

Himachal Pradesh
Jal Shakti Vibhag

No. JSV SE (P&I-I)-EE(D-I)-Technical Committee/2022-23-3461-3550 Dated: - 14-9-2023

To

Director (RDD)
SDA Complex, Block No. 27,
Shimla-09

Director (UD),
Palika Bhawan, Talland,
HP Shimla-171001

The Chief Engineer,
(S/Z), (M/Z), (H/Z), (D/Z),
Under Jal Shakti Vibhag.

The Chief Engineer-Cum- Director (WSSO),
Jal Shakti Bhawan, Shimla-05

Dr. Arvind Kumar Nema,
Professor & Head, Civil Engineering Department,
IIT New Delhi-

Dr. B.J.Alappat
Professors, Civil Engineering Department,
IIT New Delhi.-

All the Superintending Engineers,
Under Jal Shakti Vibhag,

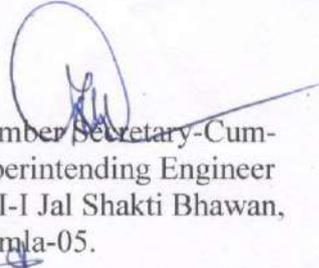
Sr. Environmental Engineer/
Sr. Scientific Officer,
HPPCB Phase-III, New Shimla-09

All the Executive Officers,
Urban Local Bodies in HP

Subject:- 2nd meeting of State Level Technical Committee for the Technical Scrutiny and approval of DPRs for Sewerage Schemes in HP.

Enclosed please find herewith the minutes of 2nd meeting of State Level Technical Committee for Sewerage, held on 11.09.2023 under the Chairmanship of E-in-C (JSV) at Jal Shakti Bhawan, Shimla-05 for your kind information and further necessary action with the rider that cost indicated with individual cases is not in the mandate of committee and the approval is only for process/ technologies to be adopted.

DA: -Minutes of Meeting


Member Secretary-Cum-
Superintending Engineer
P&I-I Jal Shakti Bhawan,
Shimla-05.

Copy to:

1. The Pr. Secretary (JSV) to the Government of HP Shimla-2 for information please.
2. The Engineer-in-Chief, JSV Jal Shakti Bhawan Shimla-05 for information please.
3. The Engineer-in-Chief (Project), Mandi for information please.
4. The Joint Controller (F&A) JSV, Jal Shakti Bhawan Shimla-05 for information please.

Member Secretary-Cum-
Superintending Engineer
P&I-I Jal Shakti Bhawan,
Shimla-05.


Member Secretary-Cum-
Superintending Engineer
P&I-I Jal Shakti Bhawan,
Shimla-05.

Minutes of the 2nd State Level Technical Committee meeting for Scrutiny and Approval of DPRs for Sewerage Schemes for the year 2023-24 held on 11.09.2023 under the Chairmanship of Er. Sanjeev Kaul, Engineer-in- Chief (JSV), at Jal Shakti Bhawan, Shimla -5.

2nd meeting of the State Level Technical Committee (Sewerage) to evaluate the proposals of sewerage schemes was held under the Chairmanship of Engineer-in- Chief (JSV) at Jal Shakti Bhawan, Shimla - 5 on 11.09.2023.

At the outset, the Member Secretary – cum – Superintending Engineer (P&I-I) welcomed the Chairman and members.

Member Secretary informed that the previous meeting of the Technical Committee was held on 15.06.2023 and minutes of the meeting were circulated to all concerned vide Member Secretary- cum- SE (P & I-I) letter No. JSV SE (P & I-I)-EE (D-I)- Technical Committee/2022-23-2025-39 dated 03-07-2023. Since no comments were received, the minutes were confirmed.

List of Participants is as per Annexure “A” attached.

Thereafter, agenda items were taken up for discussion one by one detailed as under:

Agenda 1- Proposals for reuse of waste water in existing STPs

Mandi Zone

1. Project Report for Reuse of Effluent from Sewage Treatment Plant Sundernagar Tehsil Sundernagar Distt. Mandi (HP).

(Circle- Sundernagar, Division – Sundernagar)

The Executive Engineer, JS Division Sundernagar presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	4.50 MLD (Existing STP) = 52 LPS
2	Reuse	Irrigation
3	Area of land to be Irrigated	50.00 Hectare
4	Total Rate of flow required for Irrigation (Water Demand)	25.00 LPS
5	Components Proposed:-	Nallah Crossing, P/L/ J and Testing of HDPE pipes in gravity main, Interception chamber, Field Channels and Blue Corridor water body (Lake)- 19400 Cum.

After detailed discussion, it was decided to propose the Irrigation scheme only after taking consent of beneficiaries through ULB. The committee also decided that the parameters of effluent after tertiary treatment be strictly achieved.

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

Dharamshala Zone

2. **Aug. and up gradation of Sewerage Scheme Dehra in Tehsil Dehra and Distt. Kangra HP (SH:- C/O 1.38 MLD tertiary treatment Plant Based on root zone technology in the shape of constructed wetland and lake for reuse of treated effluent).**

(Circle- Dharamshala , Division- Dehra)

The Superintending Engineer, JS Circle Dharamshala presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	1.38 MLD (Existing STP)= 15.97 LPS
2	Reuse	Irrigation
3	Area of land to be Irrigated	To be ascertained while preparing DPR
4	Total Rate of flow required for Irrigation (Water Demand)	To be ascertained while preparing DPR as per Water Demand
5	Components Proposed:-	Distribution Chamber, Constructed Wetland, Multi Media Filter, Chlorine Contact Tank and Blue Corridor Water Body (Lake)- 2262.24 Cum.,

After detailed discussion, it was decided to propose the Irrigation scheme only after taking consent of beneficiaries through ULB. The committee also decided that the parameters of effluent after tertiary treatment be strictly achieved.

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

**3. Reuse of Treated Waste for STP Palampur Town in Tehsil Palampur Distt. Kangra HP
(Circle- Dharamshala , Division- Palampur)**

The Superintending Engineer, JS Circle Dharamshala presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	0.351 MLD (Existing STP)
2	Reuse	Fish Pond (2.53 Lakh Ltr. Cap.)
3	Components Proposed:-	Fish Pond, HDPE pipe and PVC coated pond liner 500 Micron

After detailed discussion, it was decided to also explore the possibilities of reuse of treated water for Irrigation and fire fighting purpose after taking consent of beneficiaries through ULB. The committee also decided that the parameters of effluent after tertiary treatment be strictly achieved.

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

**4. Reuse and recycle of treated effluent in integration with existing STP 1.40 MLD at Dr. RPGMC
Tanda in Tehsil Nagrota Bagwa Distt. Kanga HP.
(Circle- Dharamshala , Division- Nagrota Bagwan)**

The Superintending Engineer, JS Circle Dharamshala presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	1.40 MLD (Existing STP)
2	Reuse	Fire Fighting (7 Lakh Ltr. Cap. Collection Tank)
3	Components Proposed:-	Collection Tank, Clear water submersible pumps, Rising Main, Service Storage Reservoir (7 Lakh Ltr. Cap. With staging height of 15 Mtr.), Gravity Main and Polishing Pond

After detailed discussion, it was decided to also explore the possibilities of reuse of treated water for Gardening (Floriculture) and washing of roads etc. after taking consent of beneficiaries through ULB. The committee also decided that the parameters of effluent after tertiary treatment be strictly achieved.

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

5. **Reuse and recycle of treated effluent in integration with existing STP 0.52 MLD at Rajiv Gandhi Govt. Engineering Collage Nagrota Bagwan at Massal Tehsil Nagrota Bagwan Distt. Kanga HP.**

(Circle- Dharamshala , Division- Nagrota Bagwan)

The Superintending Engineer, JS Circle Dharamshala presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	0.52 MLD (Existing STP)
2	Reuse	Gardening, Washing of Roads and Fire fighting (2.60 Lakh Ltr. Cap. Collention Tank)
3	Components Proposed:-	Collection Tank, Clear water submersible pumps, Rising Main, Service Storage Reservoir (2.60 Lakh Ltr. Cap. With staging height of 15 Mtr.), Gravity Main and Polishing Pond

After detailed discussion, it was decided to propose the reuse of treated water after taking consent of beneficiaries through ULB. The committee also decided that the parameters of effluent after tertiary treatment be strictly achieved.

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

Shimla Zone

6. **Providing Sewerage Scheme to Paonta Town in Tehsil Paonta Sahib Distt. Sirmaur HP (SH:- C/O Blue corridor water body by constructing polishing pond and laying jointing gravity main for use of treated water for irrigation)**

(Circle- Nahan , Division-Poanta)

The Superintending Engineer, JS Circle Nahan presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	Zone –I – 1.00 MLD (Existing STP) Zone –II – 0.44 MLD (Existing STP) Zone –III – 1.73 MLD (Existing STP)
2	Reuse	Irrigation
3	Components Proposed:-	Construction / establishment of polishing pond / lake for reuse of treated water of STP Zone – I , II and III complete in all respect, P/L/J GI pipe 100 mm dia (MG) gravity main for carrying treated

		water of Zone III to LIS Kishanpura- 1100 Rmt. , P/L/J GI pipe 100 mm dia (MG) Rising main for carrying treated water of Zone- I & II - 2500 Rmt., P/L/J HDPE pipe of 160 mm dia for distribution system for Zone I & II- 1500 Rmt. And Supply and erection of pumping machinery- 3X 10 HP.
--	--	---

After detailed discussion, it was decided to propose the reuse of treated water after taking consent of beneficiaries through ULB. The committee also decided that the parameters of effluent after tertiary treatment be strictly achieved.

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

7. Proposal for reuse of treated waste water from Sewerage Scheme of Trilokpur, Kheri and Johron)

(Circle- Nahan , Division-Poanta)

The Superintending Engineer, JS Circle Nahan presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	1.50 MLD (Under Construction)
2	Reuse	Irrigation(CCA- 10.26 Hect.) for Kheri area and Fire fighting for Famous Mata Bala Sundri Temple complex from STP Trilokpur
3	Components Proposed:-	<p>Kheri Area Rising Main 100 mm dia- 1500 Rmt., Pumping machinery – 60 HP, Distribution system – 2500 Rmt.</p> <p>Trilokpur Area Rising Main 80 mm dia- 3000 Rmt., Pumping machinery – 40 HP, Distribution system – 1500 Rmt., Fire hydrants – 16 No.</p>

After detailed discussion, it was decided to propose the reuse of treated water after taking consent of beneficiaries through ULB. The committee also decided that the parameters of effluent after tertiary treatment be strictly achieved.

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

Agenda- 2 – Proposals for New STPs

Shimla Zone

1. Providing Sewerage Scheme to GP Sangrah in Tehsil Sangrah Distt. Sirmour HP. (Circle- Nahan , Division- Shillai)

The Superintending Engineer, JS Circle Nahan presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	Zone 1- 0.300 MLD STP Zone 2- 0.260 MLD STP Total - 0.560 MLD
2	Technology	MBBR followed by Constructed Wetland (Root Zone System)
3	Length of Sewer Line/ Other components	Sewerage Network DI K-7 pipe- 26.250 KM, House hold connection -942 Nos. along with Manhole chamber, Inspection Chamber and Flushing Tanks etc.

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after Tertiary Treatment for Irrigation, construction activities and Fire Fighting purpose etc. in the DPR after consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the MBBR followed by Constructed Wetland and also decided to explore the possibilities for construction of Pre-fabricated/ compact/ modular sewage treated system for STPs below 1.00 MLD instead of going for conventional STP and avoiding Intermediate Pumping Stations (IPS).

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

2. **Providing Sewerage Scheme to Renuka Ji and Dadahu in Tehsil Dadahu Distt. Sirmaur (Phase-I and Phase-II) HP.**
(Circle- Nahan, Division- Nahan)

The Superintending Engineer, JS Circle Nahan presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	Phase-I - 0.700 MLD STP Phase-II- 0.710 MLD STP Total - 1.41 MLD
2	Technology	Sequential Batch Reactor (SBR Technology)
3	Length of Sewer Line	Phase-I Sewerage Network DI K-7 pipe- (I & D)= 6632 Mtr. (Main Sewer Network), 5250 Mtr. (Distribution Sewer Network), Manhole Chamber 244 Nos. and Flushing Tanks- 4 Nos. Phase-II Sewerage Network DI K-7 pipe- (I & D)= 3971 Mtr. (Main Sewer Network), Manhole Chamber 147 Nos. and Flushing Tanks 3 Nos.

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after treatment for Irrigation, construction activities and Fire Fighting purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the SBR Technology and also decided to explore the possibilities for construction of Pre-fabricated/ compact/ modular sewage treated system for STPs below 1.00 MLD instead of going for conventional STP and avoiding Intermediate Pumping Stations (IPS).

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

3. **Providing Sewerage Scheme to GP Shillai in Tehsil Shillai Distt. Sirmaur H.P.**
(Circle- Nahan , Division- Shillai)

The Superintending Engineer, JS Circle Nahan presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	1.80 MLD
2	Technology	MBBR followed by Constructed Wetland (Root Zone System)
3	Length of Sewer Line/ Other components	DI K-7 pipes and HDPE pipes for house connections, provisions for Manhole chamber

		inspection chamber and flushing tanks
4	Reuse:	Blue corridor water body (Lake) for reuse of treated effluent
5	Augmentation of Water Supply	Provision for augmentation of water supply is proposed by constructing Lift Water Supply Scheme for the area.

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after Tertiary Treatment for Irrigation, construction activities and Fire Fighting purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the MBBR followed by Constructed Wetland.

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

**4. Providing Sewerage Scheme to GP Sataun in Tehsil Kamraou Distt. Sirmaur H.P..
(Circle- Nahan , Division- Shillai)**

The Superintending Engineer, JS Circle Nahan presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	1.25 MLD
2	Technology	MBBR followed by Constructed Wetland (Root Zone System)
3	Length of Sewer Line/ Other components	DI K-7 pipes and HDPE pipes for house connections, provisions for Manhole chamber inspection chamber and flushing tanks
4	Reuse:	Blue corridor water body (Lake) for reuse of treated effluent
5	Augmentation of Water Supply	Provision for augmentation of water supply is proposed by constructing Water Supply Scheme for the area.

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after Tertiary Treatment for Irrigation, construction activities and Fire Fighting purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the MBBR followed by Constructed Wetland.

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

5. **Providing sewerage system treatment plant 0.52 MLD zone-I MBBR , 0.14 MLD Bio digester zone-II with reuse of waste water for irrigation in Sarahan Tehsil Sarahan Distt. Sirmaur H.P. (Under Namami Gange) (Circle- Nahan , Division- Shillai)**

The Superintending Engineer, JS Circle Nahan presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	Ph-I 0.520 MLD Ph-II 0.140 MLD
2	Technology	MBBR followed by Constructed Wetland (Root Zone System) Ph-I Bio Digester Ph-II
3	Length of Sewer Line/ Other components	Laying of main Trunk Line for Nallah overflow, Energy and O&M cost for 15 years and SOP
4	Reuse:	Reuse of treated effluent for irrigation; CCA-66 Hac.

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after Tertiary Treatment for Irrigation, construction activities and Fire Fighting purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the MBBR followed by Constructed Wetland and also decided to explore the possibilities for construction of Pre-fabricated/ compact/ modular sewage treated system for STPs below 1.00 MLD instead of going for conventional STP and avoiding Intermediate Pumping Stations (IPS).

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

6. **Providing sewerage system treatment plant 1.19 MLD Zone-I, 0.35 MLD Bio digester Zone-II with reuse of waste water for irrigation in Rajgarh Town Tehsil Rajgarh Distt. Sirmaur H.P. (Under Namami Gange) (Circle- Nahan, Division Rajgarh)**

The Superintending Engineer, JS Circle Nahan presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	Ph-I 1.190 MLD Ph-II 0.350 MLD
2	Technology	MBBR followed by Constructed Wetland (Root

		Zone System) Ph-I Bio Digester Ph-II
3	Length of Sewer Line/ Other components	Laying of main Trunk Line for Nallah overflow, Energy and O&M cost for 15 years and SOP
4	Reuse:	Reuse of treated effluent for irrigation; CCA-38 Hac.

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after Tertiary Treatment for Irrigation, construction activities and Fire Fighting purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the MBBR followed by Constructed Wetland and also decided to explore the possibilities for construction of Pre-fabricated/ compact/ modular sewage treated system for STPs below 1.00 MLD instead of going for conventional STP and avoiding Intermediate Pumping Stations (IPS).

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

**7. Providing sewerage Scheme to Majra and Adjoining Area in tehsil Paonta Sahib Distt. Sirmaur HP
(Circle- Nahan, Division Paonta)**

The Superintending Engineer, JS Circle Nahan presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	STP Zone -I- 0.62 MLD (MBBR) STP Zone -II- 1.60 MLD (MBBR)
2	Technology	MBBR followed by Constructed Wetland (Root Zone System) Ph-I Bio Digester Ph-II
3	Length of Sewer Line/ Other components	Zone- I Sewerage Network DI K-7 Pipe – 6631 Rmt., HDPE pipe – 5250 Rmt., Manhole – 225 Nos., Inspection Chamber – 350 Nos. and Polishing Pond Zone- II Sewerage Network DI K-7 Pipe – 23727 Rmt., HDPE pipe – 14269 Rmt., Manhole – 796 Nos., Inspection Chamber – 951 Nos. and Polishing Pond
4	Reuse:	Reuse of treated effluent for irrigation; CCA-

	Zone I- 25 Hect.,Zone –II- 55 Hect.
--	-------------------------------------

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after Tertiary Treatment for Irrigation, construction activities and Fire Fighting purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the MBBR followed by Constructed Wetland and also decided to explore the possibilities for construction of Pre-fabricated/ compact/ modular sewage treated system for STPs below 1.00 MLD instead of going for conventional STP and avoiding Intermediate Pumping Stations (IPS).

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

**8. Sewerage Treatment Plant Sangla Distt. Kinnaur.
(Circle- Reckong Peo , Division Reckong Peo)**

The Executive Engineer, JS Division R/Peo presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	STP 0.15 MLD (150 KLD)
2	Technology	MBBR
3	Length of Sewer Line/ Other components	<p>Provision for Pre-fabricate units of STP :- Bar Screen chamber, Oil and grease chamber, Equalization Tank, Anaerobic digester, MBBR Tank, Tube Settling tank, Filter Feed Tank, Sludge Holding Tank and Treated Water Tank</p> <p>RCC Units:- Foundation for all mechanical equipment, Sludge Drying Bed (Brick Work) and Land acquisition</p>

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after Tertiary Treatment for Irrigation, construction activities and Fire Fighting purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the MBBR followed by Constructed Wetland and suggested to make provision for centrifuge, which will enable the department in reducing the land requirement for sludge drying bed. The committee also decided to explore the possibilities for construction of Pre-fabricated/ compact/ modular sewage treated system for STPs below 1.00 MLD instead of going for conventional STP and avoiding Intermediate Pumping Stations (IPS).

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

9. Providing Sewerage System to Sarahan in GP Sarahan in Tehsil Rampur, Distt. Shimla (H.P.) (Circle- Reckong Peo, Division Rampur)

The Executive Engineer, JS Division Rampur presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	STP Phase-I- 0.51 MLD (SBR) STP Phase-II- 0.76 MLD (SBR)
2	Technology	SBR
3	Length of Sewer Line/ Other components	Phase- I Sewerage Network DI K-7 Pipe 150 mm dia- 3670 Rmt., 200 mm dia – 1420 Rmr., House Connection 240 Nos. and Manhole – 441 Nos. Phase- II Sewerage Network DI K-7 Pipe 150 mm dia- 6670 Rmt., 200 mm dia – 4442 Rmt., DI pipe for House Connection – 2340 Rmt., House Connection-714 Nos. and Manhole – 1164 Nos.

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after treatment for Irrigation, construction activities and Fire Fighting purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the SBR technology and also decided to explore the possibilities for construction of Pre-fabricated/ compact/ modular sewage treated system for STPs below 1.00 MLD instead of going for conventional STP and avoiding Intermediate Pumping Stations (IPS).

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

10. Proposed Sewerage Scheme for Darlaghat (Phase – I & II) in Tehsil Arki, District Solan, HP Under NABARD for the Year 2022-23 (Circle – Solan, Division- Arki)

The Executive Engineer, JS Division Arki presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	STP Phase-I- 0.74 MLD STP Phase –II- 0.48 MLD (Total – 1.22 MLD
2	Technology	SBR
3	Length of Sewer Line/ Other components	Component for each phase (Phase I & II):- Provision for Site Development, C/O STP Boundary wall around STP, Provision for Survey Investigation, Provision for Automation, Provision for Chlorination, Provision for Sewerage Network along with Manhole and Flushing Tanks , C/O Road, Provision of Restoration of roads and Pacca Path, Provision for Path around STP components, Provision for SOP, Provision for Staff Qtrs. Type-II,III & IV, Provision for Real Time Monitoring System, Provision for Land Acquisition.,

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after treatment for Irrigation, construction activities and Fire Fighting purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the SBR technology and also decided to check the water supply level required for construction of sewerage scheme and incorporate the same accordingly. The committee also decided to explore the possibilities for construction of Pre-fabricated/ compact/ modular sewage treated system for STPs below 1.00 MLD instead of going for conventional STP and avoiding Intermediate Pumping Stations (IPS).

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

**11. Proposed Sewerage Scheme for Village Batal in Tehsil Arki, District Solan H.P. under NABARD for the Year 2022-23
(Circle – Solan, Division- Arki)**

The Executive Engineer, JS Division Arki presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	0.32 MLD
2	Technology	SBR
3	Length of Sewer Line/ Other components	Provision for Site Development, C/O STP Boundary wall around STP, Provision for Survey Investigation, Provision for Automation, Provision for Chlorination, Provision for Sewerage Network along with Manhole and Flushing Tanks, C/O Road, Provision of Restoration of roads and Pacca Path, Provision for Path around STP components, Provision for SOP, Provision for Staff Qtrs. Type-II,III & IV, Provision for Real Time Monitoring System, Provision for Land Acquisition.

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after treatment for Irrigation, construction activities and Fire Fighting purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the SBR technology and also decided to check the water supply level required for construction of sewerage scheme and incorporate the same accordingly. The committee also decided to explore the possibilities for construction of Pre-fabricated/ compact/ modular sewage treated system for STPs below 1.00 MLD instead of going for conventional STP and avoiding Intermediate Pumping Stations (IPS).

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

Mandi Zone

**12. Detailed Project Report for Sewerage Scheme for Balichowki Bazar in GP Balichowki Tehsil Balichowki District Mandi-HP.
(Circle – Sundernagar, Division- Thunag)**

The Superintending Engineer, JS Circle Sundernagar presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	IPS Zone –I- 0.320 MLD

		IPS Zone –II- 0.100 MLD STP- 0.420 MLD Capacity
2	Technology	MBBR followed by Constructed Wetland (Root Zone System)
3	Length of Sewer Line/ Other components	Sewerage Network DI K-7 Pipe (I & D), RCC Manhole-400 Nos., Inspection Chamber – 158 Nos., Flushing Tanks – 15 Nos. (500 Ltr. Cap. Each)

The scheme is appearing in MLA priority list for the year 2022-23.

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after Tertiary Treatment for Irrigation, construction activities and Fire Fighting purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the MBBR followed by Constructed Wetland and also decided to explore the possibilities for construction of Pre-fabricated/ compact/ modular sewage treated system for STPs below 1.00 MLD instead of going for conventional STP and avoiding Intermediate Pumping Stations (IPS).

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

**13. Detailed Project Report for Providing Sewerage scheme to Kalahod, Dhaneshwari, Ropa and its adjoining area in Tehsil Sundernagar District Mandi H.P.
(Circle – Sundernagar, Division- Sundernagar)**

The Superintending Engineer, JS Circle Sundernagar presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	Phase 1 IPS Zone 1- 0.050 MLD STP- 0.350 MLD (MBBR) Phase 2 STP-1- 0.320 MLD (MBBR) STP-2- 0.120 MLD (MBAR)
2	Technology	MBBR followed by Constructed Wetland (Root Zone System) and MBAR
3	Length of Sewer Line/ Other components	Phase -1 - Sewerage network DI K-7 Pipe, RCC Main Hole - 540 Nos., Inspection Chamber- 195 No., Flushing Tanks – 46 Nos. Phase -2 - Sewerage network DI K-7 Pipe, RCC Main Hole - 757 Nos., Inspection, Chamber- 258 No., Flushing Tanks – 65 Nos.

The scheme is appearing in MLA priority list for the year 2023-24.

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after Tertiary Treatment for Irrigation, construction activities and Fire Fighting purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the MBBR followed by Constructed Wetland and also decided to explore the possibilities for construction of Pre-fabricated/ compact/ modular sewage treated system for STPs below 1.00 MLD instead of going for conventional STP and avoiding Intermediate Pumping Stations (IPS).

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

**14. Capacity Enhancement and Technology up gradation of STP Badah at Kullu. In Tehsil Manali, in District Kullu (H.P.)
(Circle – Kullu, Division- Kullu)**

The Executive Engineer, JS Division Kullu presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	1.50 MLD
2	Technology	MBBR
3	Length of Sewer Line/ Other components	<p>STP Units - Inlet Chamber/ Stilling Chamber (New) - 1 No., Course screen chamber (Mechanical & Manual) (New) - 2 No., Fine Screen chamber (Mechanical & Manual) (New) - 2 No., Grit chamber (Mechanical & Manual) (New) - 2 No., Equalisation Tank (Existing Aeration tank be used) - 2 No., MBBR System (New)- 2 lots, Tube settler (New) - 1 No., Centrifuge sump (New) - 1 No., DWPE Dosing Tank (New) - 1 No., Chlorine Contact Tank (Existing to be used) - 1 No., Filter feed Tank (Existing settling tank be used) - 1 No., Centrate Tank (New) - 1 No., Air blower building & Blower pannel room (New) - 1 No., Chlorination cum chlorine Tonner house (Existing pump house be used with modification) - 1 No., Centrifuge Building (New) - 1 No., Other Miscellaneous civil works - 1 No. and Jacketing of Existing Sludge drying Beds - 3 No.</p> <p>Connectivity of Low laying area - Sewer R/Main</p>

		DI 150 mm dia – 1250 Rmt., Sewer line DI 150 mm – 1351 Rmt., RCC Manhole (1.50 Mtr. depth to 2.20 meter Depth) – 57 No. and Wet well – 1 No.
--	--	---

The scheme has been approved in 1st Tranche of AMRUT 2.0

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after Tertiary Treatment for Irrigation, construction activities and Fire Fighting purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the MBBR followed by Constructed Wetland.

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

**15. Providing Sewerage facilities in left out area between Kullu Municipal area and Bhunter Naggar Panchayat area in Distt Kullu (H.P.)
(Circle – Kullu, Division- Kullu)**

The Executive Engineer, JS Division Kullu presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	7.00 MLD at Sharabai and 2.50 MLD at Jarad (Left Bank)
2	Technology	Sequential Batch Reactor (SBR)
3	Length of Sewer Line/ Other components	Wetwell / Pump Room – 1 No., Rising main- 400 mm dia K-9- 2100 Rmt., House Connection – 2846 No., RCC Manhole – 1420 No. <ul style="list-style-type: none"> • Sewerage Network <ul style="list-style-type: none"> ○ 150 mm dia K7- 31247.00 Rmt. ○ 200 mm dia K7 – 4086.00 Rmt. ○ 250 mm dia K7 – 210.70 Rmt. ○ 300 mm dia K7 – 600.60 Rmt. ○ 400 mm dia K7 – 2353.00 Rmt. ○ 450 mm dia K7 – 579.30 Rmt. ○ 600 mm dia K7 – 252.40 Rmt.
4	Augmentation of Water Supply	Provision for augmentation of water supply is proposed by constructing Water Supply Scheme for the area.

The scheme is proposed for MLA priority list for the year 2023-24.

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after treatment for Irrigation, construction activities and Fire Fighting purpose etc.

in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the SBR. The committee also decided to construct all components of the scheme above Highest Flood Level (HFL).

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

**16. Providing Sewerage Scheme to GP Gohar, Bassa, Chail Chowk & Adjoining area in Teshil Chaciout Distt. Mandi H.P.
(Circle – Sundernagar, Division- Baggi)**

The Superintending Engineer, JS Circle Sundernagar presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	Zone-I -0.40 MLD (IPS) Zone-II -1.80 MLD Total – 2.20 MLD (STP)
2	Technology	Sequential Batch Reactor (SBR)
3	Length of Sewer Line/ Other components	Sewerage Network DI K-7 pipes – 43.575 KM, House connections 3146 Nos., Provisions for Manhole chamber, Inspection chamber and flushing tanks,

The scheme is proposed for MLA priority list for the year 2022-23.

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after treatment for Irrigation, construction activities and Fire Fighting purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the SBR and also decided to explore the possibilities for construction of Pre-fabricated/ compact/ modular sewage treated system for STPs below 1.00 MLD instead of going for conventional STP and avoiding Intermediate Pumping Stations (IPS).

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

**17. Providing Sewerage Scheme to Gram Panchayat Dallah & Kannu in Tehsil Padher Distt. Mandi H.P. (S.H. Construction of Sewage Treatment Plant, Capacity 1.20 MLD STP Zone-I, 0.40 MLD STP Zone-2, Associated Sewage Network)
(Circle – Sundernagar, Division- Padhar)**

The Superintending Engineer, JS Circle Sundernagar presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	Zone-I -1.20 MLD Zone-II -0.40 MLD
2	Technology	MBBR followed by Constructed Wetland (Root Zone System)
3	Length of Sewer Line/ Other components	Zone -I Sewerage Network DI K-7 pipes – 31134 Rmt. (Main Sewer Network) ,HDPE Pipe for House connections-9113 Rmt. , Manhole chamber- 1155 Nos., Inspection chamber- 911 Nos. Zone -II Sewerage Network DI K-7 pipes – 7190 Rmt. (Main Sewer Network) ,HDPE Pipe for House connections-3395 Rmt. , Manhole chamber- 269 Nos., Inspection chamber- 340 Nos.
4	Augmentation of Water Supply	Provision for augmentation of water supply is proposed by constructing Lift Water Supply Scheme for the area.

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after Tertiary Treatment for Irrigation, construction activities and Fire Fighting purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the MBBR and also decided to explore the possibilities for construction of Pre-fabricated/ compact/ modular sewage treated system for STPs below 1.00 MLD instead of going for conventional STP and avoiding Intermediate Pumping Stations (IPS).

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

18. Providing Sewerage Scheme to Pandoh and adjoining area in Teshil Sadar Distt. Mandi HP Himachal Pradesh
(Circle – Sundernagar, Division- Mandi)

The Superintending Engineer, JS Circle Sundernagar presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	0.620
2	Technology	SBR
3	Length of Sewer Line/ Other components	Sewerage Network DI K-7 pipes ,HDPE Pipe for House connections, Manhole chamber, Inspection chamber, flushing tank and polishing pond for reuse of treated effluent with allied civil work etc.

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after treatment for Irrigation, construction activities and Fire Fighting purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the SBR and also decided to explore the possibilities for construction of Pre-fabricated/ compact/ modular sewage treated system for STPs below 1.00 MLD instead of going for conventional STP and avoiding Intermediate Pumping Stations (IPS).

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

19. Providing Sewerage Scheme to Kotadhar, Takoli, Nagwain and Jhiri in Teshil Aut Distt. Mandi Himachal Pradesh
(Circle – Sundernagar, Division- Mandi)

The Superintending Engineer, JS Circle Sundernagar presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	Zone –I and II = 0.340 MLD Zone-III, IV and V = 0.855 MLD Zone-VI = 0.340 MLD Total = 1.565 MLD
2	Technology	SBR
3	Length of Sewer Line/ Other components	Sewerage Network DI K-7 pipes ,HDPE Pipe for House connections, Manhole chamber, Inspection chamber and flushing tank etc.

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after treatment for Irrigation, construction activities and Fire Fighting purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the SBR and also decided to explore the possibilities for construction of Pre-fabricated/ compact/ modular sewage treated system for STPs below 1.00 MLD instead of going for conventional STP and avoiding Intermediate Pumping Stations (IPS).

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

Dharamshala Zone

20. Providing Sewerage Scheme to Palampur Town in Tehsil Palampur Distt. Kangra H.P. (Circle – Dharamshala, Division- Palampur)

The Superintending Engineer, JS Circle Dharamshala presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	Zone 1- 1.900 MLD STP for 6 No. Wards Zone 2- 2.200 MLD STP for 4 No. wards Total - 4.100 MLD
2	Technology	MBBR followed by Constructed Wetland (Root Zone System)
3	Length of Sewer Line/ Other components	Sewerage network DI K-7 Pipe – 72.00 KM approx., HDPE pipe for House connection including provisions for Manhole chamber, Inspection Chambers and Flushing tanks and Polishing Ponds for reuse of treated effluent at Zone I & II
4	Reuse	Irrigation
5	Area of land to be Irrigated	To be ascertained while preparing DPR

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after Tertiary Treatment for Irrigation, construction activities and Fire Fighting purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the MBBR followed by Constructed Wetland.

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

21. Providing Sewerage Scheme to GP Drang, Amb Pathiar and Bohan Bhatti in Tehsil Jawalamukhi Distt. Kangra H.P.

(Circle – Dharamshala, Division- Dehra)

The Superintending Engineer, JS Circle Dharamshala presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	STP at Zone 1- (0.46 +0.43+0.36)=1.25 MLD IPS Zone 2 = 0.43 MLD IPS Zone 3 = 0.36 MLD
2	Technology	MBBR followed by Constructed Wetland (Root Zone System)
3	Length of Sewer Line/ Other components	Sewerage network- Approx. Length- 38.650 KM, Manhole – 1346 Nos., Households- 1287 Nos. and provision for Land acquisition.

The scheme is proposed for MLA priority list for the year 2023-24.

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after Tertiary Treatment for Irrigation, construction activities and Fire Fighting purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the MBBR followed by Constructed Wetland and also decided to explore the possibilities for construction of Pre-fabricated/ compact/ modular sewage treated system for STPs below 1.00 MLD instead of going for conventional STP and avoiding Intermediate Pumping Stations (IPS). The committee also decided to check the water supply level required for construction of sewerage scheme and incorporate the same accordingly.

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

22. Providing Sewerage Scheme to GP Khundian Distt. Kangra H.P.

(Circle – Dharamshala, Division- Dehra)

The Superintending Engineer, JS Circle Dharamshala presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	STP Zone I = 0.300 MLD STP Zone II = 0.200 MLD
2	Technology	MBBR followed by Constructed Wetland (Root Zone System)
3	Length of Sewer Line/ Other components	Sewerage network- Approx. Length- 17.665 KM, Manhole – 495 Nos., Households- 563 Nos. and provision for Inspection chamber.

The scheme is proposed for MLA priority list for the year 2023-24.

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after Tertiary Treatment for Irrigation, construction activities and Fire Fighting purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the MBBR followed by Constructed Wetland and also decided to explore the possibilities for construction of Pre-fabricated/ compact/ modular sewage treated system for STPs below 1.00 MLD instead of going for conventional STP and avoiding Intermediate Pumping Stations (IPS).

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

**23. Providing Water Supply and Sewerage facility to GP Tang, Narwana Khas , Rasehar and Adjoining area in Tehsil Dharamshala Distt. Kangra H.P.
(Circle – Dharamshala, Division- Dharamshala)**

The Superintending Engineer, JS Circle Dharamshala presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	STP = 1.00 MLD Zone – I – 0.490 MLD Zone – II – 0.330 MLD (IPS) Zone – III – 0.180 MLD(IPS)
2	Technology	MBBR followed by Constructed Wetland (Root Zone System)
3	Length of Sewer Line/ Other components	Sewerage network DI K-7 Pipe, HDPE pipe for House connection including provisions for Manhole chamber, Inspection Chambers and Flushing tanks and Polishing pond for reuse of treated effluent with allied civil works.
4	Augmentation of Water Supply	Provision for augmentation of water supply is proposed by constructing Water Supply Scheme for the area.

The scheme is proposed for MLA priority list for the year 2023-24.

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after Tertiary Treatment for Irrigation, construction activities and Fire Fighting purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the MBBR followed by Constructed Wetland and also decided to explore the possibilities for construction of Pre-fabricated/ compact/ modular sewage

treated system for STPs below 1.00 MLD instead of going for conventional STP and avoiding Intermediate Pumping Stations (IPS).

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

24. Providing Water Supply and Sewerage facility to GP Yol and Adjoining area in Tehsil Dharamshala Distt. Kangra H.P.

(Circle- Dharamshala Division – Dharamshala)

The Superintending Engineer, JS Circle Dharamshala presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	1.80 MLD
2	Technology	MBBR followed by Constructed Wetland (Root Zone System)
3	Length of Sewer Line/ Other components	Sewerage network DI K-7 Pipe, HDPE pipe for House connection including provisions for Manhole chamber, Inspection Chambers and Flushing tanks and Polishing pond for reuse of treated effluent with allied civil works.
4	Augmentation of Water Supply	Provision for augmentation of water supply is proposed by constructing Water Supply Scheme for the area.

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after Tertiary Treatment for Irrigation, construction activities and Fire Fighting purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the MBBR followed by Constructed Wetland and also decided to explore the possibilities for construction of Pre-fabricated/ compact/ modular sewage treated system for STPs below 1.00 MLD instead of going for conventional STP and avoiding Intermediate Pumping Stations (IPS).

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

25. Providing Sewerage Scheme and augmentation of WSS to Jaisinghpur and Adjoining area in Tehsil Jaisinghpur Distt. Kangra HP

(Circle –Dharamshala, Division- Thural)

The Superintending Engineer, JS Circle Dharamshala presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	Zone I- STP = (0.430+0.130) = 0.560 MLD Zone II- IPS = 0.130 MLD
2	Technology	MBBR followed by Constructed Wetland (Root Zone System)
3	Length of Sewer Line/ Other components	Sewerage network DI K-7 Pipe- 22 KM, HDPE pipe for House connection- 4385 Rmt., Manhole chamber- 880 Nos., Inspection Chambers- 300 Nos. and Flushing tanks- 62 Nos.
4	Augmentation of Water Supply	Provision for augmentation of water supply is proposed by constructing Water Supply Scheme for the area.

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after Tertiary Treatment for Irrigation, construction activities and Fire Fighting purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the MBBR followed by Constructed Wetland and also decided to explore the possibilities for construction of Pre-fabricated/ compact/ modular sewage treated system for STPs below 1.00 MLD instead of going for conventional STP and avoiding Intermediate Pumping Stations (IPS).

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

26. Providing Sewerage System to Banikhet and adjoining Area in Teh. Dalhousie Distt. Chamba H.P.

(Circle –Chamba, Division- Dalhousie)

The Superintending Engineer, JS Circle Chamba presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	Phase I –Banikhet – 0.65 MLD Phase II –Bathri– 0.85 MLD
2	Technology	MBBR followed by Constructed Wetland (Root Zone System)
3	Length of Sewer Line/ Other components	Sewerage network DI K-7 Pipe, HDPE pipe for House connection including provisions for Manhole chamber, Inspection Chambers and

	Flushing tanks etc.
--	---------------------

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after Tertiary Treatment for Irrigation, construction activities, Fire Fighting and forest use purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the MBBR followed by Constructed Wetland and also decided to explore the possibilities for construction of Pre-fabricated/ compact/ modular sewage treated system for STPs below 1.00 MLD instead of going for conventional STP and avoiding Intermediate Pumping Stations (IPS).

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

27. Providing Sewerage Scheme to GP Kugti in Teshil Bharmour Distt. Chamba H.P. (S.H. Construction of Sewage Treatment Plant, Capacity 120 KLD, Associated Sewage Network) (Circle –Chamba, Division- Bharmour)

The Superintending Engineer, JS Circle Chamba presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	0.12 MLD
2	Technology	MBBR followed by Constructed Wetland (Root Zone System)
3	Length of Sewer Line/ Other components	Sewerage network DI K-7 Pipe, HDPE pipe for House connection including provisions for Manhole chamber, Inspection Chambers and Flushing tanks etc.

The scheme is proposed under Tribal Head.

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after Tertiary Treatment for Irrigation, construction activities, Fire Fighting and forest use purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the MBBR followed by Constructed Wetland and also decided to explore the possibilities for construction of Pre-fabricated/ compact/ modular sewage treated system for STPs below 1.00 MLD instead of going for conventional STP and avoiding Intermediate Pumping Stations (IPS).

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

**28. Providing Sewerage Scheme to Samote area in Tehsil Sihunta Distt. Chamba HP.
(Circle –Chamba, Division- Bharmour)**

The Superintending Engineer, JS Circle Chamba presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	0.70 MLD and 0.67 MLD (in 2 parallel streams)
2	Technology	MBBR followed by Constructed Wetland (Root Zone System)
3	Length of Sewer Line/ Other components	Sewerage network DI K-7 Pipe, HDPE pipe for House connection including provisions for Manhole chamber, Inspection Chambers and Flushing tanks etc.

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after Tertiary Treatment for Irrigation, construction activities, Fire Fighting and forest use purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the MBBR followed by Constructed Wetland and also decided to explore the possibilities for construction of Pre-fabricated/ compact/ modular sewage treated system for STPs below 1.00 MLD instead of going for conventional STP and avoiding Intermediate Pumping Stations (IPS).

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

Hamirpur Zone

**29. Providing Sewerage Scheme to Gram Panchayat Rangas in tehsil Nadaun Distt. Hamirpur HP
(Circle –Hamirpur, Division- Hamirpur)**

The Superintending Engineer, JS Circle Hamirpur presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	0.40 MLD
2	Technology	MBBR followed by Constructed Wetland (Root Zone System)
3	Length of Sewer Line/ Other components	Sewerage network DI K-7 Pipe- 6721 Rmt., HDPE pipe for House connection- 1612 Rmt., Manhole chamber- 227 Nos., Inspection

	Chambers- 161 Nos. Household connections- 322 Nos. and provision for Flushing tanks etc.
--	--

The scheme is proposed for MLA priority list for the year 2023-24.

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after Tertiary Treatment for Irrigation, construction activities, Fire Fighting and forest use purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the MBBR followed by Constructed Wetland and also decided to explore the possibilities for construction of Pre-fabricated/ compact/ modular sewage treated system for STPs below 1.00 MLD instead of going for conventional STP and avoiding Intermediate Pumping Stations (IPS).

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

**30. Providing Sewerage Scheme to GP Dhanata in tehsil Nadaun Distt. Hamirpur HP.
(Circle –Hamirpur, Division- Hamirpur)**

The Superintending Engineer, JS Circle Hamirpur presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	IPS Zone –II – 0.160 MLD STP Zone –I – (0.24 + 0.16)= 0.40 MLD
2	Technology	MBBR followed by Constructed Wetland (Root Zone System)
3	Length of Sewer Line/ Other components	Sewerage network DI K-7 Pipe- 23.650 KM, Manhole chamber- 810 Nos., Inspection Chambers- 250 Nos. and provision for Flushing tanks and HDPE pipes for household connection etc.

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after Tertiary Treatment for Irrigation, construction activities, Fire Fighting and forest use purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the MBBR followed by Constructed Wetland and also decided to explore the possibilities for construction of Pre-fabricated/ compact/ modular sewage treated system for STPs below 1.00 MLD instead of going for conventional STP and avoiding Intermediate Pumping Stations (IPS).

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

31. Providing Sewerage Scheme to Gram Panchayat Galore in tehsil Barsar Distt. Hamirpur HP (Circle –Hamirpur, Division- Barsar)

The Superintending Engineer, JS Circle Hamirpur presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	0.65 MLD
2	Technology	MBBR followed by Constructed Wetland (Root Zone System)
3	Length of Sewer Line/ Other components	Sewerage network DI K-7 Pipe- 22.550 KM, Manhole chamber- 825 Nos., Inspection Chambers- 500 Nos. and provision for Flushing tanks and HDPE pipes for household connection etc.

The scheme is proposed for MLA priority list for the year 2023-24.

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after Tertiary Treatment for Irrigation, construction activities, Fire Fighting and forest use purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the MBBR followed by Constructed Wetland and also decided to explore the possibilities for construction of Pre-fabricated/ compact/ modular sewage treated system for STPs below 1.00 MLD instead of going for conventional STP and avoiding Intermediate Pumping Stations (IPS). The committee also decided to check the water supply level required for construction of sewerage scheme and incorporate the same accordingly.

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

32. Providing Sewerage Scheme to GP Daruhi and Sasan in tehsil Hamirpur Distt. Hamirpur, HP (Circle –Hamirpur, Division- Hamirpur)

The Superintending Engineer, JS Circle Hamirpur presented the case as under:

Sr. No.	Description	Capacity / Details
1	STP Capacity	STP Zone –I = (0.6 + 0.170) = 0.770 MLD IPS Zone –II = 0.170 MLD STP Zone III= (0.230 +0.20)= 0.430 MLD IPS Zone- IV 0.20 MLD

2	Technology	MBBR followed by Constructed Wetland (Root Zone System)
3	Length of Sewer Line/ Other components	Sewerage network DI K-7 Pipe- 38.250 KM, Manhole chamber- 1370 Nos., Inspection Chambers- 798 Nos. and provision for Flushing tanks and HDPE pipes for household connection etc.

After detailed discussion, it was decided to incorporate provision for reuse of treated waste water by creating pondage after Tertiary Treatment for Irrigation, construction activities, Fire Fighting and forest use purpose etc. in the DPR, keeping in view the consent of beneficiaries through ULB/RLB. The committee after detailed deliberation approved the MBBR followed by Constructed Wetland and also decided to explore the possibilities for construction of Pre-fabricated/ compact/ modular sewage treated system for STPs below 1.00 MLD instead of going for conventional STP and avoiding Intermediate Pumping Stations (IPS).

The Committee after detailed discussion recommended proposal and the field officers were directed to take necessary action subject to the fulfilment of detailed terms and conditions attached with the minutes of meeting.

The Chairman appreciated the participation of public representative (especially the representative from District Sirmour) and they expressed their willingness to accept the treated sewerage effluent for irrigation purpose. The Chairman expressed the need if IEC activities on reuse of treated waste water.

The committee approved the above proposals subject to following terms and conditions:-

1. *The O & M cost and other inadmissible components shall not be proposed in the DPR except where funding agencies explicitly allow its provision.*
2. *The proposals for sewerage schemes be prepared keeping in mind the adequate existing water supply level for the areas concerned.*
3. *General thumb rules for type of technology to be used shall be as under:-*
 1. ****Small Capacity (Up to 1 MLD - Million Liters per Day)*:***
 - ****Septic Tanks*:*** *Suitable for individual homes, small communities, or remote areas with lower flow rates. Provides basic primary treatment.*

- ***Constructed Wetlands***: A natural, low-energy treatment option suitable for small-scale applications with an ecological focus.

- ***Package Plants***: Compact, pre-fabricated treatment units that can serve small to medium-sized communities.

- ***Extended Aeration***: Effective for small to medium-sized communities, offering good nutrient removal and stable operation.

- ***SBR (Sequencing Batch Reactor)***: Applicable to smaller communities due to its flexibility and ability to handle variable loads.

2. ***Medium Capacity (1 MLD to 10 MLD - Million Liters per Day)***:

- ***Activated Sludge***: Commonly used for medium-sized STPs, offering efficient organic matter removal.

- ***Extended Aeration***: Suitable for medium-sized communities, known for its simplicity and stable performance.

- ***SBR (Sequencing Batch Reactor)***: Ideal for medium-sized facilities due to its ability to adapt to changing conditions.

- ***Rotating Biological Contactors (RBC)***: Can handle medium flow rates, often chosen for its low maintenance requirements.

- ***Membrane Bioreactors (MBR)***: Provides high-quality effluent and can be used for medium-sized applications with stringent effluent standards.

3. ***Large Capacity (Over 10 MLD - Million Liters per Day)***:

- ***Activated Sludge***: Widely applied in larger municipalities and industrial settings due to its scalability.

- ***Trickling Filters***: Can serve larger populations and industries, offering stable performance with less energy consumption.

- ***Membrane Bioreactors (MBR)***: Suitable for large-scale applications where high-quality effluent is required.

- ***Moving Bed Biofilm Reactors (MBBR)***: Scalable for large STPs and industrial wastewater treatment, known for its process stability.

- ***Advanced Oxidation Processes (AOP)***: Used for specialized applications in large-scale industrial settings requiring advanced.

4. The STPs of small capacities i.e. <1 MLD, the modular/ prefabricated/ decentralized units must be installed. The type of technology shall be got approved from SLTC after submitting the influent and effluent quality parameters of STPs in the prescribed proforma below:-

Sr. No.	Parameters	Influent		Effluent	
		As per Standard parameters (CPCB)	As per Sampling	As per Standard parameters (CPCB)	As per Sampling
1	pH	6.5-9.0		6.5-9.0	
2	TSS (Mg/l)	<650		<100	
3	BOD (Mg/l)	<350		<30	
4	COD(Mg/l)	<700		<250	
5	Fecal Coliform (MPN/100 ml)	10 ⁸		<1000	

In addition to above, Er. Naresh AE, MC Mandi present in the meeting, stated that due to delimitation of MC Mandi and merger of some GP area into MC Mandi, the following wards are devoid of sewerage facility:-

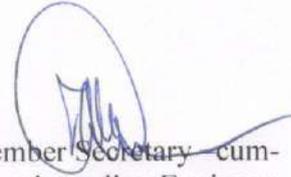
Ward No.	Name of Ward	Status of Sewerage Facility
14	Behna	No Sewerage facility
15	Dhaundi	No Sewerage facility
4	Nela	No Sewerage facility
1	Khaliyar	Partially sewerage facility
6	Sanyard	Partially sewerage facility
7	Talyahar	Partially sewerage facility
9	Palace Colony	Partially sewerage facility

He requested the Jal Shakti Vibhag, to provide Sewerage facilities to left out areas of MC Mandi (HP). SE Jal Shakti Circle, Sundernagar is directed to discuss the feasibilities and submit the proposal accordingly.

The Committee further directed that in future, proposal being submitted for SLTC approval must have following detail in addition to Influent & Effluent data mentioned above to maintain uniformity in proposals being scrutinized by SLTC.

Present Status	Proposed Capacity	Estimated Cost of Proposal (in Lakh)	Proposed Units/ Components	Comments of the Committee/ Remarks
Existing STP/ Reuse of Effluent or New STP/ Reuse of Effluent				
1. Capacity:	MLD			
2. Influent (Inlet) Parameters				
3. Effluent (outlet) Parameters				
4. Process/ Technology				
5. Reuse: (Purpose)				
6. Area of Land to be Irrigated	CCA in Hectare			

Meeting ended with the vote of thanks to and from the Chair.



Member Secretary cum-
Superintending Engineer,
P&I-1, Jal Shakti Bhawan,
Shikha-5.

Attendance Sheet

List of Participants who attended the 2nd meeting of the State Level Technical Committee for scrutiny and approval of DPRs for Sewerage Schemes in HP for the year 2023-24 on dated 11.09.2023.

Sr. No.	Name	Designation
1	Er. Anju Sharma	CE Shimla Zone
2	Er. Suresh Mahjan	CE Dharamshala Zone
3	Er. J.S. Chauhan	CE WSSO
4	Er. V.K. Dhatwalia (Through VC)	CE Hamirpur Zone
5	Er. Upendra Vaidya (Through VC)	CE Mandi Zone
6	Er. Anil Mehta	CE(D&M)
7	Dr. Arvind Kumar Nema (Through VC)	Professor & Head, Civil Engg Deptt., IIT Delhi
8	Er. Deepak Garg	SE Dharmshala
9	Er. Rohit Dubey (Through VC)	SE Sundernagar
10	Er. Mukesh Kumar Hira	SE P&I-I
11	Er. Rajeev Kumar	SE Nahan
12	Er. Sanjeev Soni	SE Solan
13	Er. Rajesh Mongra	SE Chamba
14	Er. Neeraj Bhogal (Through VC)	SE Hamirpur
15	Er. Vijay Kashyap	SE Shimla Zone
16	Er. Rakesh Prashar	Nodal Officer (NGT & AMRUT 2.0)
17	Er. Mandeep Gupta	EE Rajgarh
18	Er. Ashish Rana	EE Nahan
19	Er. Kanchan Sharma	EE Store& Purchase
20	Er. Rashbir Negi (Through VC)	EE Rampur
21	Er. Vivek Katoch	EE Arki
22	Er. Amit	EE Kullu
23	Er. Abhishek Sharma (Through VC)	EE R/Peo
24	Er. Rajat Sharma (Through VC)	EE Sundernagar
25	Er. Vivek Thakur	EE Nagrota Bagwan
26	Er. Munish Sharma	EE Noradhar
27	Er. Aneesh Thakur	EE Dehra
28	Er. Anil Kumar	AE Sub Division Majra
29	Er. Virender Sharma	AE Sub Division Kaffoti
30	Er. Amit Chaudhary	AE Sub Division Naduan
31	Er. Raman	AE Sub Division Sarahan
32	Er. Naresh	Assistant Engineer M.C Mandi
33	Er. Aditya kanwar	Process Engineer (D/Z)
34	Er. Dikshit Thakur	Process Engineer (S/Z)
35	Er. Dalip Sharma	JE (Dev.) O/o BDO
36	Er. Ghanshyam Sharma	JE N.P kandaghat
37	Sh.Pradeep Chauhan	BDO Paonta Sahib
38	Sh.Surender Singh	GP Sataun
39	Smt. Mamta Devi	Pradhan Sataun
40	Sh.Sagar	Pradhan Kyurd
41	Smt.Deepika	Pradhan Majia
42	Sh.Rasula	Pradhan Misserulda
43	Sh.Sabar Ali	Pradhan GP Melion

Sr. No.	Name	Designation
44	Sh.Ravi Kumar	Up Pradhan Lakepar
45	Smt. Ashima Sharma	Secretary GP Rajgarh
46	Sh. Ujwal Chauhan	C & E consulting
47	Sh.Mukesh Chauhan	GP Sataun

Sr. No.	Name	Designation
1	Sh. Ravi Kumar	Up Pradhan Lakepar
2	Smt. Ashima Sharma	Secretary GP Rajgarh
3	Sh. Ujwal Chauhan	C & E consulting
4	Sh. Mukesh Chauhan	GP Sataun
5	Sh. Ravi Kumar	Up Pradhan Lakepar
6	Smt. Ashima Sharma	Secretary GP Rajgarh
7	Sh. Ujwal Chauhan	C & E consulting
8	Sh. Mukesh Chauhan	GP Sataun
9	Sh. Ravi Kumar	Up Pradhan Lakepar
10	Smt. Ashima Sharma	Secretary GP Rajgarh
11	Sh. Ujwal Chauhan	C & E consulting
12	Sh. Mukesh Chauhan	GP Sataun
13	Sh. Ravi Kumar	Up Pradhan Lakepar
14	Smt. Ashima Sharma	Secretary GP Rajgarh
15	Sh. Ujwal Chauhan	C & E consulting
16	Sh. Mukesh Chauhan	GP Sataun
17	Sh. Ravi Kumar	Up Pradhan Lakepar
18	Smt. Ashima Sharma	Secretary GP Rajgarh
19	Sh. Ujwal Chauhan	C & E consulting
20	Sh. Mukesh Chauhan	GP Sataun
21	Sh. Ravi Kumar	Up Pradhan Lakepar
22	Smt. Ashima Sharma	Secretary GP Rajgarh
23	Sh. Ujwal Chauhan	C & E consulting
24	Sh. Mukesh Chauhan	GP Sataun
25	Sh. Ravi Kumar	Up Pradhan Lakepar
26	Smt. Ashima Sharma	Secretary GP Rajgarh
27	Sh. Ujwal Chauhan	C & E consulting
28	Sh. Mukesh Chauhan	GP Sataun
29	Sh. Ravi Kumar	Up Pradhan Lakepar
30	Smt. Ashima Sharma	Secretary GP Rajgarh
31	Sh. Ujwal Chauhan	C & E consulting
32	Sh. Mukesh Chauhan	GP Sataun
33	Sh. Ravi Kumar	Up Pradhan Lakepar
34	Smt. Ashima Sharma	Secretary GP Rajgarh
35	Sh. Ujwal Chauhan	C & E consulting
36	Sh. Mukesh Chauhan	GP Sataun
37	Sh. Ravi Kumar	Up Pradhan Lakepar
38	Smt. Ashima Sharma	Secretary GP Rajgarh
39	Sh. Ujwal Chauhan	C & E consulting
40	Sh. Mukesh Chauhan	GP Sataun
41	Sh. Ravi Kumar	Up Pradhan Lakepar
42	Smt. Ashima Sharma	Secretary GP Rajgarh
43	Sh. Ujwal Chauhan	C & E consulting
44	Sh. Mukesh Chauhan	GP Sataun
45	Sh. Ravi Kumar	Up Pradhan Lakepar
46	Smt. Ashima Sharma	Secretary GP Rajgarh
47	Sh. Ujwal Chauhan	C & E consulting
48	Sh. Mukesh Chauhan	GP Sataun
49	Sh. Ravi Kumar	Up Pradhan Lakepar
50	Smt. Ashima Sharma	Secretary GP Rajgarh
51	Sh. Ujwal Chauhan	C & E consulting
52	Sh. Mukesh Chauhan	GP Sataun
53	Sh. Ravi Kumar	Up Pradhan Lakepar
54	Smt. Ashima Sharma	Secretary GP Rajgarh
55	Sh. Ujwal Chauhan	C & E consulting
56	Sh. Mukesh Chauhan	GP Sataun
57	Sh. Ravi Kumar	Up Pradhan Lakepar
58	Smt. Ashima Sharma	Secretary GP Rajgarh
59	Sh. Ujwal Chauhan	C & E consulting
60	Sh. Mukesh Chauhan	GP Sataun
61	Sh. Ravi Kumar	Up Pradhan Lakepar
62	Smt. Ashima Sharma	Secretary GP Rajgarh
63	Sh. Ujwal Chauhan	C & E consulting
64	Sh. Mukesh Chauhan	GP Sataun
65	Sh. Ravi Kumar	Up Pradhan Lakepar
66	Smt. Ashima Sharma	Secretary GP Rajgarh
67	Sh. Ujwal Chauhan	C & E consulting
68	Sh. Mukesh Chauhan	GP Sataun
69	Sh. Ravi Kumar	Up Pradhan Lakepar
70	Smt. Ashima Sharma	Secretary GP Rajgarh
71	Sh. Ujwal Chauhan	C & E consulting
72	Sh. Mukesh Chauhan	GP Sataun
73	Sh. Ravi Kumar	Up Pradhan Lakepar
74	Smt. Ashima Sharma	Secretary GP Rajgarh
75	Sh. Ujwal Chauhan	C & E consulting
76	Sh. Mukesh Chauhan	GP Sataun
77	Sh. Ravi Kumar	Up Pradhan Lakepar
78	Smt. Ashima Sharma	Secretary GP Rajgarh
79	Sh. Ujwal Chauhan	C & E consulting
80	Sh. Mukesh Chauhan	GP Sataun
81	Sh. Ravi Kumar	Up Pradhan Lakepar
82	Smt. Ashima Sharma	Secretary GP Rajgarh
83	Sh. Ujwal Chauhan	C & E consulting
84	Sh. Mukesh Chauhan	GP Sataun
85	Sh. Ravi Kumar	Up Pradhan Lakepar
86	Smt. Ashima Sharma	Secretary GP Rajgarh
87	Sh. Ujwal Chauhan	C & E consulting
88	Sh. Mukesh Chauhan	GP Sataun
89	Sh. Ravi Kumar	Up Pradhan Lakepar
90	Smt. Ashima Sharma	Secretary GP Rajgarh
91	Sh. Ujwal Chauhan	C & E consulting
92	Sh. Mukesh Chauhan	GP Sataun
93	Sh. Ravi Kumar	Up Pradhan Lakepar
94	Smt. Ashima Sharma	Secretary GP Rajgarh
95	Sh. Ujwal Chauhan	C & E consulting
96	Sh. Mukesh Chauhan	GP Sataun
97	Sh. Ravi Kumar	Up Pradhan Lakepar
98	Smt. Ashima Sharma	Secretary GP Rajgarh
99	Sh. Ujwal Chauhan	C & E consulting
100	Sh. Mukesh Chauhan	GP Sataun