | 1.4                        |
| 44     | Chhura         | FSTP                    | 3.0                    | 2.7                        |
| 45     | Chhurikala     | FSTP                    | 3.0                    | 1.4                        |
| 46     | Chhuriya       | FSTP                    | 5.0                    | 1.2                        |
| 47     | Chikhalakasa   | FSTP                    | 3.0                    | 2.7                        |
| 48     | Chimiri        | FSTP                    | 5.0                    | 5.0                        |
| 49     | Dabhra         | FSTP                    | 3.0                    | 1.8                        |
| 50     | Dalli-Rajhara  | FSTP                    | 5.0                    | 4.5                        |
| 51     | Dantewada      | FSTP                    | 5.0                    | 4.5                        |
| 52     | Daundi Lohara  | FSTP                    | 3.0                    | 3.0                        |
| 53     | Devkar         | FSTP                    | 3.0                    | 2.7                        |
| 54     | Dhamdha        | FSTP                    | 3.0                    | 2.3                        |
| 55     | Dhamtari       | FSTP                    | 8.0                    | 7.2                        |
| 56     | Dharamjaigarh  | FSTP                    | 3.0                    | 2.7                        |
| 57     | Dipka          | FSTP                    | 5.0                    | 5.0                        |
| 58     | Dongargaon     | FSTP                    | 3.0                    | 2.7                        |
| 59     | Dongargarh     | FSTP                    | 5.0                    | 3.5                        |
| 60     | Dornapal       | FSTP                    | 3.0                    | 2.7                        |
| 61     | Doundi         | FSTP                    | 3.0                    | 2.7                        |
| 62     | Farasgaon      | FSTP                    | 3.0                    | 2.7                        |
| 63     | Fingeshwar     | FSTP                    | 3.0                    | 2.7                        |
| 64     | Gandai         | FSTP                    | 3.0                    | 1.2                        |



| Sr. No. | ULB Name       | Type of Treatment Plant | Capacity of PSTP (KLD) | Capacity Utilized (in KLD) |
|---------|----------------|-------------------------|------------------------|----------------------------|
| 65      | Gariyaband     | PSTP                    | 3.0                    | 2.7                        |
| 66      | Gaurella       | FSTP                    | 3.0                    | 2.1                        |
| 67      | Geedam         | FSTP                    | 3.0                    | 2.7                        |
| 68      | Gharghoda      | FSTP                    | 3.0                    | 2.8                        |
| 69      | Gobra Nawapara | FSTP                    | 5.0                    | 4.5                        |
| 70      | Gunderdehi     | FSTP                    | 3.0                    | 2.9                        |
| 71      | Gurur          | FSTP                    | 3.0                    | 2.7                        |
| 72      | Jagdālpur      | FSTP                    | 3.0                    | 2.6                        |
|         | Jamul          | FSTP                    | 5.0                    | 4.8                        |
| 74      | Jajjapur       | FSTP                    | 3.0                    | 2.8                        |
| 75      | Jertli         | FSTP                    | 3.0                    | 3.0                        |
| 76      | Jashpur Nagar  | FSTP                    | 3.0                    | 3.0                        |
| 77      | Jhagrakhand    | FSTP                    | 3.0                    | 3.0                        |
| 78      | Kanker         | FSTP                    | 5.0                    | 4.3                        |
| 79      | Kasdol         | FSTP                    | 5.0                    | 4.5                        |
| 80      | Katghora       | FSTP                    | 5.0                    | 4.4                        |
| 81      | Keskal         | FSTP                    | 3.0                    | 2.7                        |
| 82      | Khairagarh     | FSTP                    | 5.0                    | 3.5                        |
| 83      | Khamhariya     | FSTP                    | 3.0                    | 2.7                        |
| 84      | Kharod         | FSTP                    | 3.0                    | 2.1                        |
| 85      | Kharora        | FSTP                    | 3.0                    | 2.7                        |
| 86      | Kharsiya       | FSTP                    | 5.0                    | 4.5                        |
| 87      | Khongapauri    | FSTP                    | 3.0                    | 3.0                        |
| 88      | Kirandul       | FSTP                    | 5.0                    | 4.5                        |
|         | Kirodimalnagar | FSTP                    | 3.0                    | 3.0                        |
| 90      | Kondagaon      | FSTP                    | 5.0                    | 4.5                        |
| 91      | Konta          | FSTP                    | 3.0                    | 2.7                        |
| 92      | Kota           | FSTP                    | 3.0                    | 1.7                        |
| 93      | Kotba          | FSTP                    | 3.0                    | 3.0                        |
| 94      | Kumhari        | FSTP                    | 5.0                    | 5.0                        |
| 95      | Kunkuri        | FSTP                    | 3.0                    | 3.0                        |
| 96      | Kura           | FSTP                    | 5.0                    | 4.5                        |
| 97      | Kurud          | FSTP                    | 3.0                    | 2.7                        |
| 98      | Kusmi          | FSTP                    | 3.0                    | 3.0                        |
| 99      | Lailunga       | FSTP                    | 3.0                    | 2.9                        |
| 100     | Lakhanpur      | FSTP                    | 3.0                    | 2.8                        |
| 101     | Lawan          | FSTP                    | 3.0                    | 2.7                        |
| 102     | Lorini         | FSTP                    | 3.0                    | 2.5                        |
| 103     | Magarod        | FSTP                    | 3.0                    | 2.7                        |
| 104     | Mahasamund     | FSTP                    | 8.0                    | 7.2                        |
| 105     | Malhar         | FSTP                    | 3.0                    | 1.6                        |



| Sr No. | ULB Name        | Type of Treatment Plant | Capacity of FSTP (KLD) | Capacity Utilized (in KLD) |
|--------|-----------------|-------------------------|------------------------|----------------------------|
| 106    | Mana-Camp       | FSTP                    | 3.0                    | 2.7                        |
| 107    | Manendragarh    | FSTP                    | 5.0                    | 5.0                        |
| 108    | Maro            | FSTP                    | 3.0                    | 2.7                        |
| 109    | Mungeli         | FSTP                    | 5.0                    | 3.9                        |
| 110    | Nagari          | FSTP                    | 5.0                    | 4.5                        |
| 111    | Nalla-Janjgir   | FSTP                    | 3.0                    | 2.8                        |
| 112    | Nai-Ledri       | FSTP                    | 3.0                    | 2.9                        |
| 113    | Narayanpur      | FSTP                    | 5.0                    | 4.5                        |
| 114    | Narharpur       | FSTP                    | 3.0                    | 2.7                        |
| 115    | Nawagarh-JC     | FSTP                    | 3.0                    | 1.2                        |
| 116    | Nawagarh-B      | FSTP                    | 3.0                    | 2.7                        |
| 117    | NayaBardwar     | FSTP                    | 3.0                    | 2.8                        |
| 118    | Pakhanjur       | FSTP                    | 3.0                    | 2.7                        |
| 119    | Palari          | FSTP                    | 3.0                    | 2.7                        |
| 120    | Pali            | FSTP                    | 3.0                    | 1.2                        |
| 121    | Pandariya       | FSTP                    | 3.0                    | 2.7                        |
| 122    | Pandatarai      | FSTP                    | 3.0                    | 2.7                        |
| 123    | Parpondi        | FSTP                    | 3.0                    | 3.0                        |
| 124    | Patian          | FSTP                    | 3.0                    | 2.7                        |
| 125    | Pathalgaon      | FSTP                    | 3.0                    | 2.0                        |
| 126    | Pathariya       | FSTP                    | 3.0                    | 2.7                        |
| 127    | Pendra          | FSTP                    | 3.0                    | 1.9                        |
| 128    | Pipariya        | FSTP                    | 3.0                    | 2.7                        |
| 129    | Pithora         | FSTP                    | 3.0                    | 2.7                        |
| 130    | Pratappur       | FSTP                    | 3.0                    | 3.0                        |
| 131    | Premnagar       | FSTP                    | 3.0                    | 3.0                        |
| 132    | Pusaur          | FSTP                    | 3.0                    | 3.0                        |
| 133    | Rahaud          | FSTP                    | 3.0                    | 2.9                        |
| 134    | Rajim           | FSTP                    | 3.0                    | 2.7                        |
| 135    | Rajnandgaon     | FSTP                    | 100.0                  | 100.0                      |
| 136    | Rajpur          | FSTP                    | 3.0                    | 1.1                        |
| 137    | Ramanujganj     | FSTP                    | 3.0                    | 3.0                        |
| 138    | Ratanpur        | FSTP                    | 5.0                    | 4.8                        |
| 139    | Sahaspur-Lohara | FSTP                    | 3.0                    | 2.7                        |
| 140    | Saja            | FSTP                    | 3.0                    | 2.7                        |
| 141    | Sakti           | FSTP                    | 3.0                    | 2.4                        |
| 142    | Saragaon        | FSTP                    | 3.0                    | 2.1                        |
| 143    | Saraipali       | FSTP                    | 5.0                    | 4.5                        |
| 144    | Sarangarh       | FSTP                    | 5.0                    | 5.0                        |
| 145    | Sargaon         | FSTP                    | 3.0                    | 1.5                        |
| 146    | Sariya          | FSTP                    | 3.0                    | 1.4                        |



| Sr No. | ULB Name        | Type of Treatment Plant | Capacity of FSTP (KLD) | Capacity Utilized (in KLD) |
|--------|-----------------|-------------------------|------------------------|----------------------------|
| 147    | Shivpur Charcha | FSTP                    | 3.0                    | 3.0                        |
| 148    | Shivrinarayan   | FSTP                    | 3.0                    | 2.2                        |
| 149    | Simga           | FSTP                    | 5.0                    | 4.5                        |
| 150    | Sitapur         | FSTP                    | 3.0                    | 2.8                        |
| 151    | Sukma           | FSTP                    | 5.0                    | 4.5                        |
| 152    | Surajpur        | FSTP                    | 5.0                    | 5.0                        |
| 153    | Takhatpur       | FSTP                    | 5.0                    | 4.0                        |
| 154    | Tilda Newra     | FSTP                    | 8.0                    | 7.2                        |
| 155    | Tungaon         | FSTP                    | 5.0                    | 4.5                        |
| 156    | Tundra          | FSTP                    | 3.0                    | 2.7                        |
| 157    | Utai            | FSTP                    | 3.0                    | 2.7                        |
| 158    | Wadrafnagar     | FSTP                    | 3.0                    | 3.0                        |
| TOTAL  |                 |                         | 796 KLD                | 672.9 KLD                  |



**Latest Water Quality of Polluted River Stretches  
(Year 2021-22)**

**River Hasdeo (Korba to Uрга) – P-IV**

| Monitoring Parameter              | Minimum | Maximum |
|-----------------------------------|---------|---------|
| pH                                | 7.4     | 7.33    |
| B.O.D. (3-days at 27°C)<br>(Mg/L) | 0.6     | 2.6     |
| Dissolved Oxygen<br>(Mg/L)        | 6.8     | 7.4     |
| Coliform (MPN/100 ml)             | 26      | 48      |

**River Kharoon (Bhatagon to Bendri) – P-IV**

| Monitoring Parameter              | Minimum | Maximum |
|-----------------------------------|---------|---------|
| pH                                | 7.12    | 7.80    |
| B.O.D. (3-days at 27°C)<br>(Mg/L) | 4.2     | 2.4     |
| Dissolved Oxygen<br>(Mg/L)        | 6.6     | 7.1     |
| Coliform (MPN/100 ml)             | 60      | 90      |

**River Mahanadi (Shihava to Arang) – P-IV**

| Monitoring Parameter              | Minimum | Maximum |
|-----------------------------------|---------|---------|
| pH                                | 7.18    | 7.63    |
| B.O.D. (3-days at 27°C)<br>(Mg/L) | 2.2     | 2.9     |
| Dissolved Oxygen<br>(Mg/L)        | 6.8     | 7.6     |
| Coliform (MPN/100 ml)             | 34      | 70      |

**River Sheonath (Bemta to Simga) – P-IV**

| Monitoring Parameter              | Minimum | Maximum |
|-----------------------------------|---------|---------|
| pH                                | 7.30    | 7.78    |
| B.O.D. (3-days at 27°C)<br>(Mg/L) | 1.9     | 2.9     |
| Dissolved Oxygen<br>(Mg/L)        | 6.8     | 7.4     |
| Coliform (MPN/100 ml)             | 50      | 70      |

**River Kelo (Raigarh to Kanaktora) – P-IV**

| Monitoring Parameter              | Minimum | Maximum |
|-----------------------------------|---------|---------|
| pH                                | 6.9     | 8.1     |
| B.O.D. (3-days at 27°C)<br>(Mg/L) | 1.3     | 2.8     |
| Dissolved Oxygen<br>(Mg/L)        | 6.5     | 9.6     |
| Coliform (MPN/100 ml)             | 20      | 40      |