

National Mission for Clean Ganga
Format for submission of Monthly Progress Report in the NGT Matter OA
No. 673 of 2018 (in compliance to NGT order dated 24.09.2020)

For the State of Jharkhand (Month of November'2022 & December' 2022)

Overall status of the State:

- I. Total Population: **Urban Population 58,25,413 (as per Census 2011)**
- II. Estimated Sewage Generation (MLD): **452 MLD**

III. Details of Sewage Treatment Plant:

- Existing no. of STPs and Treatment Capacity (in MLD):

S.No.	Location	No. of STP	Capacity in MLD	Total A
1	Ranchi	7	10 MLD	25.5 MLD
2	Sahibganj	2	12 MLD	
3	Rajmahal	1	3.5 MLD	
4	*Ranchi	3	4.8 MLD	98.24 MLD
5	*Jamshedpur	3	60 MLD	
6	*Bokaro	5	32.8 MLD	
7	*Dhanbad	14	0.64 MLD	
Total B		35	123.74 MLD	123.74 MLD

- Capacity Utilization of existing STPs: **66%** (Ranchi: 100%, Sahibganj: 36%, Rajmahal: 20%, *Jamshedpur: 80%, *Bokaro: 80%, *Dhanbad: 80%)
- MLD of sewage being treated through Alternate technology: **10 MLD**
- Gap in Treatment Capacity in MLD: **328.26 MLD**
- No. of Operational STPs: **35**
- No. of Complying STPs: **35**
- No. of Non-complying STPs: **0**

** As per JSPCB in the matter of Hon'ble NGT OA 673/2018.*

Details of each existing STPs/FSTPs/Septage in the State

No.	Location	Existing STP Capacity	Capacity Being Utilized	Operational Status of STP	Compliance Status of STP
STPs					
1	Ranchi Municipal Corporation	10 MLD	100%	Yes	Yes
2	Sahibganj Nagar Parishad	12 MLD	36%	Yes	Yes
3	Rajmahal Nagar Panchayat	3.5 MLD	20%	Yes	Yes
FSTP					
4	*Bundu Nagar Panchayat	0.006 MLD	-	-	-
5	*Chirkunda Nagar Parishad	0.012 MLD	-	-	-
Septage					
6	*Giridih Municipal Corporation	0.052 MLD	-	-	-

* Plant is completed and under trial run.

Details of under construction STPs/FSTPs/Septage in the State

No.	Location	Capacity of the plant in MLD	Physical Progress in %	Status of I&D or House sewer connections	Completion Timeline
STPs					
1	Adityapur MC	36 MLD	79%	-	March 2023
2	Ranchi MC	37 MLD	78%	-	February 2023
3	Ranchi Smart City Mission	16 MLD	98%	-	December 2022 (Ready for testing/ Commissioning)
4	Phusro NP	15 MLD	-	-	Tender financial proposal is under evaluation.
5	Ramgarh	40 MLD	-	-	Under Tendering Process

Details of proposed STPs/FSTPs/Septage in the State

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	Dhanbad	192 MLD	Project has been approved in the 46 th meeting of EC of NMCG held on 23.12.2022.	-

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
2	Mango	43 MLD	DPR under preparation. DPR will be finalized after finalization of funding agency.	-
3	Ranchi	200 MLD	- Survey work started. - LOA is issued to the consultant for Updating/ Revising DPR of "<i>Ranchi Sewerage and Drainage (2006) including integration of existing/ongoing sewerage schemes (Ranchi Sewerage Zone- 1), Preparation of Safeguard documents and providing Project Management Consultancy Services.</i>"	-

IV. Details of Industrial Pollution: NA

- No. of water polluting industries in the State: **270**
- Quantity of effluent generated from the industries in MLD: 122.587 **MLD** and **Under Evaluation**
- Number of industrial units having ETPs: **171**
- Number of industrial units connected to CETP: **Primary treatment of effluent is being done by 97 units which is sent to final treatment in CETP, Gamharia, Saraikela Kharsawn**
- Number and total capacity of ETPs (details of existing/ under construction / proposed):
 - Existing - 171
 - Under Construction: 02
- Compliance status of the ETPs: **Complied**
- Number and total capacity of CETPs (details of existing/ under construction / proposed):
 - Adityapur Auto Cluser – 1200 KLD (Existing)**
 - Silk Park Irba Area – 0.5 KLD (Existing)**
 - Tupudana Industrial Cluster- 3.5 MLD (Under Construction) almost 85% complete**

Status of compliance and operation of the ETPs & CETPs:

Town	No. of industries	Industrial discharge	Status of ETPs	Status of CETPs (existing, under construction & proposed)
Dhanbad Region	42	Under Evaluation	ETPs Complied – 42 nos.	
Jamshedpur Region	149	92.743 MLD	1. ETPs Complied - 51 nos. 2. CETPs Complied - 97 nos. 3. ETP Under Construction- 01 nos.	Adityapur Auto Cluster, Gamharia, Saraikela Kharsawa – 1200 KLD
Ranchi Region	41	5500 KLD	1. ETPs Complied – 40 nos. 2. ETP Under Construction- 01 nos.	1. Silk Park Irba – 0.5 KLD 2. Tupudana Industrial Cluster – 3.5 MLD under construction
Hazaribagh Region	38	29.844 MLD	ETPs Complied – 38 nos.	

V. **Solid Waste Management:**

- Total number of Urban Local Bodies- **49** and their Population-58,25,413 (as per Census 2011)
- Current Municipal Solid Waste Generation- **2297 MTPD**
- Number, Installed Capacity and utilization of Existing MSW facilities:

S. No.	Type of processing	No. of facility/ULB	Installed Capacity	Utilization Capacity	Gap (%)
1	Waste to Energy (Tonnage-Power Output)	Decentralized-01 ULB	0.5 MTPD	100%	Nil
2	Compost Plants	Windrow Vermi decentralized pit composting-42 ULBs	320 MTPD 589 MTPD	 93%	 7%
3	Bio-methanation	Setup-06 ULBs. Operational-01 ULB.	337.58 MTPD 1.1 MTPD	 88%	 12%

S. No.	Type of processing	No. of facility/ULB	Installed Capacity	Utilization Capacity	Gap (%)
		Under Trial- 03 ULBs	27 MTPD		
		Under Installation/ Planned-02 ULBs.	309.48 MTPD		
4	MRF	42 ULBs	617 MTPD	90%	10%

- Action plan to bridge gap between Installed Capacity and Current Utilization of processing facilities (if Gap > 20%): **NA**
- No. and capacity of C&D waste processing plants in TPD (existing, proposed and under construction): **3 nos. – Work awarded at Dhanbad, proposed at Ranchi (To be re-tendered), and Jamshedpur (To appoint consultant for preparation of DPR is Under Tendering Evaluation).**
- Total no. of wards- **1053**, no. of wards having door to door collection service- **934**, no. of wards practicing segregation at source- **848**
- Details of MSW treatment facilities;

Existing MSW processing facilities in MTPD

Number	Capacity	Technology
4	285	Bio methanation & Windrow

Under construction MSW processing facilities in MTPD

Number	Capacity	Technology
14	1205	Windrow & Bio methanation

Proposed MSW processing facilities in MTPD

Number	Capacity	Technology
23	285	Windrow & Bio methanation

*A status report on SWM projects is enclosed as **Annexure-5**.*

- No. and area (in acres) of uncontrolled garbage dumpsites-**41** and Sanitary Landfills is under construction-**03**.
- No. and area (in acres) of legacy waste within 1km buffer of both side of the rivers. **-Nil**
- No. of drains falling into rivers and no. of drains having floating racks/screens installed to prevent solid waste from falling into the rivers: **47** no of drains in **8 ULBs** identified in O.A.673/2018. (**Annexure 3**)

Status of ULB wise Management of Solid Waste

ULB	Total MSW generation in MTPD	Total MSW being processed in MTPD	Existing MSW facilities	Utilization Capacity of the existing MSW facilities	Total Proposed MSW Facilities & Completion Timeline
49	2297	1310	4	285 TPD	23 Nos, March 2024

VI. Bio-medical Waste Management: (Domestic) – As per Annual report 2020-21

- Total Bio-medical generation: 8316.7281 Kg/day
- No. of Hospitals and Health Care Facilities:
 - a. Bedded: 1073
 - b. Non- Bedded: 733
- Status of Treatment Facility/ CBWTF: Four CBWTF at Lohardaga, Ramgarh, Dhanbad & Dugni, Saraikela is functioning.
- Total Quantity of Bio-Medical Waste treated: 5893.79 Kg/day
 - i. Captive Facility: 1358.6 Kg/day
 - ii. CBWTF : 4535.19 Kg/day
- CBWTF Treatment Capacity:
 - i. M/s Bio-Genetic Laboratories Pvt. Ltd., Ramgarh: BMW Disposal Capacity- 600 Kg/day
 - ii. M/s Bio-Genetic Laboratories Pvt. Ltd., Dhanbad: Incineration of BMW- 25.2 TPM
 - iii. M/s Medicare Environment Management Pvt. Ltd., Lohardaga: Incineration of BMW- 200 Kg/hr
 - iv. Adityapur Waste Management Pvt. Ltd. (CBWTF) – 200 Kg/hr

VII. Hazardous Waste Management: (Domestic) - As per Annual report 2020-21

- Total Hazardous Waste generation: 202813.83 MT/Yr.
- No. of Industries generating Hazardous waste: 550
- Treatment Capacity of all TSDFs:
 1. *M/s Adityapur Waste Management Pvt. Ltd. located in Saraikela Kharsawan- Land Fill: 40000 MT/A and capacity of 500 kg/hr (Incineration)*
 2. *Captive Facility Capacity*
 - i. *WWR Div. Usha Martin Limited Ranchi- Landfill: 13500 X 2 MT/A*

- ii. *M/s Mangalum Lubricant Pvt. Ltd., Ranchi – Incineration: 960 MT/H*
- iii. *M/s Tin Plate Co. of India Ltd, Saraikela Kharsawan: Landfill: 753 MT/A*
- iv. *M/s Tata Motors Ltd, Jamshedpur, East Singhbhum- Incineration: 0.25 MT/H*
- v. *M/s. Bokaro Steel Ltd. B.S. City, Bokaro- Landfill: SLF Dimension 125 m X 30 m X 3 m*

3. ACC Cement, Chaibasa for Co-processing – 23500 MT

- Avg. Quantity of Hazardous waste reaching the TSDFs and Treated: Land fill – 25056.74 MT and Incineration - 839.199 MT.

1. M/s Adityapur Waste Management Pvt. Ltd., Dugni, Saraikela Kharsawan (HW disposed by the end of financial year) -SLF – 35363.5 MT/Yr and Incineration- 1258.8 MT/Yr.

- Details of on-going or proposed TSDF: Nil
- Details of on-going or proposed TSDF: Nil

VIII. Plastic Waste Management:

- Total Plastic Waste generation: **43332 TPA**
- Treatment/ Measures adopted for reduction or management of plastic waste: **violations were registered, plastic carry bags were seized from traders and fine has been imposed on them; In Chas & Jamshedpur Road construction has been done by using plastic waste and reused by M/s ACC Limited Chaibasa Cement Works (registered with JSPCB) having facility of Co-processing plastic wastes. The State Govt. has decided to declare the entire area of the State of Jharkhand as the “Plastic Carry Bags Free Area”. (Annexure-4)**

- IX. Details of Alternate Treatment Technology being adopted by the State/UT: N.A.
- X. Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment.
- XI. Details of Nodal Officer appointed by Chief Secretary in the State/UT: Urban Development & Housing Department.
- XII. Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river: Details are annexed as Annexure - 8
- XIII. Ground water regulation: Drinking water & Sanitation Dept. have identified the contaminated hand pumps and sealed those hand pumps whose water is not fit for

drinking. The contamination of the ground water is caused mainly due to the presence of Arsenic (Sahebganj, Rajmahal and Udhwa) and Fluoride (Ranchi, Gumla, Garwha, Khunti, Plamu, Dhanbad, Bokaro etc.) in excess in few of the regions of Jharkhand. Portable water is supplied to the Communities in the identified critical blocks through water tanker owned by local bodies and log book is maintained. Periodic assessment of 24 districts and 260 blocks of Jharkhand for ground water resources was conducted by Jharkhand in 2009, 2011, 2013 & 2017 which also covers the area related to 7 polluted stretches and based on which a comparative statement of dynamic ground water resource. As per report of CGWA, Dhanbad and Bermo are among the overexploited blocks, Patratu, Silli and Bermo are among semi critical blocks along the seven polluted river stretches. Groundwater quality monitoring shall be carried out at least twice in the year (winter: December-January and summer: May- June) at strategic locations to ascertain quality of groundwater.

- XIV. Good irrigation practices being adopted by the State: The report is enclosed as Annexure 7
- XV. Rain Water Harvesting: Policy made by the department of UD&HD Jharkhand has been attached with the report as Annexure1.
- XVI. Demarcation of Floodplain, removal of illegal encroachments and maintaining
- XVII. minimum e-flow of river: The report is enclosed as Annexure 6
- XVIII. Plantation activities along the rivers: **Total – 124.69 Kms. (Jumar – 20 Kms, Swarnrekha – 65 Kms, Damodar- 20.69 Kms, Konar – 6 Kms, Sankh -8 Kms and Garga - 5 Kms)**
- XIX. Model River being adopted by the State & Action Proposed for achieving the bathing quality standards: **River Swarnrekha**
- XX. Status of Preparation of Action Plan by the 13 Coastal States: **NA**
- XXI. Regulation of Mining Activities in the State/UT: **NA**
- XXII. Action against identified polluters, law violators and officers responsible for failure for vigorous monitoring: **Environmental Compensation has been charged upon 3 units (BTPS & CTPS – Damodar River and HIDALCO Muri- Swarnrekha River)**
- XXIII. Status of Grievances redressal portal in the on-going NGT OA No. 673 of 2018: **All 8 (Eight)-grievances have been disposed off.**
- XXIV. Action Taken Status for prohibition of immersion of idols, puja material and other items of religious offerings in river & other water bodies in particular during the

occasion of festivals: **Draft “Jharkhand Prevention and Control of Water Pollution (Procedure for Idol Immersion) Rules”** has been prepared and is under review in the State/Sub-committee.

ANNEXURE - 1

Government of Jharkhand
Urban Development & Housing Department

Notification

File no. -06/TC PO/Vivldh-05/2016/नंवि०...६४४

Ranchi, dated -23/01/17

JHARKHAND RAIN WATER HARVESTING REGULATION, 2017.

Increasing urbanization has resulted in greater pressure on the infrastructure needs of urban areas. The supply of adequate quantity of potable water on one hand and managing the flooding of streets during monsoon on the other, has become Herculean tasks for the ULBs. Urban areas, including major cities, are becoming increasingly dependent on ground water as Surface Water supply is inadequate and unable to cater to the needs of the entire urban population. Freshwater sources are being heavily exploited to meet the demand of the urban population. Considering this issue seriously, Government have decided to take effective measures for collection of rain water from roof tops, paved / unpaved surfaces etc. and to use it either for recharging ground water or storing it in storage tanks. For this, it has been decided that, no building permission be granted unless provision is made for Rain Water Harvesting System. Rain water harvesting is the activity of direct collection of rain water. The rain water collected can be stored for direct use or can be recharged into the ground water. Water harvested can be used for domestic use, livestock, plant production or flood control.

Accordingly, in exercise of powers conferred by Section 592 of the Jharkhand Municipal Act, 2011, the Governor of Jharkhand hereby makes the following regulation:-

1. Short Title, Extent and Jurisdiction, Applicability of Regulations

- 1.1 **Title-**This regulation shall be called as *Jharkhand Rain Water Harvesting Regulation, 2017.*
- 1.2 **Extent and Jurisdiction:** It shall apply to all public, private, government institutions/buildings in the whole state of Jharkhand.
- 1.3 **Date of coming into force:** This regulation shall come into force from the date of publication of notification in Official Gazette.
- 1.4 **Applicability of Regulations:** Jharkhand Rain Water Harvesting Regulation, 2017 shall be applicable for installation of Rain Water Harvesting Structures in all building falling within the jurisdiction of-
 - 1.4.1. All Regional Development Authorities.
 - 1.4.2. All Urban Local Bodies.
- 1.5 All existing rules, regulations, byelaws, orders that are in conflict or inconsistent with these bye laws shall stand modified to the extent of the provision of these bye laws.

2. Definitions

In this Regulation, unless the context otherwise requires: -

- 2.1 **'Act'** means Jharkhand Municipal Act-2011;
- 2.2 **'Aquifer'** is a geological formation that stores and transmits water;
- 2.3 **'Artificial'** means any man made scheme or facility that adds water to an aquifer;
- 2.4 **'Amenity'** means roads, street, open spaces, parks, recreational grounds, play grounds, gardens, water supply, electric supply, street lighting, sewerage, drainage, public works and other utilities, services and conveniences.
- 2.5 **'Applicant'** means the person, who is the owner of the land or building or has title to a land or building and includes;
- 2.5.1 A trustee who is entrusted with or is concerned with any building;
- 2.5.2 A receiver, executor or administrator or a manager appointed by any Court of competent jurisdiction to have the charge of or to exercise the rights of the owner; and
- 2.5.3 A mortgagee in possession;
- 2.6 **'Authority'** means Regional Development Authority/Urban Local Bodies (ULBs).
- 2.7 **'Bore well'** means small diameter well which are generally deeper than open wells.
- 2.8 **'Dug well'** means traditionally made long diameter wells, pits excavated in the ground until the water reached, supported at the sides by RCC/Brick/Stone walls.
- 2.9 **'Ground water'** means the water retained in the inter- granular pores of soil or fissures of rock below the water table.
- 2.10 **'Open Space'** means an area forming an integral part of the plot, left open to the sky.
- 2.11 **'Rain Water Harvesting'**-The harvesting of rainwater is the collection of water from surfaces on which rain falls, and subsequently storing this water for later use. Normally water is collected from the roofs of buildings and stored in rainwater tanks. Water can also be collected in dams from rain falling on the ground and producing runoff;
- 2.12 **'Run off'**- Run off is the term applied to the water that flows away from a surface after falling on the surface in the form of rain;
- 2.13 **'Recharge'** means the process of surface water (from rain or reservoirs) joining the ground water aquifer;
- 2.14 **'State government'**- means the government of Jharkhand;
- 2.15 **'Stakeholders means'**-
- 2.15.1 All households and residents of urban areas,

- 2.15.2 Educational institutions including research and development (private & public),
- 2.15.3 All Government agencies and private agencies,
- 2.15.4 Industrial establishments,
- 2.15.5 Community Based Organizations,
- 2.16 'Water tables' means the level of water within inter-granular pores of soil or fissures of rock, below which the pores of the host are saturated;
- 2.17 Anything not defined in this regulation but is defined in the Act shall have the same meaning as defined in the Act.

3. Objectives

- 3.1 The objective of the Jharkhand rainwater harvesting regulation-2017 is to ensure the (best) possible beneficial use of rainwater endowment on the entire urban areas of Jharkhand.
- 3.2 To ensure that the maximum utilization of rainfall as possible through water harvesting, either by recharging it into the groundwater aquifers or storing it for direct use.

4. Expected outcome of the regulation

- 4.1 Recharge ground water.
- 4.2 Preserve and enhance surface water bodies in urban areas.
- 4.3 Provide back-up supplies during dry spell, draughts or periods of main supply break down.
- 4.4 Mitigate urban floods.
- 4.5 Improve quality of groundwater.
- 4.6 Provide environmental and ecological benefits to the urban area including fostering bio diversity.
- 4.7 Augment soil moisture for urban greenery.
- 4.8 Use of rainwater for urban aquaculture and vegetable production.

5. The following provisions shall be applicable for installation of Rain Water Harvesting structures

- 5.1 Provision of Rain Water Harvesting shall be mandatory for plot of size 300 sq.mt and above .
- 5.2 The building construction could be broadly classified as per the following:
- 5.2.1 Category -(A) Building on plot size less than 300 sq.mt.
- 5.2.2 Category- (B) buildings up to G-2 on the plot size more than 300 sq.mt.

5.2.3 Category- (C) buildings G+3 and above on plot size more than 300 sq.mt

- 5.3 The Rain Water Harvesting arrangement is not mandatory for buildings with a plot size less than 300 sq.mt. However the owners of buildings are advised to construct Rain Water Harvesting structure for conservation and protection of ground water. Either they adopt traditional method or any upgrade method.
- 5.4 All the layout open spaces / amenity spaces of housing societies and new constructions / reconstruction's/ additions on plots having area not less than 300 sq. mt provided that the Authority may approve the Rain Water Harvesting structures of specifications different from those specified here with, subject to the minimum capacity of rain water harvesting being ensured in each case.
- 5.5 The owner / society of every building mentioned in the para 5.4 above shall ensure that the Rain Water Harvesting structure is maintained in good condition for storage of water for non potable purposes or recharge of groundwater at all times.
- 5.6 The Authority may impose a levy for the failure of the owner of any building mentioned in the para 5.4 above to provide or to maintain Rain Water Harvesting structures as and when required.
- 5.7 Rain Water Harvesting shall be made mandatory for every Urban Local Bodies/Planning Authority to identify, demarcate, protect and maintain the water bodies that come under their jurisdiction will prepare a list.
- 5.8 If Rain water harvesting system has not been installed in the apartments/houses having area less than 300 sq.m , constructed before 2010 and there is no space available for installation of the same , the issue will be heard and resolved by the concerned ULBs and suitable order shall be passed from case to case by the CEO/ Executive officer/special officer of the ULBs.
- 5.9 It is the responsibility of the builders of the apartments to install rain water harvesting structure, if the building is constructed on or after 2010 and occupancy certificate from the respective Municipal corporation has not been procured. In case of construction on or after 2010 and the occupancy certificate has been procured from the municipal corporation than the owner of the flats will have combined responsibility to install rain water harvesting in the building.

6. **Rain Water Harvesting in a building site**

Includes storage or recharging into ground the rain water falling on the terrace or on any paved or unpaved surface within the building site.

6.1 **The following systems may be adopted for harvesting the rain water drawn from terrace and the paved surface**

- 6.1.1 Open well of a minimum of 1.00 mt.dia and 6 mt. in depth into which rain water may be channeled and allowed after filtration for removing silt and floating material. The well shall be provided with ventilating covers. The water from the open well may be used for non potable

domestic purposes such as washing, flushing and for watering the garden etc.

6.1.2 Rain Water Harvesting for recharge of ground water may be done through a bore well around which a pit may be excavated up to a depth of atleast 3.00 mt and refilled with stone aggregate and sand. The filtered rain water may be channeled to the refilled pit for recharging the borewell.

6.1.3 An impervious surface / underground storage tank of required capacity may be constructed in the setback or other open space and the rain water may be channeled to the storage tank. The storage tank shall always be provided with ventilating covers and shall have draw-off taps suitably placed so that the rain water may be drawn off for domestic, washing gardening and such other purpose s. The storage tanks shall be provided with an overflow.

6.1.4 The surplus rain water after storage may be recharged into ground through percolation pits or trenches or combination of pits and trenches. Depending on the geographical and topographical condition, the pits may be of the size of 1.20 mt. width $\times$ 1.20 mt. length $\times$ 2.00 mt. to 2.50 mt. depth. The trenches can be or 0.60 mt width $\times$ 2.00 to 6.00 mt. length $\times$ 1.50 to 2.00 mt. depth. **The capacity/ volume and number of pits and trenches should depend upon the catchment area and quantity of peak rain fall of the area. It can vary from place to place.** Terrace water shall be channeled to pits or trenches. Such pits or trenches shall be back filled with filter media comprising the following materials.

6.1.4.1 40 mm stone aggregate as bottom layer upto 25% of the depth;

6.1.4.2 20 mm stone aggregate as lower middle layer upto 25% of the depth;

6.1.4.3 Coarse sand as upper middle layer upto 40% of the depth;

6.1.4.4 A thin layer of fine sand as top layer.

6.1.5 Top 10% of the pits / trenches will be empty and a splash is to be provided in this portion in such a way that roof top water falls on the splash pad.

6.1.6 Brick masonry wall is to be constructed on the exposed surface of pits / trenches and the cement mortar plastered.

6.1.7 The depth of wall below ground shall be such that the wall prevents lose soil entering into pits / trenches. The projection of the wall above ground shall at least be 15 cms.

6.1.8 Perforated concrete slabs shall be provided on the pits / trenches. Bund should be created to minimize the run off.

6.1.9 If the open space surrounding the building is not paved, the top layer upto a sufficient depth shall be removed and refilled with coarse sand to allow percolation of rain water into ground.

6.1.10 Any other system developed, which is technically suitable and feasible under the local circumstances and conditions, which may vary from place to place.

6.2 In case the plots where the water table is high i.e 10 feet or less, it is not mandatory to follow the above provisions.

6.2.1 The terrace shall be connected to the open well / borewell / storage tank / recharge pit / trench by means of PVC pipes through filter media. A valve system shall be provided to enable the first washings from roof or terrace catchment, as they would contain undesirable dirt. The mouths of all pipes and opening shall be covered with mosquito (insect) proof wire net. For the efficient discharge of rain water, there shall be at least two rain water of 100 mm diameter for a roof area of 100 sq.mt.

6.2.2 Rain water harvesting structures shall be installed as not to endanger the stability of building or earthwork. The structures shall be designed such that no dampness is caused in any part of the walls or foundation of the building or those of an adjacent building.

6.2.3 The water so collected / recharged shall as far as possible be used for non-drinking and non-cooking purpose.

6.2.4 Provided that when the rain water in exceptional circumstances will be utilized for drinking and / or cooking purpose, it shall be ensured that proper filter arrangement and the separate outlet for by passing the first rain-water has been provided.

6.2.5 Provided further that it will be ensured that for such use, proper disinfectants and the water purification arrangements have been made.

7. Community Rain Water Harvesting

A common rain water harvesting structure shall be installed for a cluster of houses/buildings where there is no space for making a rain water harvesting structure. It shall be the duty of each and every owner/occupier to participate in the installation and maintenance of community rain water harvesting.

8. Rain Gardens

A rain garden is a functional landscaping technique that can beautify our property as well as help to filter and slow the flow of storm water. Rain gardens allow about 30% more rainwater to soak into the ground than traditional lawns.

8.1 Rain gardens are saucer shaped gardens that water flows into that are planted with grasses, flowers, shrubs, and sometimes small trees. They soak up water while providing wildlife habitat. The soils and basin fills with water for a short amount of time before soaking back into the surrounding soil. Plants used in

these gardens are adapted to survive in short periods of flooding as well as dry soils in between storms.

- 8.2 They are strategically located to capture runoff from hard surfaces such as a driveway, parking area, sidewalk of streets. Rain gardens fill with a few inches of water after a storm and then water filters into the surrounding soil, rather than running off to the street or storm culvert.
- 8.3 Rain gardens are a very good option to help lower the impact of impervious surfaces and polluted runoff because they are low-tech, inexpensive, sustainable and aesthetically pleasing.
- 8.4 There are multiple benefits of rain garden to the community and the local environment which include:
 - 8.4.1 Reduced polluted stormwater runoff from yards into local streams,
 - 8.4.2 Reduced localized flooding,
 - 8.4.3 Reduced erosion,
 - 8.4.4 Pollution prevention,
 - 8.4.5 Groundwater recharge,
 - 8.4.6 Enhanced wildlife habitat,
 - 8.4.7 Aesthetics.

9. **Awareness of stakeholders:**

- 9.1 Publication of Rain Water Harvesting guidelines and conduct awareness campaigns, Orientation programmes, etc. for various stakeholders (Bulk consumers, residents, etc).
- 9.2 To construct model demonstration project for public building, educational institutions, parks, open spaces, etc on rain water harvesting to disseminate the idea to various stakeholders.

10. **Formation of Monitoring committee at State and District level**

- 10.1 **State level Advisory Committee** will monitor the entire process of Rain Water Harvesting implementation at the State level. This committee will also comprise of a technical cell, which will provide the necessary technical support for implementation of Rain Water Harvesting. This Committee shall be chaired by the Principal Secretary, Urban Development & Housing Department and shall meet at least once in three months to review the status of implementation of Rain Water Harvesting.
- 10.2 **District level Advisory Committee** will monitor the implementation of Rain Water Harvesting at district level. The Committee shall comprise of representatives from all the concerned Government Departments involved in urban water management like Lake Development Authority, Central Ground Water Board, Mines and Geology Department, Town Planning Department and NGOs (working in water conservation), Academic institutions and field experts. This committee shall be chaired by the concerned Deputy Commissioner of the district. The committee shall be responsible to prepare, implement and monitor

the town / city wise RWH Action Plans. The Committee shall meet regularly at least once in three months to review the status of implementation.

10.3 Roles and responsibilities of the committees

10.3.1 State Level Advisory Committee - Frame the State Policy, prepare Technical Guidelines, Manuals and monitor the overall implementation of RWH.

10.3.2 Technical Cell - Provide the necessary technical inputs for the installation of Rain water harvesting current practices, drawings, legislations, etc

10.3.3 District Rain Water Harvesting Committee - Formulation and implementation of RWH Action plans.

10.3.4 Agencies/NGOS - provide the necessary technical inputs to the District Committees and ULBs for implementation of RWH Action Plans.

10.3.5 Physical verification of structures would be carried out before the onset of monsoon each year. Penalty shall be charged if not properly maintained.

11. Prohibition on digging of new tube wells/bore wells. Proper enforcement of such prohibition is required to be monitored at higher level and permission may only be given in exceptional circumstances.

11.1 Power of Municipalities to use any discarded or dead tube well as recharge pit or percolation pit. The municipality may provide or cause to be used any discarded or dead tube well for use as percolation pit for any locality or for use as community Rain water harvesting system.

11.2 The department will prepare a list of all government buildings, which do not have rain water harvesting facilities. Such buildings will be served notices and they will be directed to implement the new structural designs at the earliest.

12. Incentives and disincentives mechanism shall be designed to facilitate the implementation of Rain Water Harvesting like rebate/fine in property tax etc.

13. Responsibility of the household- It shall be ensured by every household responsible for construction of Rain Water Harvesting structure that in no case polluted or waste water is let into the recharge pit as it will lead to pollution of the ground water.

14. Penalty:

14.1 Any person found violating clause no. 13 shall be punishable as per section 340 of the Jharkhand Municipal Act 2011.

14.2 Occupancy certificates will not be issued to the owners of the buildings unless they produce satisfactory proof of compliance of installation of rain water harvesting.

14.3 The Authority shall impose fine for the failure of the owner/builders of any building to install or to maintain Rain Water Harvesting structures depending on the residential area.

14.4 The state government may levy incremental penalty on erring property owners/builder. The rain water harvesting unit is must in houses built on sites of 300sq.mt or more. The rule applies to properties built in the year 2010 or earlier. The penalty for the first three months is 25% of the water bill. From the

fourth month the penalty becomes 50% of the water bill, which after six months becomes equivalent to water bill.

15. Power of the State Government

- 15.1 Notwithstanding anything contained in the foregoing paragraphs of the **Jharkhand Rainwater Harvesting Regulation-2017** the State Government by issuance of notification in the official gazette may amend or withdraw any of the provisions and / or the schemes mentioned herein above.
- 15.2 **Interpretation** - Should any doubt arise as to the interpretation of any of the provisions of these Rules, the matter shall be referred to the Urban Development and Housing Department, whose decision thereon shall be final.

By the order of the Governor of Jharkhand,

(Arun Kumar Singh)
(Arun Kumar Singh)

Principal Secretary to Government

Urban Development and Housing Department

Memo No. File no. -06/TC PO/Vividh-05/2016/ नं.वि. 644 Ranchi, Dated 23/01/17

Copy to : Copy forwarded to the Superintendent, Government Press, Jharkhand, Ranchi for publication in the forthcoming issue of Government Gazette/Nodal officer, E-Gazette, Urban Development and Housing Department, Government of Jharkhand for information and necessary action.

(Arun Kumar Singh)
Principal Secretary to Government,

Memo No File no. -06/TC PO/Vividh-05/2016/ नं.वि. 644 Ranchi, Dated 23/01/17

Copy to : P.S to Minister, Urban Development and Housing Department/ All Additional Chief Secretary/ Principal Secretary/Secretary, Govt of Jharkhand/All Divisional Commissioners, Jharkhand/Director, SUDA / Director DMA/Town Planner, Town Planning Organization/ All Deputy Commissioners, Jharkhand / All Officers, UD&HD/ Municipal Commissioners/ Executive Officers/ Special Officers, urban local bodies for information and necessary action.

(Arun Kumar Singh)
Principal Secretary to Government

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ANNEXURE - 2

**Government of Jharkhand
Urban Development & Housing Department**

RESOLUTION

No.- SUDA/AMRUT/Wastewater Policy/38/2017/2899..... Ranchi, Dated 27/4/17

Subject:- Jharkhand Waste Water policy, 2017

1. BACKGROUND

Water recycling is reusing treated wastewater for beneficial purposes such as agricultural and landscape irrigation, industrial processes, toilet flushing, and replenishing a ground water basin (referred to as ground water recharge). Water recycling offers resource and financial savings. Wastewater treatment can be tailored to meet the water quality requirements of a planned reuse. Recycled water for landscape irrigation requires less treatment than recycled water for drinking water. A common type of recycled water is water that has been reclaimed from municipal wastewater, or sewage. The term water recycling is generally used synonymously with water reclamation and water reuse. Gray water is reusable wastewater from residential, commercial and industrial bathroom sinks, bath tub shower drains, and clothes washing equipment drains. Gray water is reused onsite, typically for landscape irrigation.

Through the natural water cycle, the earth has recycled and reused water for millions of years. Water recycling, though, generally refers to projects that use technology to speed up these natural processes. Water recycling is often characterized as "unplanned" or "planned."

2. WHY WATER RECYCLING

Recycled water can satisfy most water demands, as long as it is adequately treated to ensure water quality appropriate for the use. Recycled water can satisfy most water demands, as long as it is adequately treated to ensure water quality appropriate for the use.

2.1 Uses for Recycled Water

- 2.1.1 Landscaping
- 2.1.2 Public parks
- 2.1.3 Cooling water for power plants and oil refineries
- 2.1.4 Processing water for mills, plants
- 2.1.5 Toilet flushing
- 2.1.6 Dust control
- 2.1.7 Construction activities
- 2.1.8 Concrete mixing
- 2.1.9 Artificial lakes
- 2.1.10 Car, Cloth & floor washing
- 2.1.11 Garden and irrigation using a hose spray or drip irrigation.
- 2.1.12 Construction.

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2.1.13 Artificial lakes

Although most water recycling projects have been developed to meet nonpotable water demands, a number of projects use recycled water indirectly for potable purposes. These projects include recharging ground water aquifers and augmenting surface water reservoirs with recycled water. In ground water recharge projects, recycled water can be spread or injected into ground water aquifers to augment ground water supplies, and to prevent salt water intrusion.

2.2 What are the Environmental Benefits of Water Recycling?

In addition to providing a dependable, locally-controlled water supply, water recycling provides tremendous environmental benefits. By providing an additional source of water, water recycling can help us find ways to decrease the diversion of water from sensitive ecosystems. Other benefits include decreasing wastewater discharges and reducing and preventing pollution. Recycled water can also be used to create or enhance wetlands and riparian habitats.

2.3 Recycling Water Can Save Energy

As the demand for water grows, more water is extracted, treated, and transported sometimes over great distances which can require a lot of energy. If the local source of water is ground water, the level of ground water becomes lower as more water is removed and this increases the energy required to pump the water to the surface. Recycling water on site or nearby reduces the energy needed to move water longer distances or pump water from deep within an aquifer. Tailoring water quality to a specific water use also reduces the energy needed to treat water. The water quality required to flush a toilet is less stringent than the water quality needed for drinking water and requires less energy to achieve. Using recycled water that is of lower quality for uses that don't require high quality water saves energy and money by reducing treatment requirements.

3. TITLE

This policy shall be called as **Jharkhand Waste Water Policy, 2017**

4. VISION

"All Jharkhand cities and towns achieve the water recycling capability from STPs, household, commercial and industrial areas in a sustainable manner and reduce the fresh water demand to a sizeable extent".

5. GOAL

Jharkhand Waste Water Policy, 2017 is to ensure increase use of recycled water for other purposes apart from drinking, through the provision of appropriate technologies for water recycling and protection of environment.

The policy specifically endorses the following core principles:

5.1 To protect the environment and the State's water resources.

5.2 To promote proper functioning of network based sewerage systems and ensure connections of household so as to prevent dry weather flow in drains & streets.

- 5.3 Treatment of sewage, sludge and grey water and recycle it for other uses.
- 5.4 Promoting recycle & reuse of household, commercial and industrial grey water
- 5.5 To make waste water project economical and environmentally sustainable.
- 5.6 Inclusive and participatory decision making in waste water recycling.
- 5.7 Transparent decision making processes to achieve socio-environmental as well as economic financial objectives.
- 5.8 Capacity building for enhanced institutional ability to govern the sector effectively.
- 5.9 Ensuring, protecting and optimizing investments.
- 5.10 Public Private Partnership (PPP) in the most appropriate manner.
- 5.11 Public outreach for environmental and health related outcomes.
- 5.12 Establishment of an efficient, effective, affordable and accountable system for managing the water recycling from urban sewerage and septage management

6. OBJECTIVES

To overcome the shortage of water by recycling it and putting them for different purpose, so that the use of potable water should mostly be for drinking purposes. The re-use of water in a sizeable quantity up to a certain quality after proper treatment of water for non-drinking purpose and last but not the least scientifically disposal of the remaining waste is the object behind formulating this policy.

- 6.1 To ensure 100 percent wastewater recycling in cities/towns
- 6.2 To improve waste water supply service focusing on customer satisfaction, coverage, frequency and reliability
- 6.3 Supply of potable water that incurs large amount of money to be reduced and waste water to be used in non-drinking purposes.
- 6.4 Promoting and augmenting wastewater reuse for ensuring environmental sustainability by reducing burden on already stressed basin and aquifers and preventing their depletion.
- 6.5 Promoting wastewater reuse from sewage discharge leading to reduction in environmental costs and health hazards.
- 6.6 Wastewater reuse by ensuring resource conservation & preservation of sensitive ecosystem and reducing pollutant loading.

All cities and towns of Jharkhand become totally sanitized, healthy and liveable and ensure sustain good public health and environmental outcomes for all their citizens with a special focus on hygienic and affordable sewerage facilities for the urban poor and women. All urban dwellers will have access to and use safe and hygienic sewerage or sludge facilities and arrangements.

7. COMPOSITION OF GREYWATER

- 7.1 Greywater from Bathroom

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Water used in hand washing and bathing generates around 50-60% of total greywater and is considered to be the least contaminated type of greywater. Common chemical contaminants include soap, shampoo, hair dye, toothpaste and cleaning products.

7.2 Greywater from Cloth Washing Water

It is used in cloth washing generates around 25 - 35% of total greywater. Wastewater from the cloth washing varies in quality from wash water to rinse water to second rinse water. Greywater generated due to cloth washing can have faecal contamination with the associated pathogens and parasites such as bacteria.

7.3 Greywater from Kitchen

Kitchen greywater contributes about 10% of the total greywater volume. It is contaminated with food particles, oils, fats and other wastes. It readily promotes and supports the growth of microorganisms. Kitchen greywater also contains chemical pollutants such as detergents and cleaning agents which are alkaline in nature and contain various chemicals. Therefore kitchen wastewater may not be well suited for reuse in all types of greywater systems.

8. LEGISLATION AND GUIDANCE DOCUMENTS

The Waste water Policy should be read in accordance with the most current versions of the following: Legislation and document

- 8.1 Environmental (Protection) Act, 1986
- 8.2 The Environment (Protection) rules, 1986
- 8.3 The water (Prevention and Control of Pollution) Act, 1974
- 8.4 The water (Prevention and Control of Pollution) cess, Act, 1974
- 8.5 The water (Prevention and Control of Pollution) Amended rules, 2011
- 8.6 The water (Prevention and Control of Pollution) Cess rules, 1978
- 8.7 The water (Prevention and Control of Pollution) Rules, 1975
- 8.8 National Urban sanitation Policy 2008
- 8.9 National Water Policy 2012
- 8.10 Quality standards suggested by Central Pollution Control Board and Jharkhand State Pollution Control Board.
- 8.11 Standards set by Bureau of Indian Standards (BIS)

9. WHAT NEEDS TO BE DONE

- 9.1 A Separate System: STPs water reuse and grey water reuse to encourage.
- 9.2 Water reclamation centers to reclaim water after treatment of domestic sewage and greywater.
- 9.3 Where water Reclamation centers are situated in the midst of residential area, these can be built under ground to avoid the problem odour and parks can be maintained on the roof of treatment facility.

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- 9.4 One of the Scheme of treatment may be Grit chamber, Primary sedimentation tank, Reaction Tank, Secondary sedimentation tank, Chlorination Tank followed by sand filtration.
- 9.5 Reverse osmosis filtration may be used for tertiary treatment.
- 9.6 100% households, commercial area and industrial area to be covered for wastewater recycling
- 9.7 Sewerage and water supply activity should be coordinated.
- 9.8 Water tariff should be such as to discourage the people from wasteful use of water.
- 9.9 Provision of adequate wastewater collection and treatment facilities for all the cities and towns in Jharkhand.
- 9.10 Protection of the environment and public health in the areas affected by the proposed systems, especially, surface water and ground water.
- 9.11 Consideration of treated effluents as a source for reuse (irrigation/ industrial).

10. THE POLICY

10.1 On Resource Development

Wastewater is a perennial water source and shall form an integral part of renewable water resources and the State water budget. Each local body will consider it as a resource and make the plan for reuse as per the site conditions with the help of experts. All local bodies will make city wastewater reuse plan (CWP) for a period of 20 years considering future development and city development in line with city Master plan to avoid any conflicts in developing the city in the future.

Existing levels of wastewater services shall be maintained and upgraded where necessary to enhance public health and the environment and separate plan is to be prepared by local body as per their requirement. Treatment of wastewater shall be targeted towards producing an effluent fit for reuse in irrigation in accordance with WHO guidelines as a minimum. Reuse of treated wastewater in other purposes shall be subject to appropriate specifications. Coordination shall be maintained with the official bodies in charge of urban development to account for the treatment and disposal of their liquid wastes. Central treatment plants shall be built to serve semi-urban areas, and collection of wastewater can be made initially through trucking until collection systems are justified. Specifications and minimum standards as stipulated by CPHEEO shall be applicable for the use of septic tanks in urban areas. Particular attention shall be paid to the protection of underlying aquifers.

10.2 On Resource Management

It is highly imperative that Urban Local Body shall develop and manage wastewater systems as well as the treatment and reuse of the effluent.

A basin management approach shall be adopted where possible. The use of treated wastewater from sewerage, households, commercial and from industrial application shall be given the highest priority and shall be pursued with care. Effluent quality standards shall be defined based on the best attainable treatment technologies, and calibrated to support or improve ambient receiving conditions, and to meet public health standards for end users. Key factors will include the location of the discharge, its

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proximity to wells, the type of receiving water, and the nature and extent of end uses. Industries shall be encouraged to recycle part of its wastewater and to treat the remainder to meet standards set for ultimate wastewater reuse or to meet the regulations set for its disposal through the collection systems and/or into the receiving environment. Wastewater from industries with significant pollution should be treated separately to standards allowing its reuse for purposes identified by the city or to allow its safe disposal or water recharging. Consideration shall be given to isolating treated wastewater from surface and ground waters used for drinking purposes, and to the blending of treated effluent with relatively fresher water for suitable reuse. Urban Local Bodies can engage Experts from Government Engineering Colleges of Jharkhand NITs/Engineering colleges.

10.3 On Wastewater Collection and Treatment

10.3.1 City Plan : A proper and updated city plan is an essential pre-requisite for proper planning and design of all utilities and more so for the Sewerage Systems and water recycled from houses. The State shall endeavor to have proper digital city maps showing the levels prepared through modern available technology. The digital city maps should clearly show the city feature over ground and underground including all utilities. Geographical Information System (GIS), Ground Penetrating Radar (GPR), Total station etc. tools may be used for preparation of city map. The city maps should be updated for every 5 years. An effective and comprehensive GIS based data base and Management Information System correctly mapping the assets, user base and status of operations shall be established.

10.3.2 Design Period: Every city has to prepare a City Wastewater Recycling Plan (CWP) for next 20 years along with 5 year short term plan. The CWP for the city should take into account the likely changes in the city in next 20 years and plan for them and will be according to city Master plan. The Detailed Project Report (DPR) for recycling should be in accordance to CWP. The design of the sewers and planning of space should be for the 30 year projection requirements and for recycling from households and commercial establishments. However, the units which can be developed in modules (e.g. Sewage Treatment Facility, sewerage Pumping machinery, on site treatment facilities, etc.) can be designed for appropriate shorter period. Earmark of land for Sewage Pumping Station (SPS) and Sewage Treatment Plant (STP) should be done for all Urban Local Bodies (ULBs) and appropriate land allotment shall be done by Development Authority/Urban Improvement Trust/State Govt. on priority.

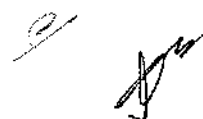
10.4 On Reuse of Treated Effluent and Sludge

10.4.1 Treated wastewater effluent is considered a water resource and is added to the water stock for reuse.

10.4.2 Blending of treated wastewater with fresh water shall be made to improve quality where possible.

10.4.3 Crop nutrient requirements shall be determined taking into consideration the prevailing effluent quality. Overuse of nutrients shall be avoided.

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- 10.4.4 Accumulation of heavy metals and salinity shall be monitored, managed and mitigated. Leaching of soils shall be advocated by the irrigation authorities.
- 10.4.5 Treated effluent quality should be monitored and users alerted to any emergency causing deterioration of the quality so that they will not use such water unless corrective measures are taken.
- 10.4.6 Studies should be conducted and projects designed and implemented to store the excess treated wastewater in surface reservoirs but artificial recharge is not permitted. Due attention shall be given to the quality of treated and groundwater and the characteristics of the strata.

10.5 Industry:

Industrial reuse of reclaimed wastewater represents major reuse next only to irrigation in both developed and developing countries. Reclaimed wastewater is ideal for many industrial purposes. Where effluent is to be used in the industrial processes, it should be the responsibility of the industry to treat it to the quality standards required. Wastewater is to achieve adequate quality for reuse as cooling water.

The membrane filtration system can remove all suspended solids, faecal coliforms, and giardia cysts. It could also significantly reduce human enteric viruses such as reovirus and enterovirus.

10.6 Industrial uses for reclaimed water include:

10.6.1 Evaporative cooling water:

- 10.6.1.1 once-Through cooling system

- 10.6.1.2 Re-circulating cooling system

- 10.6.1.3 cooling water quality requirements

10.6.2 Boiler -Feed water- The use of reclaimed water differs little from use of conventional public supplies for boiler-feed water, as both require extensive additional treatment. Quality requirements for boiler feed make up water are dependent upon pressure at which boiler is operated.

10.6.3 Industrial process water- Suitability of reclaimed water for use in industrial process depends upon particular use like-

- 10.6.3.1 Pulp and paper

- 10.6.3.2 chemical industry

- 10.6.3.3 Textile industry

- 10.6.3.4 Petroleum and coal

10.7 Re-use Options:

The following options or re-use of effluent have been identified: In general, public health concern is the major issue in any type of reuse of wastewater, be it for irrigation or non-irrigation utilization, especially long term impact of reuse practices. It is difficult

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to delineate acceptable health risks and is a matter that is still hotly debated. Potential reuse of wastewater depends on the hydraulic and biochemical characteristics of wastewater, which determine the methods and degree of treatment required. While agricultural irrigation reuses, in general, require lower quality levels of treatment, domestic reuse options (direct or indirect potable and non-potable) reuses need the highest treatment level. Level of treatment for other reuse options lie between these two extremes. The reuse options may be (artificial recharge of aquifers is not permitted):

10.7.1 Irrigation

10.7.1.1 Agriculture and forestry

10.7.1.2 Landscaping

10.7.2 Fish - farming

10.7.3 Industry

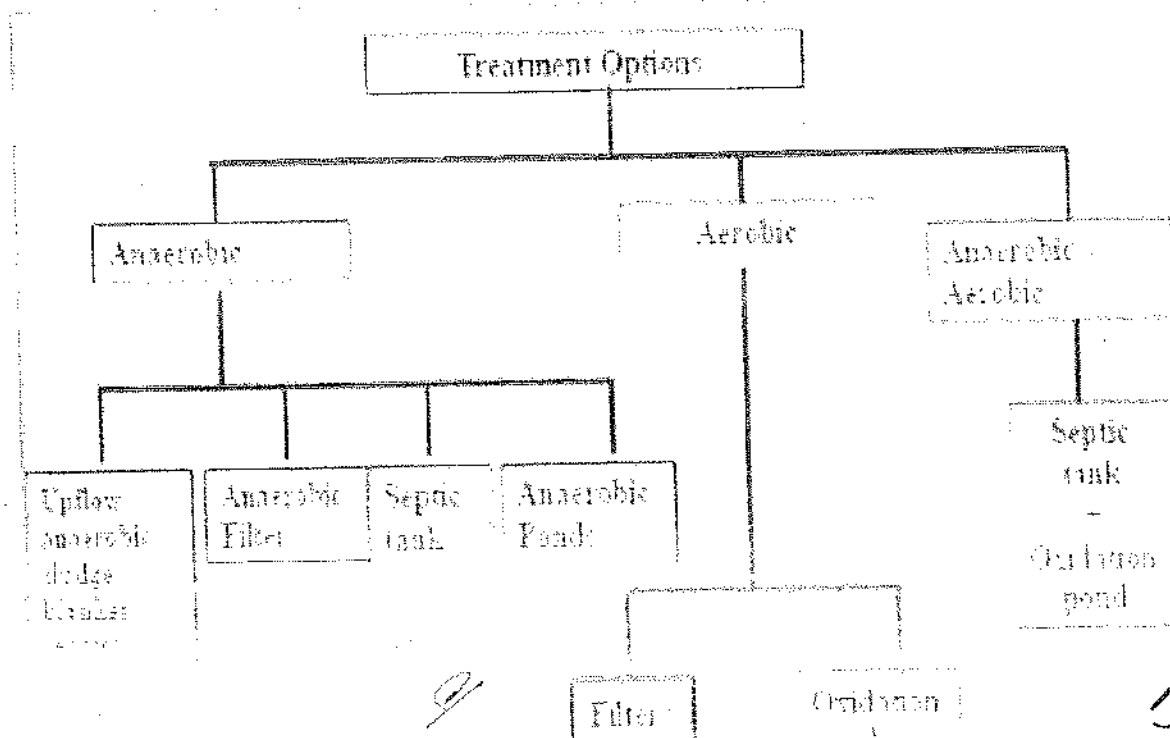
10.7.4 Non-potable Domestic Reuse:

The detailed project report should clearly define the best reuse option particular to town and strategy to obtain it. Action plan with clarity should be the part of Detailed Project Report (DPR), while preparing sewerage Projects. Before deciding the reuse of treated waste water authority must full fill the water quality norms and its legal implications.

Governing local body can sell the treated waste water and digested sludge to generate the revenue.

11. GREYWATER TREATMENT OPTIONS

Greywaterreuse methods can range from low cost methods such as the manual bucketing of greywater from theoutlet of bathroom, to primary treatment methods thatcoarsely screen oils, greases and solids from the greywater before other uses, to more expensive secondary treatment systems that treat and disinfect the greywater to a high standard before using it further. The choice of system will depend on a number of factors including whether a new



system is being installed or a disused wastewater system is being converted because the household is connected to sewer.

11.1 Components of Greywater Treatment Systems

A number of technologies have been applied for greywater treatment worldwide varying in both complexity and performance. The following in general greywater systems considered :-

11.1.1 Primary treatment pre-treatment to secondary treatment:

11.1.1.1 Screening

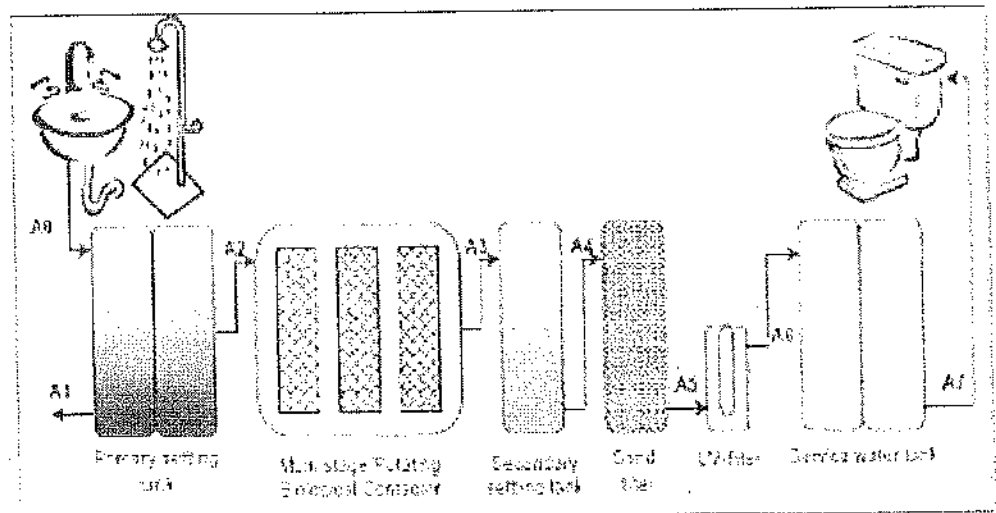
11.1.1.2 Equalization

11.1.2 Secondary treatment -I

11.1.2.1 Gravel filtration

11.1.2.2 Sand filtration

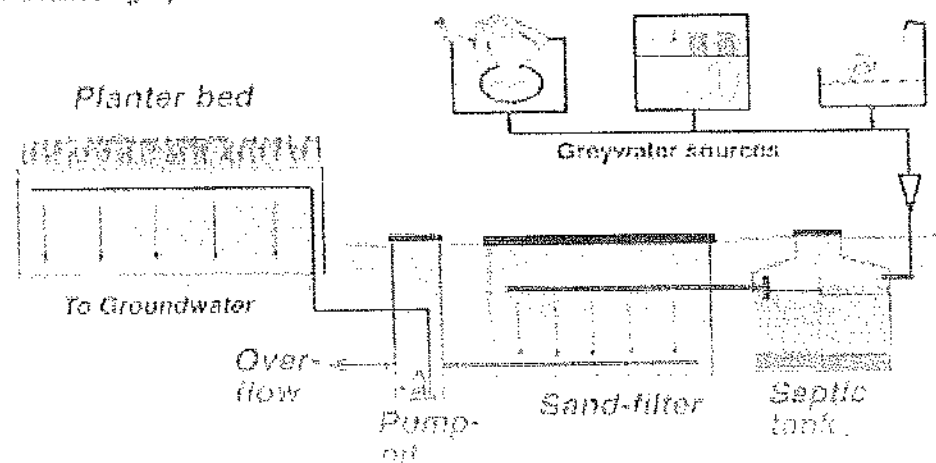
11.1.2.3 Chlorination



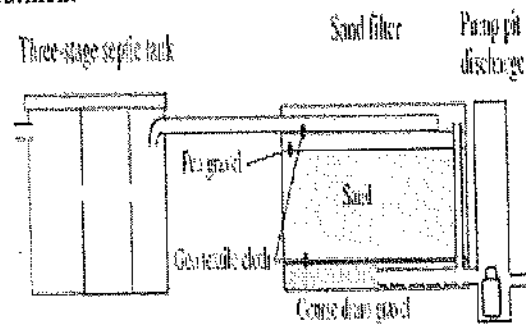
11.1.3 Secondary treatment -II.

Broken brick, Charcoal, Chlorination, Treated greywater

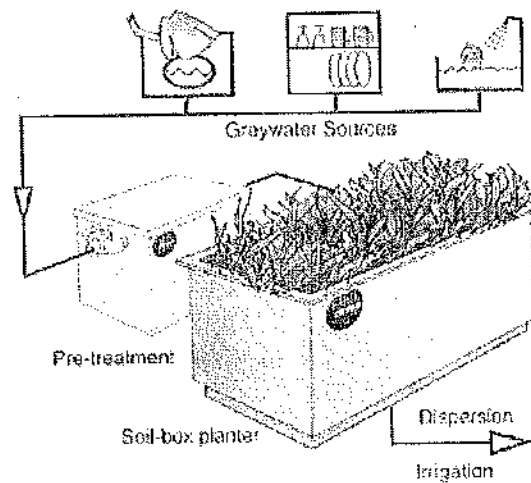
Advanced greywater treatment



Anaerobic to aerobic treatment



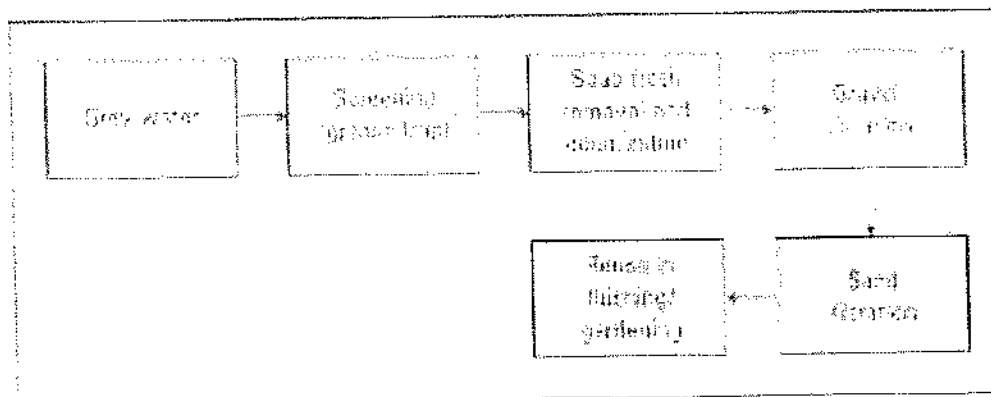
Aerobic Pre-treatment -- suitable for showers, hand-washing and laundry* water treatment.



11.2 Household level Greywater Treatment and Reuse System

In water scarce areas, with specific treatment the greywater can be cleaned and reused not only for gardening but for other use also.

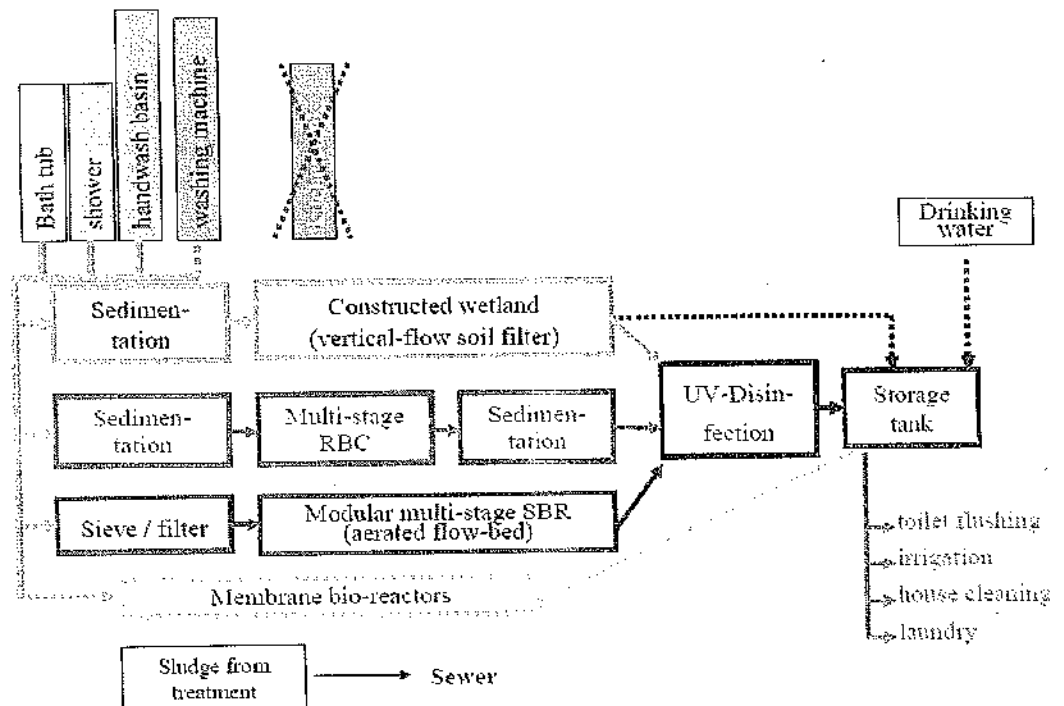
Technological process Greywater treatment process at the household level mainly involves screening (grease and silt removal), soap froth removal, equalization and filtration. Flow diagram of household based greywater treatment system is shown below



Greywater treatment for reuse in household

Advantages:

- 11.2.1 Reduces fresh water requirement
- 11.2.2 Prevents greywater stagnation
- 11.2.3 Prevents vector breeding
- 11.2.4 Use in flushing toilets to make toilets functional
- 11.2.5 Use of greywater in gardening
- 11.2.6 Minimal risk to users of greywater as it incorporates principles of water safety.



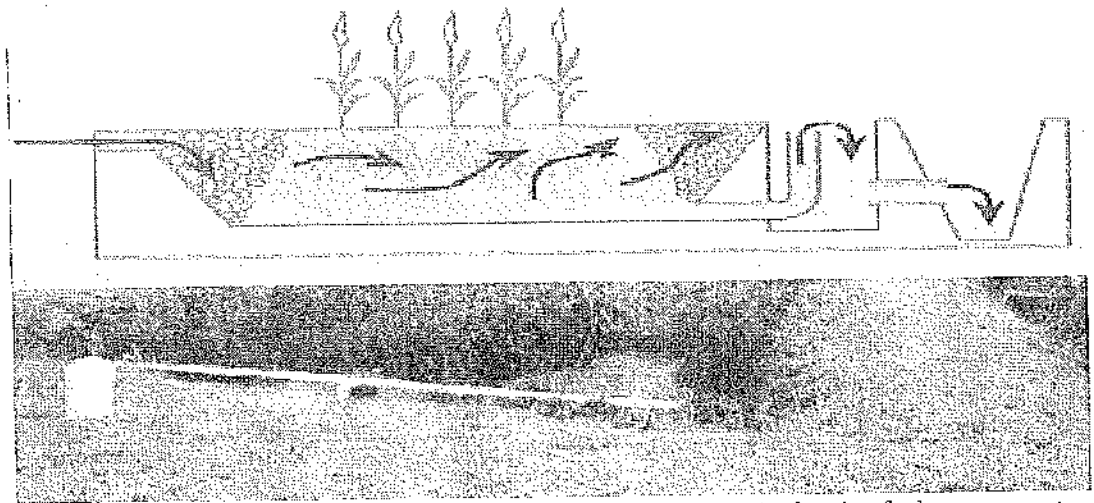
11.3 Constructed wetlands:

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Constructed wetlands have been used successfully in the past for the treatment of wastewaters. Physical, chemical, and biological processes combine in wetlands to remove contaminants from wastewater. Greywater treatment is achieved by soil



filtration in reed-bed systems which reduces the organic load of the greywater considerably, in addition to decreasing the concentrations of faecal bacteria. If properly designed, these systems would produce a clear and odourless effluent, which can be stored for several days without the need for disinfection.

12. ON PRICING FINANCING AND INVESTMENT

- 12.1 In view of increasing marginal cost of wastewater collection and treatment, wastewater charges, connection fees, sewerage taxes and treatment fees shall be set to cover at least the operation and maintenance costs. It is also highly desirable that part of the capital cost of the services shall be recovered. The ultimate aim is for a full cost recovery.
- 12.2 Appropriate criteria in order to apply the "polluter pays" principle shall be established.
- 12.3 Different charges for different areas may be applied. This shall be assessed for each geographical area as a function of end uses and effluent quality and will be subject to economic and social considerations.
- 12.4 Because of the limited financial resources available to Government of Jharkhand, setting investment priorities in wastewater will be compatible with government investment plans.
- 12.5 Criteria for prioritizing investments in the wastewater sector shall take into account the current and future needs of the state, needs to expand wastewater systems in urban areas and to provide wastewater systems to smaller towns and villages.
- 12.6 Priorities of wastewater projects shall not be disconnected from water supply projects and urbanization in general. Decisions will be made concerning them to attain optimum solutions to the need for services, availability of finance and availability of trained manpower.
- 12.7 Treated effluent shall be priced and sold to end users at a price covering at least the operation and maintenance costs of delivery.

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- 12.8 It is the intention of the Government, through private sector participation, to transfer management of infrastructure and services from the public to the private sector, in order to improve performance and upgrade the level of service.
- 12.9 The role of the private sector will expand with management contracts, concessions and other forms of private sector participation in wastewater management.
- 12.10 The concepts of Built Operate Own/Built Operate Transfer shall be entertained, and the impact of such concepts on the consumers shall be continually addressed and negative impacts mitigated.
- 12.11 The private sector role in reuse of treated effluent shall be encouraged and expanded.
- 12.11.1 The costs will depend on the system/technology adopted for collection of sewerage and treatment and the administration costs. It is important that the full cost of the service is assessed for each urban area instead of adopting a typical cost assessment. The full cost shall cover the following:
- 12.11.1.1 Institutional aspect of the sanitation service e.g. the management information systems, accountancy and finance management, billing and collection, customer services, etc. and oversight activities.
- 12.11.1.2 Operating, maintaining (on a planned maintenance basis), repairing replacing and extending sanitation service physical infrastructure.
- 12.11.1.3 Keeping updated infrastructure and customer data on a GIS base.
- 12.11.1.4 Managers, staff, vehicles, equipment and consumables associated with above.
- 12.11.1.5 Consumable like chemicals etc.
- 12.11.1.6 Power charges.
- 12.11.1.7 Spare Parts.
- 12.11.1.8 Any other O&M contract amount
- 12.11.2 The urban local bodies are proposed to have following sources funds for O&M :-
- 12.11.2.1 The O&M cost will be met from the Government grants and contribution of the beneficiaries.
- 12.11.2.2 Revenue from sale of treated waste water.

The government in town policy shall include the provision of the recovery of full capital cost of lying sewerage system and prorate cost of STP for new colonies. It shall be mandatory for the ULBs to adhere to minimum 20% reuse and recycling of treated waste water. The treated waste water may be sold at a rate as decided by adopting transparent procedure as decided by State Government.

- 12.12 Public Private Partnership (PPP)/Engineering Procure Construct (EPC) and Operational & Maintenance (O&M) Contract

As there is budget constraint from the Central and the state side the option of the Sewerage Project through Public Private Partnership (PPP) will be explored. In case the PPP mechanism is not workable then the EPC mechanism will be explored and long term O&M Contract will be done.

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13. ON STANDARDS, REGULATIONS AND QUALITY ASSURANCE

- 13.1 Particular attention shall be focused on adopting and enforcing effluent and sludge standards for municipal and industrial wastewater treatment plants and for discharges from industries, laboratories, hospitals, slaughterhouses and other businesses.
- 13.2 Extensive and comprehensive monitoring programs shall be developed. Influent to and effluent from the plants and throughout watercourses shall be measured and monitored against all appropriate parameters to ensure that public health objectives and treatment efficiency goals are attained.
- 13.3 Observation wells shall be installed near the treatment plants to monitor groundwater quality where necessary, and to mitigate adverse impacts where and when needed.
- 13.4 Data collected from the monitoring process shall be entered and stored, processed and analyzed through computer software, and results published periodically.
- 13.5 Roof and storm water connections to public sewers shall be prohibited. Collection of storm water shall be done separately and will be the subject of water harvesting.
- 13.6 Effluent and sludge standards for the disposal of hazardous liquid wastes shall be defined to ensure the safe disposal of such wastes.
- 13.7 State Pollution Control Board/ Central Pollution Control Board regulations for disposal norms shall be mandatory.
- 13.8 Industrial waste water is not allowed to be disposed off in the sewer line. ULB can issue notification for penalties to be imposed on the such industrial units.
- 13.9 Laboratories shall be maintained and properly equipped to provide services and reliable data needed to ensure enforcement of and adherence to standards and regulations.

14. ON LEGISLATION AND INSTITUTIONAL ARRANGEMENTS

- 14.1 Legislation and institutional arrangements for the development and management of wastewater shall be periodically reviewed. Gaps shall be filled, and updating of the institutional arrangements with parallel legislation shall be made periodically to cope with varying circumstances and for this government shall notify an agency giving full power to take necessary action in this matter.
- 14.2 The role of the Government shall be fine-tuned and its involvement reduced to be regulatory and supervisory. Involvement of the stakeholders in wastewater management and support shall be introduced and expanded.
- 14.3 On Public Awareness
 - 14.3.1 The public shall be educated through various means about the risks associated with the exposure to untreated wastewater and the value of treated effluents for the different end uses.
 - 14.3.2 Programs on public awareness shall be designed and conducted to promote the reuse of treated wastewater.
 - 14.3.3 Public awareness campaigns shall also be waged to educate the public on the importance of domestic hygiene, wastewater collection, treatment and disposal.

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- 14.3.4 It is observed that the system is dependent on the appreciation of the beneficiaries to the advantages and importance of the system to them and thereby working together towards making it successful. The co-operation is vital for following areas:
- 14.3.4.1 Protecting the system from getting choked due to entry of extraneous material in the sewer system. A vigilant public will help prevent this.
 - 14.3.4.2 The sewerage system yield full benefits or disease protection when there is 100% connectivity.
 - 14.3.4.3 It is important that the beneficiaries appreciate the benefits and pay for their upkeep. The systems require proper upkeep and the cost associated with maintenance and upkeep should at least be recovered from the beneficiaries. The principal of the polluter pays will be adopted only by an enlightened and participating public.
- 14.3.5 A conscious campaign has to precede the planning and implementation of the sewerage Systems. ULB, Non Government Organizations and local neighborhood committees could give the process a thrust.
- 14.3.6 A public participation process will not only aid in identifying potential consumers but also serve as a public education program. Potential users will be mainly concerned with the quality of reclaimed water and reliability of its delivery and the constraints in using reclaimed water. Also, connection costs or additional sewerage treatment cost might affect their ability to use the product. Consultations with various stake holders will aid in structuring of tariff and discounts for adopting reuse technologies, awareness on dual piping system, water conservation and safety issues.
- 14.3.7 Municipal Bodies should decide and pass resolution regarding sewer connection charges. The provision should be widely publicized
- 14.3.8 Series of 'Sewer connection camps' may be organized. The time and venue should be publicized widely to inform residents. The days, time and venue should be to suit the convenience of public.
- 14.3.9 Ensure that all Government offices and schools are connected.
- 14.4 On the Human Resources Development & On Research and Development:
- 14.4.1 Capabilities of human resources in the management of wastewater shall be enhanced through training and continuous education. Work environment shall be improved and incentives provided.
 - 14.4.2 Establishment of State Water & Waste water Training Center at state level. It will help in training of human resources in this sector.
 - 14.4.3 Human resources performance will be continually appraised in order to upgrade capabilities, sustain excellence and provide job security and incentives to qualified individuals with excellent performance.
 - 14.4.4 Applied research on relevant wastewater management topics shall be adopted and promoted. Topics such as the transfer of wastewater treatment technologies, low cost wastewater treatment technologies, reduction of energy consumption and others will receive adequate support.

14.4.5 Cooperation with specialized centers in the country and abroad shall be advanced, and raising of funds for this purpose shall be supported.

14.4.6 Transfer of appropriate technology suited for local conditions will be a primary target for the development activities and for adaptive research.

14.5 On Selected Priority Issues

14.5.1 To the extent that design capacities of wastewater treatment plants permit, priority of collection and house connections shall be accorded to expansion of urban areas served by treatment facilities. Users willing to contribute to the cost of the services in addition to fees and charges set by laws and regulations shall also be given priority.

14.5.2 Where design capacities of treatment facilities and of conveyance systems are approached or exceeded, priority shall be given to the expansion of such capacities.

14.5.3 Priority shall be accorded to situations and locations where waste-water disposal practices threaten the environmental integrity of freshwater resources, and where performance of cesspools and percolation pits pollute underground water aquifers.

More awareness campaigns will help to spread the work. The civic body should make it mandatory for new constructions to have a separate system to collect grey water.

15. OPERATION AND MAINTENANCE

There are several important factors that need to be considered when planning wastewater plants and options which will have a direct impact on O&M and monitoring. Since O&M aspects are important for the overall long-term success of the programme, O&M planning, including the financial provision of funds, should be included in the terms of references for the design of each plant. Furthermore, the O&M plan should be reviewed and approved along with engineering designs and specifications, including the operation and maintenance cost:

15.1 location of the wastewater treatment plants and its proximity to residential areas;

15.2 volumes and schedules of wastewater collection;

15.3 degree of mechanisation of technologies; and

15.4 final end use or disposal of reuse

15.5 running it on PPP mechanism and charging the different users

16. STATE-LEVEL IMPLEMENTATION STRATEGY

16.1 State Urban Development Agency will develop and issue a Wastewater Implementation Strategy and Plan Guidelines. These Guidelines will provide an overall state-level framework, objectives, *timelines and implementation plans to the ULBs. The Implementation Strategy will cover* aspects such as implementation targets, framework for engagement of the private sector, training and capacity building, behavior change and social communication, M&E framework, specific roles and responsibilities of various entities, guidelines to develop ULB-level plans, and funding mechanisms.

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16.2 ULB-specific Wastewater Strategy and Action Plan conforming to the State Policy will be developed by each ULB based on the State Faecal Sludge & Septage Management Implementation Strategy and Plan Guidelines.

16.3 How the policy will be executed in the in the cities/towns. Three phase approach will be designed to implement the policy.

16.3.1 In the financial year 2017-18 it will be implemented in all the notified Nagar Nigam.

16.3.2 In the financial year 2018-19 it will be implemented in all the notified Nagar Parisad.

16.3.3 In the financial year 2019-20 it will be implemented in in all the notified Nagar Panchayat.

All efforts will be done to follow the execution method outlined above for the cities towns, however, depending upon the centre/state programme and budget availability the cities/towns might be chosen from any category in any financial year. Due to environmental factors the cities/towns may also be chosen out of these to implement the plan.

17. MONITORING & EVALUATION

17.1 At the state level, State Urban Development Agency (SUDA)/ Jharkhand Urban Infrastructure Development Corporation (JUIDCO) will adopt San-Benchmark framework for revised service level benchmark for sanitation that assess performance of citywide waste water recycling and sewage water treatment.

17.2 State Urban Development Agency (SUDA) / or JUIDCO will develop an M&E framework to measure cities' performance, and also devise data collection and reporting systems using indicator framework developed for San-Benchmark. This will be aligned with the 14th Finance Commission condition of publishing the service level benchmark to avail performance grant. ULBs will develop robust reporting format to track compliance of the various stakeholders with outcomes and process standards.

17.3 A cell will be created inside JUIDCO to monitor and evaluate the wastewater management operation. The cell will be created by funds from external agency funding or from the funds of 14th finance commission or through the state budget.

17.4 A Management Information System (MIS) will be developed accordingly to monitor the progress.

18. TAX INCENTIVE

The tax incentive will apply in following conditions:

18.1 All the Individual Households of RWAs will treat their waste water in a decentralised manner and reuse it inside their colonies as permissible will get a rebate of 10% in the property tax.

18.2 All the new apartments which will be constructed and compulsory treat and reuse the treated waste water in their apartment, will get a 10% rebate of 10% of the construction permit fee, or Rs. 2,00,000/- (Two lakhs) whichever is less.

18.3 All the new malls, big hotels, industries, clubs, colleges, universities, hospitals, sports stadiums etc. which will be constructed will compulsorily treat and reuse the treated water. In doing so they will get a rebate of 10 % of the construction permit fee, or Rs. 2,00,000/- (Two lakhs) whichever is less.

18.4 A separate head of the tax namely called 'Waste Water Tax' will be created which may be levied in the property tax for the operation and maintenance of the sewage.

19. POLICY EVALUATION:

19.1 Policy may be reviewed as and when required for assessing its effectiveness and making changes if necessary.

19.2 This policy shall come into force from the date of issue of this resolution.

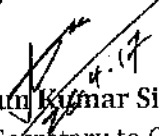
20. POWER OF THE STATE GOVERNMENT

20.1 Notwithstanding anything contained in the foregoing paragraphs of the Jharkhand WasteWater Policy, 2017 the State Government by issuance of notification in the official gazette may amend or withdraw any of the provisions and / or the schemes mentioned herein above.

20.2 Interpretation - Should any doubt arise as to the interpretation of any of the provisions of these Rules, the matter shall be referred to the Urban Development and Housing Department, whose decision thereon shall be final.

Order: It is hereby ordered that the copy of this resolution be published in the Special Gazette and wide publicity be given and circulated among all Department/ Head of the Department.

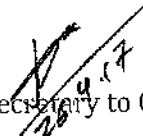
By the order of the Governor of Jharkhand,


(Arun Kumar Singh)

Principal Secretary to Government

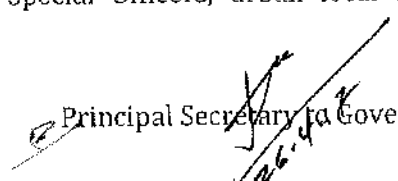
Memo No-Suda/Amrut/ WasteWater-Policy/38/2017/2899..... Ranchi, Dated 27/4/17

Copy to : Copy of the resolution forwarded to the Superintendent, Government Press, Jharkhand, Ranchi for publication in the forthcoming issue of Government Gazette/Nodal officer, E-Gazette, Urban Development and Housing Department, Government of Jharkhand for information and necessary action.


Principal Secretary to Government

Memo No-Suda/Amrut/ Waste Water-Policy/38/2017/2899..... Ranchi, Dated 27/4/17

Copy to : P.S to Minister, Urban Development and Housing Department/ All Additional Chief Secretary/ Principal Secretary/Secretary, Govt of Jharkhand/All Divisional Commissioners, Jharkhand/Director, SUDA / Director DMA/All Deputy Commissioners, Jharkhand / All Officers, UD&HD/ Municipal Commissioners/ Executive Officers/ Special Officers, urban local bodies for information and necessary action.


Principal Secretary to Government

ANNEXURE - 3

Sr. No.	Name of River	Name of ULBs	Name of Drains visited through which sewage directly discharged into the river	Approx. flow in drains (in MLD)
1	Damodar	Ramgarh Nagar Parishad	Drain near Argada village.	2
			Parsotia Nallah at Gola road Ramgarh	5
			Sahoo nallah Ramgarh	6
Total Flow				13
2	Damodar	Dhanbad Municipal Corporation	Jeetpur Nallah	30
			Jodiya Nallah	100
			Chas Nallah	15
			Domgarh Nallah	3
			ACC Jamdoba Nallah	1.5
			Sudamadih Nallah	2
			Matkuriya checkpoint Nallah (in city area ultimately discharged into Jodiya nallah)	60
			Wasseypur Nallah (in city area ultimately discharged into Jodiya nallah)	30
Total Flow				63.5 (for 4 drains)
3	Damodar	Phusro Nagar Parishad	Bermosi nallah	4
			Ghutiyatad nallah	1
			Dhorikhas nallah	2
			Joriya Pull nallah	12
Total Flow				5 (for 2 drains)

4	Garga	Chas Municipal Corporation	Drains near Gai ghat on the banks of Garga River.	3
			Drain at Medicine Gali near bridge on Garga river	2.5
			Drains at Bhojpur colony near bridge	6
			Drains at Bharra colony near bridge	2
			Drain at Bharra colony (Niche muhalla)	0.7
			Drain at Chira Chas near Pandey bridge	2
			Singar joriya nallah	12
			Total Flow	28.2
5	Subernarekha	Adityapur Municipal Corporation	JRDCL Drain	4
			Nagina Puri Drain	6
			Ram Madaiya nallah	7
			Road No. 32 Drain	7
			Saldih Drain	2
			Baba Kuti Drain	2
			Total Flow	28
6	Subernarekha	Jamshedpur NAC	Drain near Chhaya nagar bus stand (near WTP):	10
			East Plant Basti Drain	30
			510 Number Basti/ Sithgoda Drain (near CSIR-NML)	5

			Drain near old Baridih Colony	3
			Kumariya Nallah	25
			Jublie Park drain	5
			Sonari drain near Domuhani	2
			Asiana drain opposite Mandakini enclave	2
Total Flow				82
7	Subernarekha	Mango Municipal Corporation	Daiguttu Nallah	8
			Dimna Nallah	10
			Moocity Nallah	7
			Paras Nagar Nallah	6
			Gurudwara Basti Nallah	2
Total Flow				33 (for 5 nos. of drains)
8	Subernarekha	Ranchi Municipal Corporation	Drain at Tupudana Industrial area in Hatia	6
			Drain at Hatia town	1.5
			Drain at Dhurwa	4
			Drain at Patel Nagar (Ward no. 52)	8
			Drain at Hetu	6
			Ghaghra nallah	10
Total Flow				35.5

ANNEXURE - 4



THE JHARKHAND GAZETTE EXTRAORDINARY PUBLISHED BY AUTHORITY

No. 777

25 Aashwin, 1938 (S)
Ranchi, Tuesday, 17th October, 2017

Department of Forest, Environment and Climate Change

NOTIFICATION

15 September, 2017

Notification No.- 3/PrayaPradu-52/2007/3900-- Whereas, plastic carry bags cause short-term and long-term environmental damage and health hazard;

And whereas, Article 48-A of the Constitution of India, inter alia, envisages that the State shall endeavour to protect and improve the environment;

And whereas, the Government of Jharkhand is of the opinion that, the use of plastic carry bags is causing grave and irreparable injury to the environment and the health of human beings as well as animals;

And whereas, it is observed that plastic carry bags are also causing blockage of gutters, sewers and drains resulting in serious environmental problems;

And whereas, with a view to prevent the occurrence of such problems, the State Government has decided to declare the entire area of the State of Jharkhand as the "**Plastic Carry Bags Free Area**";

Now therefore, in exercise of the powers conferred under Section 5 of the Environment (Protection) Act, 1986 (No. 29 of 1986) as delegated under Section 23 of the said Act by the Central Government vide Notification No. S.O. 352 (E) New Delhi, dated 18.04.2001, the State Government, by this notification, issues the following directions for the complete Ban of manufacture, import, storage, transportation, sale and usage of Plastic Carry bags in all parts of the state; namely,

1. No industry shall manufacture plastic carry bags and no person including a shopkeeper, vendor, wholesaler or retailer, trader, hawker or rehriwala etc., shall use

plastic carry bags for supply of goods and no person shall manufacture, store, import, sell or transport plastic carry bags in the State of Jharkhand with effect from the date of final publication of this Notification.

Provided that plastic carry bags manufactured exclusively for export purposes against any export order shall be exempted in terms of Rule 2(2) of the Plastic Waste Management Rules, 2016 from the application of this notification.

Explanation :- For the purpose of this Notification the words 'plastic' and 'carry bags' shall have the same meaning as defined under the Plastic Waste Management Rules, 2016. Containers used for packaging food material, milk and milk products and raising plants in nurseries shall not be deemed as carry bags.

2. Jharkhand State Pollution Control Board shall be responsible for enforcement in respect of the functions relevant to this notification and specified in clause (1) of Rule 12 of the Plastic Waste Management Rules, 2016, whereas the Urban Local Bodies and Gram Panchayats shall be responsible for enforcement under their jurisdictions in respect of the functions relevant to this notification and specified in clause (2) and (3) respectively of Rule 12 of the said Rules.

3. Officers as mentioned in Government of India's Notification No. S.O. 394 (E) dated 16 April, 1987 issued under Section 19 of the Environment (Protection) Act, 1986 shall be authorized to file complaints in the jurisdictional court of law against violation of directions contained in this notification.

4. From the date of final publication of this Notification, Notification No. 3/Parya.Pradush.-62/2007-3691 Van Parya., dated 11 September, 2013 shall be superseded except in respect of things done or omitted to be done before such supersession, to the extent that complaint cases filed under previous the Notification are pending.

By order of the Governor of Jharkhand,

Sunil Kumar,
Deputy Secretary to the Government.

ANNEXURE - 5

SWM Status Report (Approved project)

S. No.	Name of ULB	Tender Status	Design Capacity of Plant	Processing Plant Progress Status
Existing SWM				
1	Deoghar	Work awarded	160 TPD	Completed.
2	Jhumritilaya &	Work awarded	50 TPD	Completed.
3	Koderma			
4	Chakulia	Work awarded	25 TPD	Completed.
5	Giridih	Work awarded	50 TPD	Plant Completed. (Under Trial).
Under Construction SWM				
6	Bundu	Work awarded	25 TPD	Overall progress 95%.
7	Godda	Work awarded	25 TPD	Plant Construction Overall progress 95%.
8	Khunti	Work awarded	25 TPD	Plant Construction Overall progress 69% .
9	Pakur	Work awarded	25 TPD	Plant Construction Overall progress 65%.
10	Mihijam	Work awarded	25 TPD	Plant Construction Overall progress 55%.
11	Chirkunda	Work awarded	25 TPD	Plant Construction Overall progress 46%.
12	Saraikela	Work awarded	25 TPD	Plant Construction Overall progress 29% completed & Machine Procured. On hold due to local public hindrance on land. New land identification is under process.
13	Latehar	Work awarded	15 TPD	Plant Construction Overall progress 23%. Work Stopped by ULB due to EC.
14	Madhupur	Work awarded	25 TPD	Plant Construction Overall progress 22%.
15	Garhwa	Work awarded	50 TPD	Overall 5% work completed. Stopped due to non compliance of Statutory Clearance (EC).
16	Dhanbad	Work awarded	540 TPD	Boundary wall work started.
17	Chatra	Work awarded	50 TPD	Boundary wall work started.
18	Rajmahal &	Work awarded	50 TPD	Plant construction has been started.
19	Sahebganj			
20	Ranchi	Work awarded	300 TPD (150X2)	Plant construction has been started.
Proposed SWM				
21	Chas	Work awarded	150 TPD	A new land identified and under acquisition/procurement.
22	Jamtara	Work awarded	25 TPD	Work not started due to public hindrance on land. New land identification is under process.
23	Chaibasa	Work awarded	25 TPD	Land identified and is under process of procurement.
24	CKP	Work awarded	25 TPD	Land identified and is under process of procurement.
25	Lohardaga	Under Tendering Process	60 TPD	Under tender finalization process.
26	Adityapur	Under Tender Finalization	-	
27	JNAC			
28	Mango			
29	Jugsalia			
30	Kapali			

31	Hazaribagh	Under Tender Finalization	–
32	Simdega	Under Tender Finalization	–
33	Phusro	Proposal under approval in SBM 2.0 (GOI)	Work awarded (construction not started). Approval from GOI is awaited.

SWM Status Report (DPR Stage)

S. No.	Name of ULB	DPR Status
34	Gumla	Proposal under approval in SBM 2.0 (GOI).
35	Ramgarh	Proposal under approval in SBM 2.0 (GOI).
36	Dumka	Proposal under approval in SBM 2.0 (GOI).
37	Medininagar	DPR Technically Sanctioned (TS).
38	Basukinath	DPR under TS.
39	Hussainabad	DPR under TS.
40	Manjhiaon,	DPR under Preparation.
41	Bishrampur &	
42	Bansidhar Nagar	
43	Barharwa	
44	Dhanwar	
45	Badkisariya	
46	Chhatarpur	
47	Hariharganj	
48	Domachanch	Under Re-tendering for selection of DPR Consultant.
49	Mahagama	Under Re-tendering for selection of DPR Consultant.

ANNEXURE - 6

**Govt. Of Jharkhand
Water Resources Department
Nepal House, Doranda, Ranchi**

Letter No- 226

/ Ranchi / Dated - 11.4.22

From,

Prashant Kumar,
Secretary

To,

Member Secretary
Jharkhand State Pollution control board, Ranchi

The director
SUDA, Govt. of Jharkhand

Sub: Regarding compliance of directions issues by Hon'ble NGT in its order 30.11.2021 in
O.A. 606/2018

Sir,

1. Demarcation and protection of 'flood plain zones' keeping them free from encroachment:
 - As per report, only 2 flood plain zones which has been identified along the river Ganga & Damodar and the details are as follows:
 - a. Along 83 km stretch of river Ganga flowing along the Sahebganj district, there is inundation mostly in areas lying to the right of the river Ganga when its level rises during high flood. The total area which gets flooded is 54.7 square km (Flood Prone Zone). Demarcation of flood plain zone has been completed (Copy of the Certificate provided by the Chief Engineer, Deoghar is enclosed as Annexure 1).
 - b. Along 146 km stretch of river Damodar flowing along Bokaro and Dhanbad District, there is inundation mostly in areas lying to the right and left of the river Damodar when its level rises during high flood. The total area which gets flooded is 34 square km (Flood Prone Zone). Demarcation of flood plain zone has been completed (Copy of the Certificate provided by the Chief Engineer, Hazaribagh is enclosed as Annexure 2).
 - c. Action Plan for Flood Prone Zone is under formulation and shall be finalised in all respect by Aug. 2025
2. Maintenance of E-flow:

P.T.O.

- a. There is no issue regarding maintenance of E-flow of River Ganga as no dams/ barrages has been constructed or present across River Ganga within the State of Jharkhand.
 - b. Action Plan for maintenance of E Flow along the River Garga, Sankh, Damodar, Subarnarekha, Nalkari, Jumar and Konar is under preparation and will be completed by all respect upto Aug. 2024
3. Status on Ground Water Recharge:
- a. Action Plan for Ground Water Recharge is simultaneously under preparation and will be completed by all respect upto Aug. 2024
4. Rain Water Harvesting Structures & Restoration of Water Bodies: Preparation of DPR for Rain Water Harvesting Structures & Restoration of Water Bodies was taken up during 2021-2022, but due to COVID-19 pandemic formulation of DPR is under progress. It shall be finalised and implemented by Aug 2024.
5. Ground Water Quality: C.G.W.B. report is being enclosed as annexure 3

Enclosure: As stated


(Prashant Kumar),
Secretary

मुख्य अभियंता का कार्यालय
जल संसाधन विभाग
देवघर

पत्रांक :- 617 देवघर दिनांक :- 08.04.2022

Along 83 km stretch of river Ganga Falling under Sahebganj district, there is inundation mostly in areas lying to the right of the river Ganga when its level rises during high flood. The total area which gets flooded has been worked out around 54.47 square km. The demarcation of flood plain zone has also been done by the consultant based on recorded HFL of the river along the said stretches (Drawing enclosed). There is no report of any illegal encroachment over existing embankment of the river in the aforesaid stretch.

It is to certify that the above 54.47 Square km is Flood Prone Zone.


मुख्य अभियंता
जल संसाधन विभाग
देवघर

मुख्य अभियंता का कार्यालय,
जल संसाधन विभाग,
हजारीबाग।

क्र.सं :- 267

हजारीबाग, दिनांक :- 08/04/2022

Along 146 km Stretch of river Damodar Falling under Dhanbad and Bokaro district, there is inundation mostly in areas laying to the right and left of the river Damodar when its level rises during high flood. The total area which gets flooded has been worked out around 34 square km. The demarcation of flood plain zone has been done. On basis of HFL of the river along the said stretches (Drawing enclosed). There is no report of any illegal encroachment over existing embankment of the river in the aforesaid stretch.

It is to certify that the above 34 Square km is Flood Prone Zone.

Rajiv
8.4.22
कार्यपालक अभियन्ता
तेनुघाट बाँध प्रमंडल, तेनुघाट
(बोकारो)

[Signature]
8.4.2022
(Chief Engineer)
WRD, Hazaribag

Ground Water Resources of Jharkhand- As on March 2020

Estimation of ground water resources has been carried out by CGWB, State unit office, Ranchi(MER, Patna) in association with Ground Water Directorate, WRD, Jharkhand for the state of Jharkhand based on the methodology recommended by the Ground Water Estimation Committee, 2015 (GEC, 2015). The ground water resource estimation, 2020 has been assessed considering 2019-2020 ground water year. For recharge estimation, ground water worthy areas has been considered which is also named as ground water assessment areas. About 25% of the state geographical area has been demarcated as hilly area (>20% slope).

Ground Water Resource of the state has been computed block wise and then summarized district-wise. Total Annual Ground Water Resources as on water year, 2019-2020 is 6.01 BCM. Considering natural discharge 0.49 BCM, Annual Extractable Ground Water Resources for the state of Jharkhand has been found to be 5.52 BCM. The annual ground water draft in the state of the Jharkhand is 1.64 BCM which includes irrigation draft of 0.92 BCM, domestic draft of 0.51 BCM and remaining 0.20BCM ground water use for industrial use. The average Stage of Ground Water Development as on Ground Water Year, 2019-2020 is 29.76%. The net ground water available for future development is 3.8 BCM. As per the assessment three blocks namely Bermo, Topchanchi and Golmuri-cum-Jugsalai blocks have been categorized as Over-exploited. Baliapur and Silli have been categorized as Critical, 10 blocks have been categorized as Semi-Critical and rest 244 blocks are under safe category. District wise highest Stage of development has been observed in Ranchi district (76.84%) and lowest in West-Singhbhum district (3.73%).

ITY PROBLEMS IN ASSESSMENT UNITS, 2020

E: JHARKHAND

S. No	Name of District	S. No	Name of Assessment Unit affected by Fluoride	S. No	Name of Assessment Unit affected by Arsenic	S. No	Name of Assessment Unit affected by Salinity
	Bokaro	1	Chas				
	Bokaro	2	Chandankyari				
	Bokaro	3	Peterbar				
	Dhanbad	1	BALIAPUR				
	Dhanbad	2	DHANBAD				
	GARHWA	1	BHANDARIA				
	GARHWA	2	BHAWANATHPUR				
	GARHWA	3	CHINIA				
	GARHWA	4	DANDAI				
	GARHWA	5	DHURKI				
1	GARHWA	6	GARHWA				
2	GARHWA	7	KANDI				
3	GARHWA	8	MAJHIAON				
4	GARHWA	9	MERAL				
5	GARHWA	10	RAMKANDA				
6	GARHWA	11	RAMNA				
7	GARHWA	12	RANKA				
8	GARHWA	13	UNTARI				
9	GIRIDIH	1	GIRIDIH				
10	GIRIDIH	2	TISRI				
11	GODDA	1	BOARIJOR				
12	GODDA	2	GODDA				
13	GODDA	3	MAHAGAMA				
14	GODDA	4	PATHARGAMA				
15	GODDA	5	POREYAHAT				
16	GUMLA	1	BISHUNPUR				
17	GUMLA	2	CHAINPUR				
18	GUMLA	3	DUMRI				
19	GUMLA	4	GHAGHRA				
20	GUMLA	5	GUMLA				
21	GUMLA	6	SISAI				
22	KHUNTI	1	KARRA				
23	KHUNTI	2	MURHU				
24	KODERMA	1	CHANDWARA				
25	KODERMA	2	JAINAGAR				
26	KODERMA	3	KODERMA				
27	KODERMA	4	MARKACHHO				

KODERMA	5	SATGAWAN				
PAKUR	1	AMRAPARA				
PAKUR	2	LITIPARA				
PAKUR	3	PAKURIA				
PALAMAU	1	BISHRAMPUR				
PALAMAU	2	CHAINPUR				
PALAMAU	3	CHHATARPUR				
PALAMAU	4	DALTONGANJ				
PALAMAU	5	HARIHARGANJ				
PALAMAU	6	LESLIEGANJ				
PALAMAU	7	MANATU				
PALAMAU	8	PANDU				
PALAMAU	9	PANKI				
PALAMAU	10	PATAN				
PALAMAU	11	SATBARWA				
RANCHI	1	NAMKUM				
RANCHI	2	ORMANJHI				
RANCHI	3	SILLI				
SAHEBGANJ	1	BARHAIT				
SAHEBGANJ	2	BORIO				
SAHEBGANJ	3	RAJMAHAL	1	RAJMAHAL		
SAHEBGANJ	4	SAHEBGANJ	2	SAHEBGANJ		
SAHEBGANJ			3	UDHUA		

ABSTRACT				
Total No. of Assessed Units		Number of Assessment Unit affected by Fluoride	Number of Assessment Unit affected by Arsenic	Number of Assessment Unit affected by Salinity
260		59	3	nil

Annexure-3

Annexure -II

Chemical Quality of Ground Water during May 2017 (CGWB GW Year Book)

Sl. No	Dist.	Block	Locality	Temperature in °C at 100°C	TDS	pH	CO ₃ ²⁻	HCO ₃ ⁻	Cl ⁻	F ⁻	NO ₃ ⁻	SO ₄ ²⁻	TH	Ca ²⁺	Mg ²⁺	Na	K	SO ₂	PO ₄
					mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
1	Bokaro	Chas	Rodhagr am	1303	847.0	7.88	0	252.15	216	0.342	118	78.27	590	110	66.82	76.16	6.72	N.A	0
2		Chas	Jaina More	1329	863.85	7.78	0	270.6	214	0.35	135	77.33	605	116	76.545	78.52	6.78	N.A	0
3		Chas	Find raora	346	237.9	8.19	0	190.65	7.02	0.928	3.02	16.22	170	40	17.131	9.73	5.57	N.A	0
4		Chas	Pusunkil	730	474.5	7.93	0	195.8	63.81	0.813	164	72.92	345	110	24.3	23.51	7.21	N.A	0
5		Chand ankiyari	Chandanki yari	781	5076.5	8	0	190.65	93.4	0.657	70.9	65.95	225	80	6.075	83.92	7.28	N.A	0
6		Chand ankiyari	Laghi la	1237	804.05	7.78	0	202.95	211	0.903	201	75.16	505	182	12.15	56.87	8.03	N.A	0
7		Chand ankiyari	Nulta ndih	2450	1592.5	7.56	0	246	714	0.293	58.2	85.09	1110	256	95.985	45.28	9.84	N.A	0
8		Chand ankiyari	Kara masia	494	321.1	7.79	0	122	71.24	0.174	96.4	36.16	130	36	9.72	54.46	19.56	N.A	0
9		Chandankiya ri	Chandanki ya	2115	1374.8	7.6	0	492.4	365	1.52	134	106.5	320	106	13.365	374.94	27.94	N.A	0.12
10		Pelbar ar	Chandanki ya	335	217.75	7.9	0	86.1	25	1.12	1.98	76.76	135	38	9.72	4.86	17.97	N.A	0.3
11		Gomia	Gomia	120.4	783.9	8.01	0	460.02	157	1.01	8.52	52.76	200	70	6.075	158.41	8.61	N.A	0
12		Nawadhi	Nawadhi	997	648.05	8.25	0	276.75	156	0.599	68.8	73.51	375	120	18.225	62	5.18	N.A	0
13		Pelbar ar	Pelbar ar	776	504.4	7.63	0	178.49	101	0.246	104	64.02	350	60	48.6	33.5	6.76	N.A	0
14		Bermo	Bermo/ Phura	121.8	791.7	7.78	0	455.1	123	0.439	8.76	72.11	425	84	52.245	58.2	5.13	N.A	0
15	Dhanbad	Baghmara	Baghmara	112.1	728.65	7.7	0	369	110	0.74	8.72	88.16	435	72	61.965	72.08	5.35	N.A	0
16		Dhanbad	Basudeop ur	116	754	7.91	0	399.75	69.9	0.731	15.2	97.97	375	96	32.71	62.36	100	N.A	0
17		Dhanbad	Dhanba lem	532	345.8	8.05	0	147.6	44.4	0.828	8.29	75.35	180	44	17.01	31.09	30.63	N.A	0
18		Dhanbad	Dhanbad (New)	714	464.1	8.11	0	190.65	105	0.539	8.08	39.65	305	46	46.17	35.88	4.63	N.A	0
19		Jharia	Dhanbar MRS	654	425.1	7.9	27	104.55	67	0.394	121	71.62	245	78	12.15	46.24	4.75	N.A	0
20		Dhanbad	Godhar basil	569	382.85	8.02	0	270.6	7.9	1.67	54.5	49.8	185	32	25.515	62	5.57	N.A	0
21		Gavinapur	Gabindpu r	720	468	8.09	0	270.6	58.3	1.83	56.4	50	215	24	37.665	81.34	5.37	N.A	0
22		Jharia	Jharia	676	440.7	8.06	0	270.6	47.3	0.928	10.3	71.82	200	48	19.44	42.37	32.37	N.A	0
23		Jharia	Kan dha Man dalbasti	107.9	701.35	8.05	0	375.15	85	0.578	37.1	96.25	255	40	37.46	147.27	9.99	N.A	0
24		BAGHMARA	Mah uda	196.6	1277.9	8	24	282.9	177	0.495	353	91.4	600	100	85.05	206.96	6.91	N.A	0
25		DHANBAD	Mai kura	662	430.3	8.27	0	295.2	30.8	0.777	4.06	40.42	235	22	43.74	51.3	6.72	N.A	0
26		NIKI A	Nin a	270	175.5	8.25	0	147.6	5.85	1.56	1.17	10.91	110	22	13.365	5.14	5.48	N.A	0
27		DHANBAD	Firo y College	196.8	1279.2	8.1	0	295.2	186	0.566	365	92.34	565	106	72.9	238.76	6.99	N.A	0

Sl No	Dist	Block	Location	K.Oiler re Ba mm s/lt m 46 280C	TDS	pH	CO32-	HCO3-	Cl-	F-	NO3-	SO42-	TH	Ca 2+	Mg2+	Na	K	NO2	PO4
28		DHANBAD	Puro nath Jorapoth or	173.3	1126.5	8.1	0	319.8	169	0.544	262	94.1	390	54	61.96	255.52	8.43	N A	0
29		RAJGANGI	Rajganj	1153	749.45	8.03	0	270.6	169	0.44	75.3	75.82	326	56	45.198	91.28	5.44	NA	0
30		JHABIA	Bind ri Gasee Bn More	734	477.1	8.0	0	190.65	80.6	0.755	5.79	62.72	300	70	30.375	44.33	7.28	N A	0
31		TOPC NANCHI	Topc hanchi	1685	1095.3	8.14	0	442.5	198	0.51	39.4	96.05	459	84	60.57	202.14	6.95	N A	0
32		TUNDI	Tundi	765	497.25	8.25	0	196.8	104	0.388	20.7	68.99	295	86	19.44	45.55	5.69	NA	0
33	Khumli	Topa	doma	258	167.7	7.8	0	104.55	13.9	0.47	3.55	17.27	65	24	1.215	29.1	2.22	NA	0
34		Lapung	Kakariva	488	317.2	7.9	0	178.35	37.7	0.167	39.3	27.52	190	36	24.3	31.87	7.29	NA	0.35
35		Khumli	Kakamoli	145.7	94.705	7.48	0	55.35	10.4	0.185	5.38	11.39	50	10	6.075	10.93	2.52	NA	0
36		Kama	Novia toll	241	156.65	7.6	0	92.25	29.3	0.337	6.85	4.53	80	14	10.935	23.62	1.19	NA	0
37		Kama	Raitia	204.4	130.99	7.77	0	110.7	6.36	0.396	3.4	9.93	78	10	12.15	14.78	0.61	N A	0
38		Kama	Barwadag	420	273	7.87	0	98.4	50.9	0.203	49.4	15	160	24	24.3	22.8	2.04	N A	0
39		Kama	Gavindpur	302	194.3	8.27	0	144.05	10	0.782	1.02	12.37	110	16	17.01	22.8	2.04	N A	0
40		Kama	Jarly	129	63.8	7.7	0	61.5	3.5	0.2	4.5	7.1	50	6	8.5	8.7	1.4	N A	0
41		Kama	Rake guka	142.4	92.56	7.77	0	67.65	7.36	0.334	6.32	4.82	45	6	7.29	13.18	1.19	N A	0
42		Kama	Malgo	139	90.35	7.14	0	67.65	1.9	0.107	12.3	6.97	50	8	7.29	7.14	2.78	NA	0.3
43		Kama	Mas ama na	400	260	7.43	0	129.19	68.5	0.118	9.28	4.16	120	20	17.01	38.49	3.87	N A	0
44		Kama	Kast	325	211.25	7.68	0	86.1	38.9	0.128	26	20.17	95	16	13.365	32.96	2.13	NA	0
45		Kama	Jobna	475	308.75	7.77	0	166.05	80.3	0.55	20	26.8	190	28	29.16	22	2.07	NA	0
46		Kama	sohya	186	120.9	7.81	0	92.25	5.75	0.347	9.33	8.02	70	8	12.15	12.3	1.09	NA	0
47		Topa	Bala	251	163.15	7.67	0	135.3	11.8	0.694	6.41	4.24	100	12	17.01	9.36	12.11	NA	0
48		Kama	Kudri	84.2	54.75	7.52	0	24.6	1.95	0	12.3	8.89	40	4	7.29	0.88	2.83	NA	0
49		Topa	Jumi	576	374.4	7.63	0	196.8	70.9	0.301	19.4	37.68	240	38	35.235	21.48	2.06	NA	0
50		Kama	Ladhma	276	179.4	7.92	0	129.15	12.6	0.305	12.9	11.2	110	20	14.58	12.25	3.02	NA	0
51		Kama	Sirka	232	150.8	7.8	0	86.1	23.9	0.454	9.01	7.4	85	16	13.365	15.14	2.21	NA	0
52		Kama	Singau	189.3	123.05	7.86	0	79.95	16.6	0.245	5.76	9.51	85	16	10.94	5.084	4.42	NA	0
53		Kama	Ghunsul	881	572.65	8.21	0	209.1	148	0.172	53.6	47.98	255	34	41.31	41.28	75.39	NA	0
54		Khumli	Gultora	1033	671.45	7.74	0	362.85	19.7	0.194	90.5	72.29	260	56	29.16	61.45	85.36	NA	0
55		Khumli	Jallaanda	169.7	110.31	8.07	0	49.2	24.2	0	8.91	4.75	65	8	10.94	11.21	1.91	NA	0
56		Khumli	dum ardaga	131.5	85.475	7.6	0	36.9	3.4	0.138	27.2	7.26	20	6	1.215	17.41	3.73	N A	0
57		Khumli	Bewa	118	76.7	7.38	0	36.9	6.99	0.294	19.8	3.92	49	16	2.3	0.59	3.68	NA	0
58		Khumli	Anyara	213.9	139.04	7.6	0	92.25	12.4	0.532	7.2	12.46	85	8	15.795	8.58	2.7	NA	0
59		Kama	Jansail	116.1	75.465	7.84	0	49.2	5.45	0.172	7.87	3.45	35	6	4.86	12.29	0.71	NA	0
60		Khumli	Kunjala	260	182	7.47	0	61.5	53.2	0.186	12.1	14.66	95	16	13.365	19.5	3.8	NA	0
61		Khumli	Pekaul	322	209.3	7.61	0	67.65	75.3	0.18	10.6	4.37	130	38	8.505	12.28	2.5	NA	0
62		Arti	Serengha tu	353	229.45	7.83	0	172.2	15.3	0.362	4.53	21.35	130	22	18.225	18.02	1.9	N A	0
63		Muthu	Kunapurli	1209	785.85	7.9	0	418.2	147	0.225	75.4	22.75	500	70	78.975	32.62	3.43	NA	0
64		Khumli	Khu nil	1489	967.85	8	0	381.3	289	0.825	37.6	69.67	505	82	72.9	110.4	3.61	N A	0
65		Muthu	Muthu	458	297.7	8	0	147.6	50.3	0.544	23.5	37.85	130	38	8.505	35.12	17.5	NA	0
66	Simdega	Bano	Bano	229	148.85	7.75	0	98.4	16.3	0.171	11.3	10.63	80	20	7.29	15.82	0.81	NA	0
67		Gulma	Bham o bdo	101	65.65	7.57	0	55.35	2.11	0.177	2.92	3.92	35	8	3.645	7.85	0.74	N A	0
68	Simdega	Simdega	Birv	415	249.75	8.14	0	209.1	20.3	0.237	2.82	16.71	85	24	6.075	11.89	91.49	NA	0
69	Gulma	Bishunpur	Bishunpur	797	518.05	8.18	0	202.95	109	0.219	9.8	44.9	272	92	10.225	42.65	1.95	NA	0
70		Chairp ur l	Chal npur l	269	174.85	7.9	0	67.65	33.9	0.435	23.4	16.49	85	24	6.075	19.64	1.84	N A	0
71		Ghaghra	Ghaghra	214.3	139.3	7.66	0	79.95	14.7	0.249	19.1	9.84	80	20	7.29	11.39	1.37	NA	0
72		Gulma	Gulma	1218	791.7	7.98	0	362.85	179	0.223	66.7	62.61	364	110	21.87	110.8	4.9	NA	0

Sl. No	District	Block	Locality	Household no. in the village	Yield	pH	C.O.D.	HC.D.	Q.	P.	NO.3	NO.42	T.H.	Ca.2+	Mg.2+	Na	K	SO2	PO4
73	Simdega	Jaldiga	Jaldiga	489	298.35	7.93	47.2	153.75	47.2	0.339	44.3	17.26	175	42	17.01	21.54	2.72	NA	0.14
74	Guima	Raidih	Kair	568	349.2	7.92	77.3	178.35	77.3	0.306	35.4	25.46	220	56	19.44	27.56	3.01	NA	0
75	Guima	Guima	Khatke	142	92.3	7.58	11.9	43.05	11.9	0.113	19.5	8.4	40	10	3.645	12.55	1.98	NA	0
76	Simdega	Kalebira	Kalebira	321	208.65	7.92	21.3	153.75	21.3	3.12	11.1	3.46	80	24	4.86	38.25	0.75	NA	0
77		Lechra gath	Lach ragarh	847	550.55	7.96	149	215.25	149	0.245	43.2	43.23	285	72	28.515	58.04	2.36	NA	0
78	Guima	Bhama	Nagferi	481	312.65	7.82	71.9	135.3	71.9	0.339	37.8	18.53	150	52	4.86	40.29	2.83	NA	0
79	Guima	Polka	Polka	1282	833.3	7.25	0	246	230.4	0.817	55	55.48	494	144	32.805	48.01	3.5	NA	0
80	Simdega	Kalebira	Puthi Tal	203	131.95	7.58	23.7	55.35	23.7	0.31	28.7	5.21	60	16	4.86	19	0.76	NA	0
81	Guima	Raidih	Raidih	526	341.9	7.79	46.9	209.1	46.9	0.142	43.7	17.43	200	46	20.655	28.03	9.68	NA	0
82	Simdega	Simdega	Simdega	196.1	127.47	7.65	30.9	55.03	30.9	0.135	11.8	5.84	55	16	3.445	21.01	2.67	NA	0
83	Guima	Sial	Sial	303	196.95	7.37	38.4	55.35	38.4	0.174	36.3	21.32	70	18	6.075	37.08	0.77	NA	0
84	Simdega	Jaldiga	Teng ara Tuku	378	245.7	7.7	47.2	141.45	47.2	0.264	5.11	19.37	120	32	9.72	31.34	2.72	NA	0
85		Thelha Tongar	Thelha Tongar	401	240.65	7.77	35.45	116.85	35.45	1.81	3.08	66.05	115	34	7.29	36.09	2.05	NA	0
86		Jaldiga	Borihin ga	293	190.45	7.57	38.8	86.1	38.8	0.203	20.6	22.65	95	28	6.075	19.35	3.6	NA	0
87		Jaldiga	Lam bol	240	156	7.68	22	110.7	22	0.211	4.17	5.82	70	22	3.445	24.11	1.24	NA	0
88		Baba	Baba	448	291.2	7.71	47.3	172.2	47.3	0.703	6.79	31.09	145	44	8.505	35.53	1.54	NA	0
89		Karia	Karia	280	182	7.72	23.7	116.85	23.7	0.577	11	10.92	70	20	4.86	34.03	3.36	NA	0
90	E.Singbhum	Jugulai	Parahi	748	486	7.7	41	289	41	0.1	5.4	4.1	30	90	19.4	28	0.4	NA	0
91		Jugulai	Bag nu nagar	868	544.2	7.44	57.2	209.1	57.2	0.324	84.4	79.43	275	88	13.365	75.31	2.25	NA	0
92		Jugulai	Baha ragara	375	243.75	7.58	1.22	215.25	1.22	0.361	3.66	3.87	160	46	10.935	17.66	1.91	NA	0
93		Jugulai	Bari di	314	204.1	7.68	14	141.45	14	0.167	13.5	9.05	145	36	13.365	9.79	1.68	NA	0
94		Jugulai	Bar mom Ina Thana	590	383.5	7.65	21.2	196.8	21.2	0.31	53.6	44.43	220	62	15.795	35.65	8.72	NA	0
95		Chakula	Cha kula	236	153.4	6.31	26.7	24.6	26.7	0	56.8	5.51	60	12	7.29	25.3	3.54	NA	0
96		Jugulai	Tela o	710	461.5	7.61	10.4	350.55	10.4	0.903	17.8	7.67	265	66	24.3	41.15	1.59	NA	0
97		Dalsh umgar h	Dhal bhu mgath	355	230.75	7.06	33.4	110.7	33.4	0	45.7	5.53	125	30	12.15	30.22	1.42	NA	0
98		Ghatil a	Gatu di	412	267.8	7.69	35.7	153.75	35.7	0	8.52	5.25	115	44	1.215	35.62	13.1	NA	0
99		Jugulai	Gath abasa	865	542.25	8.02	49.7	319.5	49.7	0.365	73.1	4.27	295	82	21.87	62.49	1.62	NA	0
100		Ghatil a	Ghat ala	812	527.8	7.49	88.5	282.9	88.5	0.437	8.88	4.74	305	72	30.375	41.69	2	NA	0
101		Jugulai	galm ul	767	498.55	8.06	16	362.85	16	0.398	33.5	5.01	270	80	17.01	32.23	40.6	NA	0
102		Polka	Hatarim g	1238	804.7	7.5	136	399.75	136	0.501	61.9	5.44	389	126	18.225	78.73	4.47	NA	0
103		Jugulai	Jug alathana	894	581.1	7.9	67.35	350.55	67.35	0.848	26	4.38	285	54	36.45	78.83	11.67	NA	0
104		Chakula	KalaPath ar	490	318.5	7.4	44.9	141.45	44.9	0.113	46.7	6.27	115	36	6.075	35.86	40.27	NA	0
105		Marabani	Maraban	580	377	7.9	35	215	35	0.3	13	24	21	42	26.7	32	22	NA	0
106		Chakula	Pitha jui	331	215.15	7.8	14.2	129.15	14.2	0.213	52.2	4.69	100	32	4.86	22.84	2.3	NA	0
107		Polka	Polka	828	536.2	7.87	50.6	350.55	50.6	0.254	18	3.32	375	76	44.955	17.5	0.3	NA	0
108		Polka	Ran liri Man dir Jadugo	258	167.7	7.91	17.72	123	17.72	0.352	6.2	3.77	100	24	9.72	16.75	2.72	NA	0.13
109		Jugulai	shila Man dipak hi	560	364	7.72	48.3	221.4	48.3	0.287	5.82	3.67	190	42	20.655	29.69	2.14	NA	0
110		Jugulai	Bana manthar	1354	880.1	7.67	145.3	448.95	145.3	0.539	49.8	4.54	305	80	25.51	163.05	3.09	NA	0

Sl. No	Dist	Block	Least loc	Locality re site area s/c m at 280C	TDS	pH	C.O.D.	HCOD	Cl-	F-	NO ₃ -	SO ₄ 2-	TH	Ca ²⁺	Mg ²⁺	Na	K	SDS	PO ₄
111		Jamshampur	Sundama gar 1	1143	742.95	7.97	0	356.7	134.7	0.598	43	3.44	349	122	12.15	80.3	24.1	NA	0
112		Jamshampur	Pipal a	1238	804.7	7.98	0	553.5	64.8	2.21	24.7	3.06	180	42	18.225	204.65	1.24	NA	0
113		Chakulia	And hatta	290	188.5	7.87	0	104.55	12.6	0.165	30.3	5.73	110	22	13.365	13.54	4.78	NA	0
114		Chakulia	Jabr dha	358	237.7	7.65	0	153.75	37	0	16.7	4.61	95	30	4.86	40.56	1.97	NA	0
115		Chakulia	Ken dadh	198	128.7	7.31	0	49.2	19.5	0	21.5	4.66	55	14	4.86	9.68	15.76	NA	0
116		Polka	Moti gara	788	512.2	7.25	0	252.15	96.2	0.263	10.8	5.04	305	84	23.085	33.89	1.39	NA	0
117		Hatta	Gill ata	810	526.5	8.01	0	264.45	98.8	0.353	32.8	4.26	320	78	30.375	42.15	1.9	NA	0
118		Jamshampur	Bin a Nag arZone 11	641	416.65	7.94	0	307.5	21.2	0.739	8.17	4.78	227	49	25.51	32.09	0.62	NA	0
119		Jamshampi	Maraban	788	512	7.9	0	350	44	0.4	7.7	4.3	26	84	13.3	56	0.9	N	0
120		Chakulia	Pitha judi	331	215.15	7.8	0	129.15	14.2	0.213	52.2	4.69	100	32	4.86	22.84	2.3	NA	0
121		Polka	Polka	828	538.2	7.87	0	350.55	50.6	0.284	18	3.32	375	76	44.985	17.5	0.3	NA	0
122		Polka	Ran kiti Man dir jaduga	258	167.7	7.91	0	123	17.72	0.352	6.2	3.77	100	24	9.72	16.75	2.72	NA	0.13
123		Jugul ai	shill a Man disatc N	560	344	7.72	0	221.4	48.3	0.287	5.82	3.67	190	42	20.655	29.69	2.14	NA	0
124		Jugul ai	Bara manines	1354	880.1	7.67	0	448.95	145.3	0.539	49.8	4.54	305	80	25.51	163.05	3.09	NA	0
125		Jamshampur	Sundama gar 1	1143	742.95	7.97	0	356.7	134.7	0.598	43	3.44	349	122	12.15	80.3	24.1	NA	0
126		Jamshampur	Pipal a	1238	804.7	7.98	0	553.5	64.8	2.21	24.7	3.06	180	42	18.225	204.65	1.24	NA	0
127		Chakulia	And hatta	290	188.5	7.87	0	104.55	12.6	0.165	30.3	5.73	110	22	13.365	13.54	4.78	NA	0
128		Chakulia	Jabr dha	358	237.7	7.65	0	153.75	37	0	16.7	4.61	95	30	4.86	40.56	1.97	NA	0
129		Chakulia	Ken dadh	198	128.7	7.31	0	49.2	19.5	0	21.5	4.66	55	14	4.86	9.68	15.76	NA	0
130		Polka	Moti gara	788	512.2	7.25	0	252.15	96.2	0.263	10.8	5.04	305	84	23.085	33.89	1.39	NA	0
131		Hatta	Gill ata	810	526.5	8.01	0	264.45	98.8	0.353	32.8	4.26	320	78	30.375	42.15	1.9	NA	0
132		Jamshampur	Bin a Nag arZone 11	641	416.65	7.94	0	307.5	21.2	0.739	8.17	4.78	227	49	25.51	32.09	0.62	NA	0
133		Jamsh	Man yarn a temp leveld h	788	512	7.9	0	350	44	0.4	7.7	4.3	26	84	13.3	56	0.9	NA	0
134		edpur		2	2	5		55	1	41	7	3	5	5	65	83	5	NA	
135		Chakulia	Lodhika I	266	172.9	6.57	0	18.45	34.1	0	74.7	2.06	90	28	4.86	10.23	8.16	NA	0
136		Gomha na radhya pur	Kan dha	780	507	7.84	0	221.4	56.6	0.372	113	1.81	310	82	25.51	35.67	1.34	NA	0
137		Khoria wan	Khori sawan	850	552.5	8.22	0	344.4	64	0.393	15.3	1.65	210	54	18.225	69.82	38	NA	0
138		Nimdin	jamdin	661	559.65	8.04	0	301.35	92.4	0.374	14.2	3.18	275	66	26.73	78.37	1.69	NA	0
139		Sarakela	Sarakela	1770	1180.5	7.66	0	405.9	310	0.394	1.4	22.98	450	68	68.04	161.9	13.19	NA	0
140		Nimdin h	Lupungd h	524	340.6	8.07	0	153.75	46.9	0.317	33.5	19.51	170	48	12.15	41.5	3.76	NA	0
141		Chandil	bhal udh h	983	638.95	8.26	0	332.1	77.4	0.3	10.5	15.51	349	62	47.19	39.83	2.27	NA	0
142		Rajnagar	Kesh aragaria	773	502.45	8.28	0	276.75	55.5	0.271	52.1	6.37	295	60	35.235	51.25	4.3	NA	0
143		Rajnagar	Rajra Sai	377	245.05	8.39	6	190.65	4.98	0.614	4.69	4.35	140	32	14.58	27.78	0.68	NA	0
144		Sarakela	Dugul	431	280.15	8.14	0	178.35	30.6	0.312	6.99	2.29	160	44	12.15	31.6	1.86	NA	0
145		Rajnagar	Nababera	654	425.1	7.96	0	178.35	78.7	0.274	33.5	12.29	235	66	17.01	31.29	0.44	NA	0
146		Angara	Janha	256	167.7	8.11	0	209.1	7.08	0.541	6.39	11.41	135	32	13.365	21	3.33	25	0
147		Namrum	Hinoo	338	219.7	8.12	0	147.6	20.9	1.43	7.04	27.95	110	30	8.508	28.32	4.17	7	0
148		Raju	Koya	544	353.6	7.84	0	98.4	68.4	0.327	58.6	45.23	195	46	19.44	36.1	1.19	15	0
149		Nagri	Kandhara	547	356.65	7.97	0	196.8	41.9	0.805	4.14	35.54	220	44	26.73	38	0.3	6	0

Sl. No	Dist	Block	Location	Latitude to the nearest m at 250C	TDS	pH	CO ₂ H ₂ O	HC O ₃	Cl ⁻	F ⁻	NO ₃ ⁻	SO ₄ ⁻²	TH	Ca ²⁺	Mg ²⁺	Na	K	SO ₂	PO ₄
160		Angar a	Bar wadiag	189	302.85	8.19	0	172.2	37.7	0.903	26.3	61.24	280	40	34.45	24.39	1.82	23	0
161		Berro	Bar	284	184	8	0	141.45	8.7	0.5	18	26	12	28	13.3	17	1.6	27	1
162		Shupara Tongar	Chao rha	649	421.85	7.9	0	147.6	77.6	0.535	46.8	32.27	165	40	15.795	59	2.65	22	0
163		Mandara r	Bar atanga	215	139.75	7.83	0	104.55	7.05	0.454	33.8	9.92	120	18	18.225	12	1.7	17	0
164		Kamke	Bar Bimare	352	228.8	7.77	0	98.4	53.17	0.245	15.2	22.07	90	20	9.72	44	0.8	15	0
165		Kamke	Bar Yalphe d	344	225.6	8.17	0	94.09	31.9	1.03	5.09	40.13	90	18	10.935	30	1.38	11	0
166		Batu	Bar Brambe y	112.6	73.19	7.84	0	55.35	3.1	0.516	6.77	9.25	55	8	8.505	6	0.7	10	0
167		Kamke	Bar Batu	373	242.45	7.84	0	75.84	80.5	0.253	50.2	12.58	130	32	12.15	18	0.9	10.4	0
168		Bundu	Bar Bundu	611	397.15	7.97	0	144.05	45.6	0.497	17.7	75.6	240	46	30.375	35	0.81	22.9	0
169		Kamke	Bar Kamke	363	245.95	8.05	0	129.15	78.5	0.343	22.5	57.84	195	36	25.515	41.4	1.12	25	0
170		Burmo	Bar Burmo	155.5	101.08	7.9	0	67.45	0.592	0.375	21.1	8.85	55	14	4.86	9	1.3	13	0
171		Chahangra	Bar Chahangra	283	183.95	7.16	0	55.35	49.63	0.32	31.5	10.37	90	18	10.935	27	0.46	29	0
172		Orman ji	Chul upadu	924	400.6	8.23	0	178.35	128	0.606	64	64.38	325	80	30.375	49	1.2	22	0
173		Angar na	Bar Gandiga	253	144.45	7.9	0	73.8	32.9	0.724	12.5	11.42	90	24	7.29	17	2.24	18.1	0
174		Bar	Bar Bar	134.4	88.46	7.69	0	49.2	10.63	0.291	1.46	8.6	50	14	3.64	6	0.3	15.3	0
175		Angar na	Bar Bar	276	179.4	8.1	0	135.3	8.49	0.597	15.2	10.36	80	22	6.07	24.2	1.8	21.4	0
176		Kamke	Bar Kamke	489	317.85	8.1	0	98.4	75	0.392	12.2	41.97	170	40	17.01	33.45	1.36	27.3	0
177		Bar	Bar Bar	487	297.05	8.05	0	110.7	54	0.474	42.7	23.23	180	48	14.58	24.5	0.62	22.9	0
178		Kamke	Bar Kamke	201	130.65	7.78	0	55.35	19.3	0.441	22.9	17	75	28	1.215	17.28	0.95	18.5	0
179		Bar	Bar Bar	302	194.3	8.04	0	129.15	23.6	0.421	4.76	25.02	130	28	14.58	12	3.8	22	0
180		Bar	Bar Bar	265	172.25	7.77	0	116.85	7.44	0.431	5.3	14.85	90	22	8.5	19.2	0.46	13.7	0
181		Bar	Bar Bar	1124	730.6	7.84	0	258.3	156	0.329	68.2	71.69	285	68	27.945	116.6	8.82	34.2	0
182		Bar	Bar Bar	294	191.1	7.94	0	73.8	35.45	0.942	42.7	10.05	75	18	7.29	33.6	2.85	14.6	0
183		Bar	Bar Bar	772	501.8	7.84	0	184.5	107	0.449	51.1	54.92	210	28	34.02	72	2.89	7.15	0
184		Bar	Bar Bar	512	332.8	7.15	0	135.3	49.63	2.35	1.34	57.25	165	42	19.44	31.8	3.84	17.3	0
185		Bar	Bar Bar	916	591.7	8.38	9	227.55	110	0.461	41.2	77.29	225	60	18.225	94.82	11.82	14.3	0
186		Bar	Bar Bar	344	223.6	7.15	0	84.1	32.5	1.44	1.3	24.96	130	26	15.79	13	3.3	15.2	0
187		Bar	Bar Bar	454	295.1	7.9	0	116.85	53	0.485	28.2	36.93	165	30	21.87	28.8	0.83	24.4	0
188		Bar	Bar Bar	432	280.8	8	0	115.05	56.8	0.419	14.5	27.54	175	38	19.44	21.6	0.65	21.8	0
189		Bar	Bar Bar	951	618.15	8.34	6	229.85	124	0.485	40.9	71.39	275	80	18.225	110.2	1.97	18.9	0
190		Bar	Bar Bar	1073	697.45	7.78	0	393.6	81.53	0.34	20.8	30.86	295	84	20.655	103.2	3.28	21.5	0
191		Bar	Bar Bar	486	317.2	7.89	0	221.4	30.4	0.242	3.03	9.5	55	6	9.72	74.8	4.2	30	0
192		Bar	Bar Bar	492	319.8	7.16	0	189.9	42.3	1.48	1.93	49.72	185	46	17.01	28.6	3.4	24.7	0
193		Bar	Bar Bar	264	171.6	7.93	0	129.15	0.244	0.264	6.01	8.73	55	6	9.72	30.8	4.23	17	0
194		Bar	Bar Bar	564	231.4	8.14	0	178.35	35.45	0.328	1.88	10.64	115	38	4.86	36	2.85	6	0
195		Bar	Bar Bar	203	131.95	7.89	0	146.05	19.8	0.352	15	8.9	75	18	7.29	45	2.97	10	0
196		Bar	Bar Bar	278	180.7	7.12	0	178.35	19.8	0.438	4.15	21.27	120	34	8.505	29.78	0.5	14.3	0
197		Bar	Bar Bar	201	130.65	7.78	0	92.25	3.8	0.639	2.56	14.61	80	26	3.64	9.6	1.3	9.14	0
198		Bar	Bar Bar	993	616.45	7.34	0	216.25	74.44	0.45	6.11	44.57	225	56	20.655	58.7	1.79	26.8	0
199		Bar	Bar Bar	819	532.35	7.11	0	178.35	118	0.948	17.4	74.86	295	86	19.44	53.76	2.7	24.5	0

Sl. No	Date	Block	Location	SLC/Date in the month of at BSC	Yield	pH	C O 32-	MC O3-	Cl-	P-	NO 3-	SO 42-	TH	Ca 2+	Mg 2+	Na	K	SO2	PO4
191		Normal soil	Field near Chandigarh	345	224.25	8.2	0	55.35	74.44	0.319	18.2	37.18	160	34	18.22	14.65	1.8	24.9	0
192		Normal soil	Chandigarh	426	274.9	8.27	0	144.05	31.9	0.257	14.6	18.3	90	18	10.955	55.2	3.09	27	0
193		Normal soil	Field near Chandigarh	423	274.95	7.74	0	110.7	28.3	0.389	28.8	59.91	110	24	12.15	48.3	1.97	22.5	0
194		Control	Field near Chandigarh	155	100.75	7.21	0	79.95	3.53	0.243	1.21	11.91	45	16	1.21	15.2	1.2	8.94	0

ANNEXURE - 7

कृषि निदेशालय, झारखण्ड, राँची

पत्रांक: 01/PMKSY/NGT-04/2020-21 1803

राँची, दिनांक: 06.04.2022

प्रेषक,

उप कृषि निदेशक (योजना),
झारखण्ड, राँची।

सेवा में,

सरकार के अवर सचिव,
कृषि, पशुपालन एवं सहकारिता विभाग,
झारखण्ड, राँची।

विषय: माननीय NGT वाद O.A.No -606/2018 में दिनांक 30.11.2021 को पारित आदेश के अनुपालन के संबंध में।

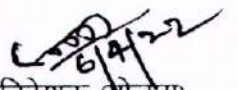
प्रसंग: विभागीय पत्रांक 766 दिनांक 05.04.2022।

महाशय,

उपर्युक्त प्रासंगिक विषय के संबंध में कहना है कि माननीय NGT वाद O.A.No.-606/2018 में दिनांक 30.11.2021 को पारित आदेश के अनुपालन प्रतिवेदन इस पत्र के साथ संलग्न कर भेजी जा रही है।

अनुलग्नक: यथोक्त।

विश्वासभाजन


उप कृषि निदेशक (योजना),
झारखण्ड, राँची।

Jharkhand

- Micro Irrigation coverage: under PMKSY-PDMC.
- Allocation 2021-22 under PDMC: Rs 50.00 Crore (Rs 30.00 Crore released)
- No. of Namami Gange Districts covered: One district (Sahibganj).

Year	Target			Achievement		
	Beneficiary	Area (ha.)	Amount (in lakh)	Beneficiary	Area (ha)	Amount (in lakh)
2017-18	-	-	-	-	-	-
2018-19	-	-	-	-	-	-
2019-20	-	-	-	-	-	-
2020-21	-	-	-	-	-	-
2021-22	250	100	129	92	39.25	56.91944
Total	250	100	129	92	39.25	56.91944

*Achievement as on March 2022.


Deputy Director,
(Agriculture Planning)
Jharkhand, Ranchi.

Stamp



Organic Farming Authority of Jharkhand

ऑर्गेनिक फार्मिंग अथॉरिटी ऑफ झारखण्ड

कृषि, पशुपालन एवं सहकारिता विभाग, झारखण्ड सरकार

Krishi Bhawan, Kanke Road, Ranchi-834008; www.organicjharkhand.in

E-mail : organicjharkhand2012@gmail.com/ ofaj2012@rediffmail.com



पत्रांक:

दिनांक:

प्रेषक,

मुख्य कार्यपालक पदाधिकारी,
ओफाज, राँची।

सेवा में,

राघवेन्द्र झा,
सरकार के अवर सचिव,
कृषि, पशुपालन एवं सहकारिता विभाग (कृषि प्रभाग),
झारखण्ड, राँची।

विषय:- माननीय NGT वाद O.A. No. 606/2018 Dt. 30.11.2018 को पारित आदेश के अनुपालन के सम्बन्ध में।

प्रसंग: विभागीय पत्रांक 766 दिनांक 05.04.2022, वन, पर्यावरण एवं जलवायु परिवर्तन विभाग का पत्रांक 1058 दिनांक 01.04.2022, राज्यादेश संख्या 41 दिनांक 09.02.2021

महोदय,

उपरोक्त प्रसंगाधीन विषय के संबंध में कहना है कि वित्तीय वर्ष 2021-22 में राज्यादेश संख्या 41 दिनांक 09.02.2021 के माध्यम से स्वीकृत तृवर्षीय जैविक खेती के प्रमाणीकरण की योजनान्तर्गत माननीय NGT में दायर Principal Bench, New Delhi में दायर O.A. No. 606/2018 Dt. 30.11.2018 में पारित आदेश के अनुपालन हेतु राज्य के सर्वाधिक प्रदूषित नदियाँ यथा- गंगा, दामोदर, स्वर्णरेखा, जुमार, खरकई, नलकरी, के तटवर्ती ग्राम पंचायतों में जैविक खेती को प्रोत्साहित किया जा रहा है।

विभागीय राज्यादेश की कंडिका 11 निम्नवत् है "इस योजना के लाभ हेतु वैसे भूमि को प्राथमिकता दी जायेगी जहाँ रासायनिक खादों का प्रयोग कम से कम हो रहा हो।"

उक्त के आलोक में ओफाज के द्वारा योजना कार्यान्वयन किया जा रहा है, तथा माननीय NGT के अनुसार राज्य के सर्वाधिक प्रदूषित नदियों (गंगा, दामोदर, स्वर्णरेखा, जुमार, खरकई, नलकरी) के तटवर्ती ग्राम पंचायतों में जैविक खेती को प्रोत्साहित जा रही है।

अनुलग्नक: यथोपरि, राज्य के अन्य सर्वाधिक प्रदूषित नदियों के तटवर्ती ग्राम पंचायतों में जैविक खेती से संबंधित संचालित योजनाओं की विवरणी।

विश्वासभाजन,
06/04/22
मुख्य कार्यपालक पदाधिकारी,
ओफाज, राँची।
06/04/22

- सोशल डिस्टेंसिंग का पालन करें। घर से बाहर निकलने पर मास्क का प्रयोग अवश्य करें। नियमित अंतराल पर हाथों पर सेबेटीजल का प्रयोग, जब तक दवाई नहीं तब तक छिटाई नहीं।

B. Development of 5 Clusters each in 19 Aspirational Districts under PKVY in Jharkhand (Centrally Sponsored Scheme)

- Govt. of India has sanctioned 95.931 Lakhs for Govt. of India has sanctioned 95.931 Lakhs for Development of 5 Clusters each in 19 Aspirational Districts under Paramparagat Krishi Vikas Yojna, vide letter no- 9-24/2020-Org. Fmg. dated 16-09-2020.
- Sanction Order and Allotment is issued.
- Details of Clusters in Districts most affected by Polluted Rivers.

Details of Clusters in Districts affected by polluted rivers.

SL No.	Districts	Total no. of Clusters (20 ha each)	Total Area (Ha)	Remarks
1	Bokaro	5	100	Selection of RC/ Facilitating Agency is under process. Work will be started in this FY.
2	Sahebganj	5	100	
3	Ranchi	5	100	
4	Latehar	5	100	
5	Palamu	5	100	
6	East Singhbhum	5	100	
7	Simdega	5	100	
8	Ramgarh	5	100	
Total		40	800	

MW

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C. BPKP 6 Clusters (Centrally Sponsored Scheme)

- Govt. of India has sanctioned 54.1 Lakhs for vide letter no- 9-49/2020-Org. Fmg. dated 02-12-2020.
- Sanction Order and Allotment is issued.

Details of Clusters in Districts most affected by Polluted Rivers.

SL No.	Districts	Total no. of Clusters	Total Area (Ha)	Remarks
1	Ranchi	4	2060	Selection of RC/ Facilitating Agency is under process. Work will be started in this FY.
2	Ramgarh	2	1340	
Total		6	3400	

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New Plans to be taken in the catchment area of the most polluted rivers in Jharkhand.

**Namami Gange Clean Abhiyan under Swakshata Action Plan (SAP)
(Centrally Sponsored Scheme)**

- Name of Scheme : Namami Gange Project (Scheme under Swakshata Action Plan-SAP)
- Physical Target : 27 Clusters (By the banks of River Ganga in Sagebganj District)
- Total Area : 1350 Acre
- Financial Target : 407.6865 Lakhs (for 3 Years, Funding through RKVY)
- Project Duration : 3 Years

1- Scheme to be implemented as per old PKVY Guideline.

2- Sanction Order and Allotment is in process

Mans a

A. PKVY 750 Clusters (Centrally Sponsored Scheme)

- Name of Scheme : Paramparagat Krishi Vikas Yojna
- Physical Target : 750 Clusters/Groups (15000 ha) Approval vide govt. of India Letter no. 9-53/2015 Org Fmg dated 12.06.2018
- Financial Target : 7650 Lakhs (for 3 Years)
- Project Duration : 3 Years
- District to be covered : Ranchi, Ramgarh, Hazaribagh, Deoghar, Saraikela, Giridih, Dumka, Bokaro, Sahebganj & Jamtara

- 1- Scheme to be implemented as per new PKVY Guideline.
- 2- 757.35 Lakhs has been released as 1st installment of Central Share vide GoI letter No- F. No- 9-53/2015- Org. Fmg. Dated 30-09-2020
- 3- 3 Year work plan has been approved by SLEC-PKVY headed by Secretary Agriculture.
- 4- Sanction order and allotment issued.

Details of Clusters in Districts affected by polluted rivers.

Sl No.	Districts	No. of Clusters	Area (ha)	Remarks
01	Ranchi	90	1800	Selection of Farmers and area is under progress.
02	Saraikela	90	1800	
03	Sahebganj	90	1800	
04	Ramgarh	60	1200	
05	Bokaro	60	1200	
Total		390	7800	

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झारखण्ड सरकार
कृषि, पशुपालन एवं सहकारिता
विभाग, (कृषि प्रभाग)

भूमि संरक्षण निदेशालय, झारखण्ड, राँची

द्वितीय तल, कृषि भवन, कॉलेज रोड,
राँची, झारखण्ड-834008

E-Mail- directorsoiljhr@gmail.com
Phone No.:- 0651-2232690

पत्रांक:- 183

-/राँची, दिनांक:- 06.04.2022

प्रेषक,

निदेशक,
भूमि संरक्षण, झारखण्ड, राँची,

सेवा में,

श्री राघवेन्द्र झा,
सरकार के अवर सचिव,
कृषि, पशुपालन एवं सहकारिता विभाग (कृषि प्रभाग),
झारखण्ड, राँची।

विषय:- माननीय NGT वाद O.A.No.-606/2018 में दिनांक 30.11.2021 को पारित आदेश के अनुपालन के संबंध में।

प्रसंग:- विभागीय पत्रांक-766 दिनांक 05.04.2022

महाशय,

उपर्युक्त प्रासंगिक विषय में माननीय NGT वाद O.A.No.-606/2018 में दिनांक 30.11.2021 को पारित आदेश के अनुपालन के संबंध में कहना है कि Soil Erosion (भूमि क्षरण) के कारण हाने वाले जल प्रदूषण को रोकने के उद्देश्य से भूमि संरक्षण निदेशालय के द्वारा राज्य के सभी जिला में बड़े तालाबों का जीर्णोद्धार/गहरीकरण तथा छोटे नये तालाब (परकोलेशन टैंक) का निर्माण विगत वर्षों से किया जा रहा है। विगत पाँच वर्षों में लगभग 5907 बड़े तालाबों का जीर्णोद्धार/गहरीकरण का कार्य किया गया है तथा लगभग 3942 छोटे नये तालाब (परकोलेशन टैंक) का निर्माण किया गया है।

अतः यह आपके सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।

विश्वासभाजन,

निदेशक,

भूमि संरक्षण, झारखण्ड, राँची।

कृषि निदेशालय, झारखण्ड, राँची

पत्रांक: 01/PMKSY/NGT-04/2020-21 1803

राँची, दिनांक: 06.04.2022

प्रेषक,

उप कृषि निदेशक (योजना),
झारखण्ड, राँची।

सेवा में,

सरकार के अवर सचिव,
कृषि, पशुपालन एवं सहकारिता विभाग,
झारखण्ड, राँची।

विषय: माननीय NGT वाद O.A.No.-606/2018 में दिनांक 30.11.2021 को पारित आदेश के अनुपालन के संबंध में।

प्रसंग: विभागीय पत्रांक 766 दिनांक 05.04.2022।

महाशय,

उपर्युक्त प्रासंगिक विषय के संबंध में कहना है कि माननीय NGT वाद O.A.No.-606/2018 में दिनांक 30.11.2021 को पारित आदेश के अनुपालन प्रतिवेदन इस पत्र के साथ संलग्न कर भेजी जा रही है।

अनुलग्नक: यथोक्त।

विश्वासभाजन


उप कृषि निदेशक (योजना),
झारखण्ड, राँची।

Jharkhand

- Micro Irrigation coverage: under PMKSY-PDMC.
- Allocation 2021-22 under PDMC: Rs 50.00 Crore (Rs 30.00 Crore released)
- No. of Namami Gange Districts covered: One district (Sahibganj).

Year	Target			Achievement		
	Beneficiary	Area (ha.)	Amount (in lakh)	Beneficiary	Area (ha)	Amount (in lakh)
2017-18	-	-	-	-	-	-
2018-19	-	-	-	-	-	-
2019-20	-	-	-	-	-	-
2020-21	-	-	-	-	-	-
2021-22	250	100	129	92	39.25	56.91944
Total	250	100	129	92	39.25	56.91944

*Achievement as on March 2022.


Deputy Director
(Agriculture Planning)
Jharkhand, Ranchi.

Stamp



झारखण्ड सरकार
कृषि, पशुपालन एवं सहकारिता
विभाग, (कृषि प्रभाग)

द्वितीय तल, कृषि भवन, कॉलेज रोड,
राँची, झारखण्ड-834008

E-Mail- directorsoiljhr@gmail.com
Phone No.:- 0651-2232690

भूमि संरक्षण निदेशालय, झारखण्ड, राँची

पत्रांक:- 183

-/राँची, दिनांक:- 06.04.2022

प्रेषक,

निदेशक,
भूमि संरक्षण, झारखण्ड, राँची,

सेवा में,

श्री राघवेन्द्र झा,
सरकार के अवर सचिव,
कृषि, पशुपालन एवं सहकारिता विभाग (कृषि प्रभाग),
झारखण्ड, राँची।

विषय:- माननीय NGT वाद O.A.No.-606/2018 में दिनांक 30.11.2021 को पारित आदेश
के अनुपालन के संबंध में।

प्रसंग:- विभागीय पत्रांक-766 दिनांक 05.04.2022

महाशय,

उपर्युक्त प्रासंगिक विषय में माननीय NGT वाद O.A.No.-606/2018 में दिनांक 30.11.2021 को पारित आदेश के अनुपालन के संबंध में कहना है कि Soil Erosion (भूमि क्षरण) के कारण हाने वाले जल प्रदूषण को रोकने के उद्देश्य से भूमि संरक्षण निदेशालय के द्वारा राज्य के सभी जिला में बड़े तालाबों का जीर्णोद्धार/गहरीकरण तथा छोटे नये तालाब (परकोलेशन टैंक) का निर्माण विगत वर्षों से किया जा रहा है। विगत पाँच वर्षों में लगभग 5907 बड़े तालाबों का जीर्णोद्धार/गहरीकरण का कार्य किया गया है तथा लगभग 3942 छोटे नये तालाब (परकोलेशन टैंक) का निर्माण किया गया है।

अतः यह आपके सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।

विश्वासभाजन,


निदेशक,

भूमि संरक्षण, झारखण्ड, राँची।

ANNEXURE - 8



JHARKHAND STATE POLLUTION CONTROL BOARD
REGIONAL OFFICE-CUM-LABORATORY, MB/15 NEW HOUSING COLONY
ADITYAPUR, JAMSHEDPUR.

Web Site- jspcb.org/ Phone- 0657-2383241/ Fax- 0657-2383905

Ref. No: -.....

Dated-.....

From,

Regional Officer
Jamshedpur.

To,

The Board Analyst
Jharkhand State Pollution Control Board,
Ranchi.

Sub: - Regarding analysis report.

Sir,

Please find enclosed herewith the analysis report of river water for the month of November, 2022 for your information & necessary action.

Encl :- As above.

Yours faithfully,

Sd/-
(J.P. Singh)
Regional officer.

Memo No.-1157..... Jamshedpur, dated19-12-2022.....
Copy to :- The Member Secretary, Jharkhand State Pollution Control Board, Ranchi for information and necessary action.

Jp883
19.12.2022
(J.P. Singh)
Regional officer.

JHARKHAND STATE POLLUTION CONTROL BOARD
REGIONAL OFFICE-CUM-LABORATORY, M/B-15, NEW HOUSING COLONY
ADITYAPUR, JAMSHEDPUR

Analysis report under NWMP for the month of November, 2022

Sl. No.	Lab. Ref.	Water Code	Name of the Sampling Point	Date / Time of collection	Temp		D.O mg/l	pH	Cond. $\mu\text{ohm/cm}^2$	R.O.D mg/l	Alk. Mg/l	Total Hard. mg/l	Ca++ mg/l	Mg++ mg/l	T.D.S mg/l	T.S.S mg/l	T.S mg/l
					A	W											
1	167/22	48	Chandl Road Bridge	11.11.2022 At-10.15AM	26.0	22.5	6.8	7.1	241.0	BDL	22.0	28.0	6.1	3.20	161.0	9.0	170.0
2	165/22	4744	On suanashila river before meeting to Khairai	11.11.2022 At-9.20AM	24.5	21.5	7.1	7.0	213.0	BDL	BDL	19.0	3.6	2.35	142.0	10.0	152.0
3	166/22	4746	On suanashila river after confluence Khairai river	11.11.2022 At-9.35AM	24.7	21.5	6.8	6.9	196.0	1.0	24.0	39.0	6.4	5.72	131.0	12.0	143.0
4	164/22	4745	On Khairai river before meeting suanashila river	11.11.2022 At-9.10AM	24.5	21.0	6.0	6.7	213.0	1.4	28.0	83.0	21.5	7.10	142.0	13.0	155.0
5	163/22	49	D/S Khango, Jamshedpur	11.11.2022 At-8.30AM	24.0	21.0	6.2	6.9	208.0	1.6	34.0	58.0	14.2	5.64	139.0	9.0	148.0
6	170/22	4742	Chandl Barrage	11.11.2022 At-11.40AM	28.0	40.0	6.4	7.3	222.0	1.3	26.0	56.0	12.6	6.00	148.0	8.0	156.0
7	172/22	4743	U/s HCL Ghatsila	11.11.2022 At-4.10PM	28.5	25.0	6.5	7.1	211.0	1.1	23.0	66.0	22.1	2.75	141.0	7.0	148.0
8	174/22	24	D/s HCL Ghatsila	11.11.2022 At-4.40PM	28.0	24.5	6.4	6.9	192.0	1.2	25.0	35.0	8.0	3.74	128.0	9.0	137.0
9	171/22	4748	Bharuaga Road Bridge	11.11.2022 At-1.0 PM	29.5	26.0	6.9	7.2	240.0	BDL	BDL	53.0	11.7	5.00	160.0	11.0	171.0
10	161/22	1036	Kool Kani River at Manoharpur	08.11.2022 At-11.20AM	29.0	26.0	7.3	7.5	226.0	BDL	22.0	45.0	13.0	3.16	151.0	7.0	158.0
11	168/22	2399	Chandl Dam	11.11.2022 At-10.25AM	26.0	23.0	7.2	7.3	195.0	BDL	BDL	44.0	7.3	6.36	130.0	13.0	143.0
12	169/22	2398	Diana Lake	11.11.2022 At-11.0 AM	27.0	24.0	6.7	7.0	201.0	1.3	BDL	43.0	9.1	5.18	134.0	14.0	148.0
13	173/22	2387	Ghatsila Road Bridge	11.11.2022 At-4.20PM	28.0	25.0	7.4	7.2	193.0	BDL	26.0	48.0	11.0	4.90	129.0	12.0	141.0
14	162/22	4747	Kolna River at Manoharpur	08.11.2022 At-12.10PM	31.0	28.0	7.0	7.4	234.0	BDL	37.0	64.0	12.8	7.84	156.0	13.0	169.0

MKC
17.12.22
(M.K. Choudhary)
S.T.

17/12/22
(Anurita Mishra)
C.E.

18.12.2022
(J.P. Singh)
Regional Officer.

21/12/2022
Board Analyst



JHARKHAND STATE POLLUTION CONTROL BOARD
Central Laboratory, Mano Balram Bhwan, Hatia, Ranchi, Phone: - 0651- 2291449

Ref. No.....

Ranchi, Dated

From,

R.N. Anjaan
Board Analyst.

To,

Regional Officer
Jharkhand State pollution Control Board
Dhanbad

Sub : Analysis report of Damodar river its Tributaries, Ponds under NWMP for month of November 2022

Sir,

Please find enclosed herewith the above analysis reports of NWMP monitoring stations Code No. – 2394, 2382, 3557, 2381, 3555, 3556, 3554, 2390, 4741, 4740, 4000, 3553, 4738, 4739, 2383, 2392, 2391 and 2384 for your information & necessary action.

Encl-A/A

Yours Faithfully,

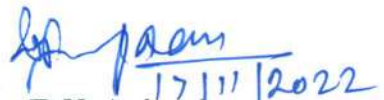
Sd/-

(R.N. Anjaan)
Board Analyst

Memo No- 269

Ranchi, Date...17-11-2022

Copy to : Member Secretary, Jharkhand State Pollution Control Board, Ranchi for information Please.


(R.N. Anjaan)
Board Analyst
17/11/2022



JHARKHAND STATE POLLUTION CONTROL BOARD

CENTRAL LABORATORY, MANO BALRAM BHWAN, HATIA, RANCHI-834003

Analysis report of Damodar river/Tributaries/Ponds under NWMP of Nov., 2022

Stn. Code	Name of the sampling point.	Date/time of sample collected	Temp A/W in oC	D.O. mg/lit	PH Value	BOD mg/lit	T.C. MPN 100	F.C. MPN 100	Alk mg/lit	Cl- mg/lit	COD mg/lit	T.H. mg/lit	Ca++ mg/lit	Mg++ mg/lit	TDS mg/lit	T.S. mg/lit	TSS mg/lit	Acidity mg/lit
2394	Top Chanchi Lake	09.11.2022 8.45 AM	25/20	7.4	7.5	1.9	-	-	82	20	48	118	33.6	8.296	420	484	64	6
2382	Damodar River, At. Phusro Road Bridge	09.11.2022 11.00 AM	27.5/21	7.6	7.5	1.7	-	-	72	18	68	116	32.8	8.296	416	488	72	6
3557	Damodar River Near Bermo Railway Station, Bokaro	09.11.2022 11.40 AM	28/22	7.5	7.5	1.8	-	-	78	16	72	120	32.8	9.272	210	252	42	6
2381	Bokaro River At. Zarangdih Bridge	09.11.2022 1.25 PM	29/23	7.4	7.5	1.7	-	-	70	20	52	126	33.6	10.248	396	456	60	6
3555	Damodar River Near Zarangdih Bridge, Bokaro	09.11.2022 1.10 PM	29/22.5	7.6	7.6	1.9	-	-	80	18	56	124	36.8	7.8	392	454	62	6
3556	Confluence of Bokaro & Damodar River Near Zarangdih Bridge, Bokaro	09.11.2022 1.45 PM	29.5/23	7.5	7.6	1.9	-	-	72	22	60	122	33.6	9.272	430	504	74	6
3554	Konar River Near Swang Coal Washery, Bokaro	09.11.2022 2.35 PM	30/23.5	7.5	7.5	2.0	-	-	70	18	56	122	33.6	9.272	432	508	76	6
2390	Damodar River, AT. Tenughat Dam	09.11.2022 5.20 PM	24/20	7.8	7.6	1.5	-	-	72	22	80	126	33.6	10.248	390	462	72	6
4741	Ranibandh Talab Near ISM Dhanbad	10.11.2022 7.30 AM	17/15	4.5	7.4	2.0	-	-	70	20	72	124	36.8	7.8	222	264	42	6
4740	Loco Talab (Pumpu Talab), At. Barmasia, Dhanbad	10.11.2022 8.20 AM	18/16	3.4	7.3	2.6	-	-	76	22	76	118	33.6	8.296	340	390	50	6
4000	Garga River Near Telmucho Bridge	10.11.2022 10.45 AM	21/18	6.7	7.3	2.3	-	-	72	20	80	116	32.8	8.296	288	326	38	6

	Name of the sampling point.	Date/time of sample collected	Temp A/W in oC	D.O. mg/lit	PH Value	BOD mg/lit	T.C. MPN 100	F.C. MPN 100	Alk mg/lit	Cl- mg/lit	COD mg/lit	T.H. mg/lit	Ca++ mg/lit	Mg++ mg/lit	TDS mg/lit	T.S. mg/lit	TSS mg/lit	Acidity mg/lit
3553	Damodar River Near Telmucho Bridge	10.11.2022 10.20 AM	20/17	7.5	7.4	2.4	-	-	80	16	76	120	32.8	9.272	316	360	44	6
4738	Jamunia River Near Lohapatti Bridge, Mahuda, Dhanbad	10.11.2022 11.10 AM	22/18.5	7.5	7.4	1.9	-	-	80	22	60	124	36.8	7.8	254	292	38	6
4739	Katri River Near Bhatinda Fall, At.-Tetengabad, M	10.11.2022 12.10 PM	23/19	7.4	7.6	1.4	-	-	94	20	56	126	33.6	10.248	446	506	60	6
2383	Damodar River, U/S Jamadoba Water Works	10.11.2022 1.20 PM	24/20	7.5	7.5	1.3	-	-	76	18	60	118	33.6	8.296	224	264	40	6
2392	Barakar At maithan Dam	10.11.2022 4.35 PM	20/17	7.6	7.4	1.4	-	-	80	16	52	124	36.8	7.8	252	294	42	6
2391	Damodar River, At Panchet Dam	10.11.2022 3.25 PM	21/18	7.7	7.5	1.3	-	-	78	18	48	122	33.6	9.272	262	308	46	6
2384	Damodar River, At Domgarh Water Works D/S Sindri	10.11.2022 2.25 PM	25/19	7.5	7.4	1.4	-	-	76	16	36	120	32.8	9.272	280	330	50	6

16.11.22
(Kumari Usha)
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(S.K. Singh)
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17/11/2022
R.N. Anjaan
Board Analyst



JHARKHAND STATE POLLUTION CONTROL BOARD

CENTRAL LABORATORY, MANO BALRAM BHWAN, HATIA, RANCHI-834003

Analysis report of Swarnrekha river basin, Brahmini river Basin under NWMP of Nov., 2022

Lab Ref. No. Station Code No.	Name of the sampling point.	Date/time of sample collected	Temp A/W in °C	D.O. mg/lit	PH Value	BOD mg/lit	T.C. MPN 100	F.C. MPN 100	Alk mg/lit	Cl- mg/lit	COD mg/lit	T.H. mg/lit	Ca++ mg/lit	Mg++ mg/lit	TDS mg/lit	T.S. mg/lit	TSS mg/lit	Acidity mg/lit
846/22 23	River Swarnrekha At. Ranchi (Tatisilwai)	14.11.2022 2.35 PM	24/17	5.8	6.6	2.4	-	-	78	18	52	112	24.8	12.2	410	452	42	6
876/22 1033	River Koel At.-Basia Dam U/S, Jharkhand	29.11.2022 2.30 PM	23/16	7.6	7.2	1.1	-	-	76	16	44	110	28.8	9.27	396	440	44	6
877/22 1034	River Sankh At.-Bolba,	30.11.2022 10.10 AM	24/15	7.8	7.4	1.1	-	-	80	18	36	118	33.6	8.296	340	380	40	6
875/22 1035	River Karo At.- Lohajimi U/S Jharkhand	29.11.2022 11.15 AM	24/16	7.4	7.3	1.1	-	-	92	20	36	120	32.8	9.27	336	398	62	6
860/22 2376	River North Koel U/S Daltonganj	22.11.2022 2.15 PM	26/21	7.2	6.6	1.2	-	-	76	22	40	122	33.6	9.27	362	422	60	6
864/22 2377	River North Koel D/S BCCL, Rehla	23.11.2022 11.20 AM	24/18	7.8	7.3	1.4	-	-	80	20	32	124	36.8	7.8	406	476	70	6
844/22 2385	River Swarnrekha At.- Namkum Road Bridge	14.11.2022 12.30 PM	25/18	5.8	6.7	2.1	-	-	76	18	48	122	33.6	9.27	392	436	44	6
855/22 2386	River Swarnrekha At.- Muri Road Bridge	21.11.2022 11.30 AM	25/19	7.8	7.5	2.2	-	-	80	16	28	126	33.6	10.248	400	450	50	6
840/22 2395	River Swarnrekha At.- Hatia Dam	14.11.2022 8.40 AM	22/16	8.0	7.4	1.1	-	-	84	18	28	124	36.8	7.800	386	344	38	6
841/22 2396	River Jumar At.- Kanke Dam	14.11.2022 10.00 AM	24/17	6.1	7.5	2.2	-	-	72	18	48	122	33.6	9.27	300	342	42	6
849/22 2397	River Swarnrekha At. - Getalsnd Dam	14.11.2022 5.00 PM	22/15	7.8	7.4	1.8	-	-	86	16	36	124	36.8	7.80	342	386	44	6

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7.12.22
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07/12/2022
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Board Analyst



JHARKHAND STATE POLLUTION CONTROL BOARD

CENTRAL LABORATORY, MANO BALRAM BHWAN, HATIA, RANCHI-834003

Analysis report of Swarnrekha river basin of Nov., 2022

Lab Ref. No. Station Code	Name of the sampling point.	Date/time of sample collected	Temp A/W in oC	D.O. mg/l	PH Value	BOD mg/l	T.C. MPN 100	F.C. MPN 100	Alk mg/l	Cl- mg/l	COD mg/l	T.H. mg/l	Ca++ mg/l	Mg++ mg/l	TDS mg/l	T.S. mg/l	TSS mg/l	Acidity mg/l
819/22 4749	River Swarnrekha, Near Ring Road Bridge, Sembo, Nagri, Ranchi	10.11.2022 4.00 PM	25/13	7.6	7.4	2.5	-	-	86	16	52	110	28.8	9.27	420	490	70	6
817/22 4750	River Swarnrekha, Near Intake Well, Hatia Railway	10.11.2022 12.10 PM	26/15	3.4	6.6	2.0	-	-	84	18	48	112	24.8	12.2	306	366	60	6
816/22 4752	River Swarnrekha, Near Oberia Road Bridge, Hatia, Ranchi	10.11.2022 11.00 AM	26/14	3.2	6.5	2.5	-	-	86	20	40	126	33.6	10.248	308	372	64	6
842/22 4753	River Harmu, Near Harmu Bridge, Harmu, Ranchi	14.11.2022 11.00 AM	24/17	3.2	6.5	11.4	-	-	82	22	184	124	36.8	7.8	420	486	66	6
843/22 4754	River Harmu before Meeting to Swarnrekha River	14.11.2022 11.40 AM	25/18	4.0	6.6	10.8	-	-	84	24	184	120	32.8	9.272	472	534	62	6
850/22 4756	River Swarnrekha At.- Rucca Dam, Rucca, Ranchi	14.11.2022 5.30 PM	22/14	7.9	7.3	2.2	-	-	78	16	44	124	36.8	7.8	308	352	44	6
856/22 4758	Govt. Handpump, Near House of Rajendra Singh Munda, Kokrana, Muri	21.11.2022 12.10 PM	26/20	7.2	6.6	-	-	-	76	18	16	126	33.6	10.248	388	426	38	6
839/22 4084	River Swarnrekha At.- Hatia Road Bridge, Ranchi	14.11.2022 8.00 AM	22/16	3.5	6.6	2.3	-	-	74	20	40	124	36.8	7.8	434	476	42	6
847/22 4085	River Jumar At.- BIT Mesra, Ranchi	14.11.2022 3.25 PM	23/16	4.0	6.5	2.2	-	-	68	18	44	118	33.6	8.296	410	450	40	6
857/22 4086	River Swarnrekha U/S Hindalco Ind. Ltd., Muri Works, Chhota Muri, Ranchi	21.11.2022 1.00 PM	25/18	7.9	7.4	2.0	-	-	76	20	36	122	33.6	9.270	344	380	40	6
838/22 4083	River Damodar Near Rohini Project, NK Area, PO-Dakra, Ranchi	11.11.2022 1.30PM	25/20	7.8	7.4	1.6	-	-	94	24	24	144	43.2	8.784	378	428	50	6

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