RE THE HON'BLE NATIONAL GREEN TRIBUNAL, PRINCIPAL BENCH,

NEW DELHI

Original Application No.1229 of 2024

In Re: News Item titled "Over 1200 sources polluting water bodies in Punjab reveals govt. report" appearing in the Tribune dated 16.09.2024.

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Deponent

Date: 08.07.2026
Place: Chandigarh

(Shailender Kaur)
Special Secretary to Government of Punjab,
Department of Science, Technology &
Environment
(On behalf of Respondent No. 04)

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL, PRINCIPAL BENCH,

NEW DELHI

Original Application No.1229 of 2024

In Re: "News Item titled "Over 1200 sources polluting water bodies in Punjab reveals govt. report" appearing in the Tribune dated 16.09.2024.

Short reply by way of affidavit of Shailender Kaur, Special Secretary to Government of 1-Punjab, Department of Science Technology and Environment on behalf of respondent no.4, Secretary Environment, State of Punjab in compliance to order dated 18.03.2026.

I, the above-named deponent, do hereby solemnly affirm and state as under:

Respectfully showeth

1) That the deponent namely Shailender Kaur is presently working as Special Secretary to Government of Punjab, Department of Science Technology and Environment. The deponent is well conversant with the facts of the case and is Competent and authorized to file the present affidavit containing the short reply on behalf of newly added respondent no. 04 i.e. Principal Secretary Environment, State of Punjab.

2) That the above-mentioned Original Application was registered by the

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Hon'ble National Green Tribunal in exercise of its Suo moto powers on the basis of News Item titled "Over 1200 sources polluting water bodies in Punjab reveals govt. report" appearing in the Tribune dated 16.09.2024. The case is pending before this Hon'ble Tribunal for adjudication.

3) The Hon'ble Tribunal vide Order dated 18.03.2026 observed that most of the effected water bodies are mostly storm water drain and if sources of pollution have been plugged then in what manner the sewage, industrial effluent and liquid waste which was being discharged through those sources is being treated or utilized. The Hon'ble Tribunal further directed that the concerned respondent i.e. Punjab Pollution Control Board (Respondent No. 1) to clarify as to how the liquid waste will be treated in the ponds. It was also directed that the State authorities are required to take action for stopping the discharge of untreated liquid and solid waste in the water bodies including storm water drains by having a proper plan for management of the said waste, which has not been disclosed in the report earlier filed by Respondent No. 1.

4) That in pursuance of NGT Order dated 18.03.2026, Administrative Secretary, Department of Science, Technology and Environment vide DO Letters dated 13.05.2026 had requested Secretary, Department of Local Govt., Govt. of Punjab and Member Secretary, Punjab Pollution Control Board to submit detailed reply of the observations made by Hon'ble NGT vide Para 2 of Order dated 18.03.2026 regarding polluting sources pertaining to Urban Local Bodies and polluting sources other than village wastewater & Urban Local Bodies outlets, respectively. The copies of DO Letters are

enclosed as **Annexure – R-4/A.** Thereafter, reminder DO Letters dated 03.06.2026 in this regard were again sent to Secretary, Department of Local Govt., Govt. of Punjab and Member Secretary, Punjab Pollution Control Board. The copies of the reminder DO Letters are enclosed as **Annexure – R-4/B**.

5) That Punjab Pollution Control Board has reported that 774 number of pollution sources contributing towards pollution of water bodies have been closed. Out of 774 sources, 39 are industrial sources, 14 are individual sources, 137 sources are related to Urban Local Body outlets, 227 are dairy waste sources, 308 are sources of village waste water and 49 sources were found to be not existing now. The information about the manner in which the treated waste water is being disposed of after the plugging of the sources of pollution into water bodies, have been also provided by the Board. The perusal of the information indicates that some sources of pollution have been permanently closed, some sources have been shown as repeated entries, some sources have been discharging the treated effluent onto land for plantation/irrigation purpose, some sources are discharging their treated effluent into the drains. The information provided by the Board in respect of closure of industrial, Individual, Urban Local Body outlets, dairy waste, village waste water sources is enclosed as **Annexure R-4/C**. A detailed Affidavit in this regard is being filed separately by Punjab Pollution Control Board (Respondent No. 1).

6) That as per the directions of the Ministry of Jal Shakti, Government of India issued vide DO Letter dated 07.03.2025 regarding up-dation of action plans of 2 Priority-I polluted river stretches of the Punjab,

the updated Action Plans of River Sutlej and River Ghaggar were prepared by the Directorate of Environment and Climate Change, Department of Science, Technology and Environment, Government of Punjab with the inputs of the stakeholder departments and agencies. The updated Action Plans were thereafter approved by the River Rejuvenation Committee (RRC) under the chairmanship of Administrative Secretary, Department of Science, Technology & Environment in its meeting held on 28.10.2025 and State Apex Committee (SAC) under the Chairmanship of Chief Secretary, Punjab in its meeting held on 12.01.2026. The updated Action Plans of River Ghaggar and Sutlej were submitted to the Ministry of Jal Shakti, Government of India vide DECC Letter No. DECC/2026/1123 dated 21.01.2026 by Directorate of Environment and Climate Change with a copy to Member Secretary, Central Pollution Control Board, New Delhi. A copy of letter dated 21.01.2026 along with copies of both the Action Plans are enclosed as **Annexure R-4/D.**

7) That the various sources of water pollution in River Ghaggar and River Sutlej have been duly identified and the same were included in the updated action plans to stop the flow of untreated wastewater or other waste directly or indirectly into both the rivers so that the CPCB prescribed Class 'B' water quality can be achieved.

8) That the implementation progress of various Clean River Action Plans of the Punjab is being regularly reviewed by River Rejuvenation Committee & State Apex Committee and directions are being issued to concerned department/agencies to take necessary actions for abetment of water pollution from various sources in a meticulous and time bound manner.

NOTARY GOVT. OF INDIA DALIP KUMAR CHANDIGARH Regd. No. 5604 Expiry dt. 25-3-2028

9) That the deponent may kindly be allowed to place on record the present short reply by way of affidavit on behalf of Respondent No. 04 for kind consideration.

It is, therefore, prayed that the Original Application No. 1229 of 2024 may kindly be disposed of with appropriate orders in view of the submissions made in the short reply herein above.

Deponent

Date: 08.07.2026
Place: Chandigarh

(Shailender Kaur)
Special Secretary to Government of Punjab,
Department of Science, Technology &
Environment
(On behalf of Respondent No. 04)

VERIFICATION:

I, the deponent above named, do hereby verify and state that the contents of the above affidavit are true and correct to my knowledge as derived from the official record. No part of the above affidavit Is false and nothing material has been concealed there from.

GOVT. OF INDIA NOTARY DALIP KUMAR CHANDIGARH Regd. No. 5604 Expiry dt. 25-3-2028

Certified that the Affidavit/SPA/GPA/RA has been read over & Explained to the Deponent / Executant who seemed directly to understand the same at the time of making & signing the document.

Attested as Identified
08 JUL 2026
NOTARY CHANDIGARH

Deponent

Date: 08.7.2026
Place: Chandigarh

(Shailender Kaur)
Special Secretary to Government of Punjab,
Department of Science, Technology &
Environment
(On behalf of Respondent No. 04)

ਪ੍ਰਿਯਾਂਕ ਭਾਰਤੀ, ਆਈ.ਏ.ਐਸ.
ਸਕੱਤਰ
Priyank Bharti, IAS
Secretary

Tel. No. : 0172-2742357
E-mail : secy.te@punjab.gov.in

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ਅ.ਸ. ਪੱਤਰ ਨੰ: /D.O. No. DSCC/2026/1124960/463

ਮਿਤੀ/Dated: 13.05.2026

ਪੰਜਾਬ ਸਰਕਾਰ
Government of Punjab
ਵਿਗਿਆਨ, ਤਕਨੀਕ ਅਤੇ ਵਾਤਾਵਰਣ ਵਿਭਾਗ
Department of Science, Technology & Environment

Sub: Regarding Compliance of Hon'ble NGT Order dated 18.03.2026 in O.A No. 1229/2024 titled, "Over 1200 Sources Polluting Water Bodies in Punjab Reveals Govt. Report" appearing in 'The Tribune' dated 16.09.2024.

Dear Sh. Dubey ji

1. This is in reference to your letter No. 8312-13 dated 30.04.2026 on the subject cited matter wherein PPCB disclosed that out of the total 1574 identified pollution sources, 738 pollution sources are plugged and 836 sources are in operation. Further out of the total 1574 polluting sources, 347 polluting sources pertains to industrial, dairy waste, individual & others besides village wastewater and urban local bodies. The Secretary, Environment has impleaded as one of the Respondents and **directed to file the response at least one week before next date of hearing i.e. 13.07.2026.**

2. Further, NGT vide order dated 18.03.2026 pointed out that the report of PPCB doesn't disclose that if sources of pollution have been plugged then in what manner the sewage, industrial effluent or other liquid waste which was being discharged through these sources, is being treated or utilized. The State authorities are required to take action for stopping the discharge of untreated liquid and solid waste in the water bodies including storm water drains by having a proper plan for management of the said waste.

3. I, therefore, request you to direct the Nodal Officer of your department to submit the detailed reply, in view of the observation made by Hon'ble NGT vide para-2 of the order dated 18.03.2026 by 25.05.2026 for the polluting sources other than village wastewater &urban local bodies outlets.

Warm regards!

Yours Sincerely,

(Priyank Bharti)

13/5

Sh. Lavneet Dubey
Member Secretary,
Punjab Pollution Control Board,
Patiala

ਪ੍ਰਿਯਾਂਕ ਭਾਰਤੀ, ਆਈ.ਏ.ਐਸ.
ਸਕੱਤਰ
Priyank Bharti, IAS
Secretary

Tel. No. : 0172-2742357
E-mail : secy.te@punjab.gov.in

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ਅ.ਸ. ਪੱਤਰ ਨੰ: /D.O. No. DSTE/2026/1124960/462

ਮਿਤੀ / Dated: 13.05.2026

ਪੰਜਾਬ ਸਰਕਾਰ
Government of Punjab
ਵਿਗਿਆਨ, ਤਕਨੀਕ ਅਤੇ ਵਾਤਾਵਰਣ ਵਿਭਾਗ
Department of Science, Technology & Environment

Sub: Regarding Compliance of Hon'ble NGT Order dated 18.03.2026 in O.A No. 1229/2024 titled, "Over 1200 Sources Polluting Water Bodies in Punjab Reveals Govt. Report" appearing in 'The Tribune' dated 16.09.2024.

Dear Sh. Brar,

1. It is informed that Hon'ble NGT, after taking cognizance of the News items titled, "Over 1200 Sources Polluting Water Bodies in Punjab Reveals Govt. Report" appearing in 'The Tribune' dated 16.09.2024 has registered the O.A No. 1229/2024. The Hon'ble NGT vide order dated 18.03.2026 (copy enclosed) informed that PPCB in their reply, after receiving the information from the stakeholder departments, disclosed that out of the total 1574 identified pollution sources, 738 pollution sources are plugged and 836 sources are in operation. Further, 462 polluting sources pertains to urban local bodies out of the total 1574 polluting sources.The Secretary, Environment has impleaded as one of the Respondents and **directed to file the response at least one week beforenext date of hearing i.e. 13.07.2026.**

2. Further, NGT vide order dated 18.03.2026 pointed out that the report of PPCB doesn't disclose that if sources of pollution have been plugged then in what manner the sewage, industrial effluent or other liquid waste which was being discharged through these sources, is being treated or utilized. The State authorities are required to take action for stopping the discharge of untreated liquid and solid waste in the water bodies including storm water drains by having a proper plan for management of the said waste.

3. I, therefore, request you to direct the Nodal Officer of your department to submit the detailed reply, in view of the observation made by Hon'ble NGT vide para-2 of the order dated 18.03.2026 by 25.05.2026 for the polluting sources relating to Urban Local Bodies.

Warm regard!

Yours Sincerely,

(Priyank Bharti)
13/5

Sh. Manjit Singh Brar, IAS
Secretary to Govt. of Punjab,
Department of Local Government

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ਕਮਲ ਕਿਸ਼ੋਰ ਯਾਦਵ, ਆਈ ਏ ਐੱਸ
Kamal Kishor Yadav, IAS

D.O. No. STEB03/46/2026-STES/201
ਮਿਤੀ/Date: 03.06.2026

ਸਕੱਤਰ, ਪੰਜਾਬ ਸਰਕਾਰ
ਆਮ ਰਾਜ ਪ੍ਰਬੰਧ ਅਤੇ ਤਾਲਮੇਲ ਵਿਭਾਗ
Secretary to Government of Punjab
Department of General
Administration & Coordination

Sub: Regarding Compliance of Hon'ble NGT Order dated 18.03.2026 in O.A No. 1229/2024 titled, "Over 1200 Sources Polluting Water Bodies in Punjab Reveals Govt. Report" appearing in 'The Tribune' dated 16.09.2024.

Dear Manjit,

1. Kindly refer to my D.O. Letter DECC/2026/1124960/462 dated 13.05.2026 on the subject cited above wherein it was requested to direct the Nodal Officer of your department to submit the detailed reply by 25.05.2026 for the polluting sources relating to Urban Local Bodies. However, no information in this regard has been received by the department.
2. The Hon'ble NGTvide order dated 18.03.2026 informed that PPCB in their reply, after receiving the information from the stakeholder departments, disclosed that out of the total 1574 identified pollution sources, 738 pollution sources are plugged and 836 sources are in operation. Further, 462 polluting sources pertains to urban local bodies out of the total 1574 polluting sources. The Secretary, Environment has impleaded as one of the Respondents and directed to file the response at least one week beforenext date of hearing i.e. 13.07.2026.
3. I, therefore, again request you to direct the Nodal Officer of your department to submit the detailed reply, in view of the observation made by Hon'ble NGT vide para-2 of the order dated 18.03.2026, by 10.06.2026 for the polluting sources relating to Urban Local Bodies.

Best Wishes.

(Kamal Kishor Yadav)

Sh. Manjit Singh Brar, IAS
Secretary to Govt. of Punjab,
Department of Local Government

Room No. 9, 6th Floor, Punjab Civil Secretariat-I, Sector 1, Chandigarh - 160001
Telelphone : +91-172-2740[illegible] Email : secy.ga@punjab.gov.in

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ਕਮਲ ਕਿਸ਼ੋਰ ਯਾਦਵ, ਆਈ ਏ ਐੱਸ
Kamal Kishor Yadav, IAS

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D.O. No. STEB03/46/2026-STE5/202
ਮਿਤੀ/Date: 03.06.2026

ਸਕੱਤਰ, ਪੰਜਾਬ ਸਰਕਾਰ
ਆਮ ਰਾਜ ਪ੍ਰਬੰਧ ਅਤੇ ਤਾਲਮੇਲ ਵਿਭਾਗ
Secretary to Government of Punjab
Department of General
Administration & Coordination

Sub: Regarding Compliance of Hon'ble NGT Order dated 18.03.2026 in O.A No. 1229/2024 titled, "Over 1200 Sources Polluting Water Bodies in Punjab Reveals Govt. Report" appearing in 'The Tribune' dated 16.09.2024.

Dear Mr. Dubey,

1. Kindly refer to my D.O. Letter DECC/2026/1124960/463 dated 13.05.2026 on the subject cited above wherein it was requested to direct the Nodal Officer of your department to submit the detailed reply by 25.05.2026 for the polluting sources other than village waste water & urban local bodies outlets. However, no information in this regard has been received by the department.

2. The Hon'ble NGTvide order dated 18.03.2026 informed that PPCB in their reply, after receiving the information from the stakeholder departments, disclosed that out of the total 1574 identified pollution sources, 738 pollution sources are plugged and 836 sources are in operation. Further, 462 polluting sources pertains to urban local bodies out of the total 1574 polluting sources. The Secretary, Environment has impleaded as one of the Respondents and directed to file the response at least one week beforenext date of hearing i.e. 13.07.2026.

3. I, therefore, again request you to direct the Nodal Officer of your department to submit the detailed reply, in view of the observation made by Hon'ble NGT vide para-2 of the order dated 18.03.2026, by 10.06.2026 for the polluting sources other than village wastewater & urban local bodies outlets.

Best Wishes.

(Kamal Kishor Yadav)

Sh. Lavneet Dubey
Member Secretary,
Punjab Pollution Control Board, Patiala.

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Annexure R4/C

List of various sources of pollution which have been plugged and the manner in which the treated waste water is utilized

A. Closure of industrial sources and the manner of utilization of treated effluent.
Total number of industrial sources which have been closed: 39

Sr. No.	Manner in which treated wastewater is disposed/utilized after closure of the source	No. of Industries
i.	Number of industries which have been closed	31
ii.	Treated effluent that is discharged onto land for plantation	6
iii.	Industries waste that has been removed	1
iv.	Treated effluent that is discharged into drain	1
Total		**39**

B. Closure of polluting sources of village waste water and the manner of utilization of treated effluent.

Total number of polluting sources of village waste water which have been closed: 308

Sr. No.	Manner in which treated wastewater is disposed/utilized	No. of polluting sources
1	No. of village wastewater polluting sources which have been permanently closed	26
2	Repeated Entry of identical polluting sources	42
3	Treated effluent after STP/ village oxidation pond that is disposed onto land for irrigation purposes	38
4	Treated effluent after Thapar Model/Seechewal Model discharged into land for irrigation	77
5	Treated effluent after Thapar Model discharged into Drain	33
6	Treated effluent after STP discharged into Drain	37
7	Treated effluent after Waste stabilization Pond discharged into Drain	29
8	Treated effluent discharged into oxidation pond/ Village Pond	24
9	The location where no outlet/polluting source found	1
10	Domestic effluent of Residential House treated through Septic Tank	1
	Total	**308**

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C. Closure of Urban Local Body (ULB) outlets and the manner of utilization of treated effluent.

Total number of Urban Local Body outlets which have been closed: 137

Sr. No.	Manner in which treated wastewater is disposed/utilized	Number of ULB outlets
1	Treated effluent after Sewage Treatment Plant that is discharged into drain	121
2	Treated effluent after Sewage Treatment Plant that is disposed onto land for plantation/horticulture	4
3	Treated effluent after Sewage Treatment Plant that is disposed onto land for irrigation purposes	10
4	Treated effluent after Thapar Model that is discharged into drain	1
5	The location/RD where no polluting wastewater source was found	1
	Total	**137**

D. Closure of dairy outlets and the manner of utilization of treated effluent.

Total number of dairy outlets which have been closed: 227

Sr. No.	Manner in which treated wastewater is disposed/utilized	Number of dairies
1	Number of Dairy wastewater polluting sources which have been permanently closed	187
2	Repeated Entry of identical polluting sources	26
3	Number of Dairy waste water polluting sources where Treated effluent after Thapar Model/Seechewal Model discharged onto land for irrigation	14
	Total	**227**

E. Closure of individual outlets and the manner of utilization of treated effluent.

Total number of individual outlets which have been closed: 14

Sr. No.	Manner in which treated wastewater is disposed/utilized	Number of individual polluting sources
1	Number of individual wastewater polluting sources which are being discharged into sewerage system	7
2	Treated effluent after STP that is discharged into drain	6
3	No. of individual wastewater polluting sources which have been permanently closed	1
	Total	**14**

F. Non-existence sources of pollution

49 sources of pollution mentioned under the head "Any Other" were found to be non-existence.

Government of Punjab
Department of Science Technology & Environment
Directorate of Environment & Climate Change

To,

The Project Director,
National River Conservation Directorate
Department of Water Resources, Ministry of Jal Shakti,
Govt. of India

Letter No. DECC/2026/ 1123
Date: 21/01/2026

Subject: **Submission of updated Action Plans of Polluted River Stretches of Punjab**

Respected Sir,

This is in reference your D.O. No. Legal/OA673/2018/NMCG/2019 dated 07.03.2025 addressed to worthy Chief Secretary, Punjab regarding updation of Action Plans of Polluted River Stretches of Punjab & their regular review.

In this regard, it informed that as per the CPCB Report titled "Polluted River Stretches for Restoration of Water Quality, 2025", now only 2 polluted river stretches of Punjab namely River Ghaggar (D/s Parwanoo to D/s Sardulgarh) and River Sutlej (Nangal to Harike Bridge) fall in the category of Priority Class-I.

Accordingly, the Action Plans of above-mentioned 2 Priority I Polluted River Stretches have been updated. These updated Action Plans were approved by River Rejuvenation Committee (RRC) in its meeting held under the Chairmanship of Administrative Secretary, Department of Science Technology and Environment, Govt. of Punjab on 28.10.2025 and by the State Apex Committee (SAC) during its meeting held the Chairmanship of Chief Secretary, Govt. of Punjab on 12.01.2026.

The copies of updated Action Plans are enclosed herewith for your information and record of Ministry of Jal Shakti, Govt. of India, please. The progress of these Action Plans would be reviewed regularly in the forthcoming Meetings of RRC and SAC.

21.1.26
Additional Director

Encls. /As Above

Endst. No. DECC/2026/ 1124–1126 **Date:** 21/01/2026

A copy of the above is forwarded to the following for information, please:

1) Secretary, Department of Science Technology & Environment, Govt. of Punjab
2) Member Secretary, Central Pollution Control Board, New Delhi
3) OSD to Chief Secretary, Govt. of Punjab

21.1.26
Additional Director

MGSIPA Complex, Sector 26, Chandigarh-160019, INDIA, Phone No. 0172-2795049
Website: https://decc.punjab.gov.in/ Email: director.decc@punjab.gov.in

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Action Plan for Clean River Ghaggar

Updated upto June-2025

Directorate of Environment and Climate Change,
Department of Science, Technology and Environment,
Government of Punjab

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Table of Contents

Chapter 1 - Introduction

1.1 Punjab – Land of Rivers

(i) The word Punjab is a compound of two Persian words, panj ("five") and āb ("water"), thus signifying the land of five waters. The erstwhile Punjab State had five rivers namely Beas, Chenab, Jhelum, Ravi, and Sutlej. However, after the partition of India in 1947, only two rivers, the Sutlej and the Beas, lie within Punjab's territory, while the Ravi flows only along part of its western border.

(ii) The rivers in the State have been used as a source of irrigation, drinking purpose especially in southern Punjab, development of hydro-electric projects to meet the energy requirements in the State and various activities including industrial purposes. The rivers have played a significant role in the socio-economic and industrial development of the State.

1.2 Rapid Urbanization and Industrialization – Main cause of River Pollution

(i) The rapid urbanization and industrialization during the last few decades has adversely impacted the environment of the State. The quantum of sewage and sullage generated from the habitation areas has significantly increased and finding its way into natural drains, eventually leading to riverine system of the State. In the rural areas, due to increase in the population, the capacity of most of the ponds has been exhausted due to which this sewage and sullage has also started flowing into the natural drains and finally becoming a part of river waters.

(ii) Therefore, the quality of water flowing in the water bodies has deteriorated as these water bodies lack sufficient assimilation capacity for self-purification not only due to increase in the quantum of discharge of untreated sewage/ sullage, but, also due to decrease in the quantum of water in the water bodies owing to construction of check dams on the upstream side.

1.3 About Ghaggar

(i) The Ghaggar, an intermittent, Endorheic River flows only during the monsoon season. The river is known as Ghaggar before the Ottu barrage near Sirsa and as the Hakra downstream of the barrage. The basin is classified in two parts, Bangar and Khadar. The higher area which is not flooded in rainy season is called Bangar and the lower flood-prone area is called Khadar.

(ii) It originates in the village Dagshai in the Shivalik Hills of Himachal Pradesh at an elevation of 1,927 metres (6,322 ft) above mean sea level and flows through Punjab and Haryana states into Rajasthan just southwest of Sirsa, Haryana and by the side of Talwara Lake in Rajasthan. From Ottu barrage near Sirsa, Ghaggar feeds two irrigation canals that extend into Rajasthan.

(iii) Initially, it receives municipal sewage of various towns located in Himachal Pradesh and Haryana namely Parwanoo, Kalka and Pinjore through Sukhna Nallah merging into Kaushalya river tributary of Ghaggar near Amravati Enclave. Besides, Ghaggar river also receives the sewage of various towns of Haryana including that of Panchkula before entering into the State of Punjab. It enters Punjab near Village Mubarikpur, District Mohali.

(iv) After passing through District Mohali, District Patiala and District Sangrur, river Ghaggar carrying sewage of some of the towns of Punjab, re-enters State of Haryana and then enters Sardulgarh, District Mansa of Punjab before finally re-entering into Haryana. The total stretch of the river Ghaggar in the state of Punjab is 165 kms.

(v) The drains meeting with the river are non-perennial and treated / partially treated/ untreated sewage / sullage of some of the cities, towns and villages situated nearby these drains as well as surface run off from fields falling in their catchment area during rainy season is discharged into river Ghaggar directly or indirectly through various drains / choes etc.

(vi) There are 30 Urban Local Bodies (ULBs) falling in the catchment area of River Ghaggar, which are discharging their effluent directly or indirectly into river Ghaggar. The total sewage generation in the catchment area of Ghaggar River has been estimated as 300.41 MLD with gap in sewage treatment as 55.58MLD.

(vii) There are 35 water polluting industries falling in the catchment area of river Ghaggar which are discharging their trade effluent directly or indirectly into river Ghaggar.

1.4 State's past efforts to control pollution in Ghaggar

(i) The State Government had formulated Comprehensive Action Plan to control the pollution of River Ghaggar and to achieve the desired river water quality i.e. "Class B" (BOD <3 mg/l and FC< 500 MPN/100 ml).

(ii) The progress of action plan is being regularly monitored by 4 Tier Governance Mechanism (at District Level by the respective Deputy Commissioner & Divisional Commissioners in the meetings of District Environment Committee, at State Level by the Secretary Environment in the meeting of River Rejuvenation Committee and by the Chief Secretary in the meeting of State Apex Committee).

(iii) For sewage management, 40 STPs of 327.30 MLD capacity are already functional in the State, 6 STPs of 28.5 MLD capacity are under installation & 11 STPs of 62.70 MLD capacity are under various stages of planning for establishment. The treated sewage of 12 STPs (78 MLD) is reused for irrigation in a command area of 2284 Ha.

1.5 Directions issued by NGT

(i) O.A No. 138-139/2016

NGT vide Order dated 07.08.2018 in O.A. No. 138-139/2016 in the matter of in the matter of "Stench Grips Mansa's Sacred Ghaggar river with Yogender Kumar" directed that at the State level, the Special Task Force (STF) comprising of the Chief Secretary, the Environment Secretary, the Secretary of Urban Development and Secretary of Local Bodies be constituted.

In compliance, the State of Punjab had constituted a State Level Special Task Force (also called as State Apex Committee) dated 14.11.2018 under the Chairmanship of Chief Secretary, Punjab.

(ii) O.A No. 673/2018

a. NGT vide order dated 20.09.18 in OA no. 673/2018 titled as, "News item published in "The Hindu" authored by Shri. Jacob Koshy titled "More river stretches are now critically polluted: CPCB" has directed the State to prepare Action Plans within two months for bringing all the polluted river stretches to be fit at least for bathing purposes (i.e BOD <3 mg/l and FC< 500 MPN/100 ml) within six months from the date of finalization of the action plans. Further, NGT vide said Order directed the State to constitute a committee of

four-members called River Rejuvenation Committee (RRC). This Committee will also be the Monitoring Committee for execution of the action plan.

In compliance, RRC was constituted by the State Govt. vide Order dated 19.11.2018 under the Chairmanship of Administrative Secretary, Department of Science, Technology & Environment.

Further, NGT vide above said Order divided the polluted river stretches in five priority categories i.e. I, II, III, IV & V depending upon the level of BOD with criteria as under:

Criteria for Priority-I

- Monitoring locations exceeding BOD concentration 30 mg/l has been considered as it is the standard of Sewage Treatment Plant and in river it appears without dilution. (River location having water quality exceeding discharge standards for BOD to fresh water sources).
- All monitoring locations exceeding BOD concentration 6 mg/l on all occasions.
- Monitoring locations exceeding 3 mg/l BOD are not meeting desired water quality criteria but does not affect to dissolved oxygen level in water bodies. If BOD exceeds 6 mg/l in water body, the dissolved oxygen is reduced below desired levels.
- The raw water having BOD levels upto 5 mg/l does not form complex chemicals on chlorination for municipal water supplies. Hence the water bodies having BOD more than 6 mg/l are considered as polluted and identified for remedial action.

Criteria for Priority-II

- Monitoring locations having BOD between 20-30 mg/l.
- All monitoring locations exceeding BOD concentration 6 mg/l on all occasions.

Criteria for Priority-III

- Monitoring locations having BOD between 10-20 mg/l.
- All monitoring locations exceeding BOD concentration 6 mg/l on all occasions.

Criteria for Priority-IV

- Monitoring locations having BOD between 6-10 mg/l.

Criteria for Priority-V

- Monitoring locations having BOD between 3-6 mg/l.
- The locations exceeding desired water quality of 3 mg/l BOD.

b. NGT vide order dated 08.04.2019 in OA No. O.A No. 673 of 2018 directed State of Punjab to submit performance guarantee of Rs. 5.0 Crore for the 4 polluted river stretches falling in the State. PPCB vide letter dated 19.03.21 submitted the same with CPCB.
In compliance, Punjab Pollution Control Board has deposited Rs 5 Crores with CPCB on dated 19.03.2021.

c. NGT vide order dated 22.02.2021 in OA No. 673/2018 directed that States/UTs will be liable to pay compensation @Rs. 5 lakhs per month per drain for default in in-situ remediation, @Rs. 5 lakhs per month per STP for default in commencement of setting up

of the STPs by 30.06.2020 and Rs. 10 lakhs per month per STP for default in commissioning of STPs by 30.06.2021.

In compliance, Punjab Pollution Control Board is imposing Environmental Compensation on Local Government for default in in-situ remediation, commencement of setting up of the STPs and commissioning of STPs.

(iii) O.A No. 148/2016

NGT vide Order dated 27.11.2018 in OA. No. 148/2016 (M.A. No. 686/2017) titled as Mahesh Chandra Saxena Vs South Delhi Municipal Corporation & Ors. has directed all the States & Union Territories to prepare and furnish their Action Plans for utilization of treated wastewater in their respective States/UTs within three months.

In compliance, the State had submitted the Action Plan for Reuse of Treated Wastewater to CPCB on 29.04.2019.

(iv) O.A No. 325/2015

a. NGT vide order dated 10.05.2019 in M.A. No. 26/2019 in O.A. No. 325/2015 titled "Lt. Col. Sarvadaman Singh Oberoi Vs UOI & Ors" directed that all States and UTs to review the existing framework of restoration all the water bodies by preparing an appropriate action plan.

   In compliance, the State had submitted the Action Plan for Rejuvenation of Ponds to CPCB on 31.03.2020.

b. NGT vide Order dated 18.11.2020 in OA No. 325/2015 in the matter of Lt. Col. Sarvadaman Singh Oberoi V/s. Union of India & Ors., directed all States/UTs to designate a Nodal Agency for restoration of water bodies, wherever no such agency has so far been so designated.

   In compliance, Punjab Pollution Control Board has been designated as Nodal Agency for Restoration of Water Bodies in the State of Punjab vide Govt. Order dated 15.12.2020.

(v) O.A No. 360/2018

a. NGT vide Order in O.A. No. 360/2018 dated 26.09.2019 in the matter of “Shree Nath Sharma V/s. Union of India” directed the State to constitute District Committee for preparing and monitoring the progress of District Environment Plans.

   In compliance, the State of Punjab had constituted a District Environment Committees vide Notification dated 31.10.2019 under the Chairmanship of respective Deputy Commissioners.

b. NGT vide order dated 18.08.2022 in O.A. No. 360/2018, directed that after dissolution of Monitoring Committee headed by Justice Jasbir Singh, former judge, Punjab & Haryana High Court on 31.12.2022 that the monitoring work being undertaken by the said

Committee may be taken over by the Chief Secretary for being continued through appropriate administrative monitoring mechanism under them.

In compliance, the State Govt. has issued directions to all the Divisional Commissioners on 17.01.2023 to monitor the District Environment Plans (DEPs) in their respective Districts on behalf of Chief Secretary, Punjab from 1.01.2023 onwards. The Divisional Commissioners are regularly monitoring the DEPs & submitting their bi-monthly reports for further review in the meeting of State Apex Committee.

(vi) O.A No. 606/2018

a. NGT vide dated 22.09.2022 in O.A. No. 606/2018 in the matter "Compliance of Municipal Solid Waste Management Rules, 2016 and other Environmental Issues" directed the State of Punjab to deposit Rs. 2080 crore in a separate ring-fenced account within 2 months, to be operated as per directions of the Chief Secretary and utilized for restoration measures.

   In compliance, a Committee under the Chairmanship of Administrative Secretary, Dept. of Local Govt. was constituted vide STE Order no. 3/17/2020-STE (5)/457018/I dated 11.11.22 to regularly assess the progress in bridging the gaps in sewage & solid waste management and to periodically report to Chief Secretary, Punjab. Further, for ring fencing the funds of Rs. 2080 Cr, an order has been passed by the worthy Chief Secretary vide No. 3/17/2020-STE (5)/478 dated 22.11.22.

b. NGT vide order dated 25.07.2024 in O.A No. 606/2018 directed the State of Punjab through Chief Secretary to deposit Rs. 1026.19 Cr. towards Environmental Compensation with CPCB within one month and submit the compliance report.

   In compliance, the NGT vide order dated 26.03.2025 directed that the Tribunal has examined the report filed by the State on 26.02.2025 & found the gaps and deficiency in solid waste management, liquid waste management & in ring fencing of account. NGT further directed the State to file a fresh report by at least one week before date of hearing i.e. 28.10.2025.

   The State, in context of above said Order of Hon'ble NGT, has filed appeal before Hon'ble Supreme Court of India which is due for hearing on 17.09.2025.

(vii) O.A No. 976/2019

NGT vide its order in O.A No. 976/2019 dated 21.10.2022 directed that the process of planning and execution for utilization of Environmental Compensation (EC) Funds being collected by statutory regulators particularly State PCBs and State Environmental Impact Assessment Authority, Water Resource Authorities etc may be preferably entrusted to a High-Powered Committee of three Additional Chief Secretaries, identified by the Chief Secretary within one month. Such plans and progress in execution may be placed on websites of the States/UTs after every six months.

In compliance, High-Powered Committee comprising of three Administrative Secretaries of DLG, DRDP, & STE (Convenor) was constituted vide Notification No. 10/01/2023-STE2/03

dated 03.01.2023 which is regularly conducting the meetings of the Committee for utilization of EC funds.

(viii) Ministry of Jal Shakti, Govt. of India has requested the State vide letter dated 07.03.2025 to direct River Rejuvenation Committee (RRC) to update the Action Plans of Polluted River Stretches of Punjab identified as Polluted River Stretches of Priority -I, i.e., Sutlej and Ghaggar and review the implementation of these plans on regular basis.

Chapter 2 – Vision, Mission and Strategy

2.1 Vision for Clean Ghaggar

To restore the quality of water in Ghaggar to prescribed standards to ensure ecological balance and socio-economic wellbeing of the people.

2.2 Mission Clean Ghaggar

To prepare and implement a comprehensive action plan for clean Ghaggar:

(i) Creating awareness about the adverse impact of water pollution
(ii) Identifying the sources of water pollution
(iii) Setting up facilities for treating the pollutants
(iv) Ensuring effective operations of the facilities
(v) Ensuring effective monitoring of the quality of water
(vi) Mitigating adverse impact on health of the people in the surrounding areas

2.3 Strategy for Clean River Ghaggar

The strategy for clean River Ghaggar includes:

(i) Identification of Stakeholders
(ii) Identification of sources of pollution
(iii) Measures to control pollution and timelines
(iv) Nodal Department
(v) Integration of Departmental Plans
(vi) Monitoring and Review
(vii) Risk Mitigation Plan

2.4 Identification of the Stakeholders and their roles

The State of Punjab envisages a comprehensive plan for cleaning of River Ghaggar by involving all the Stakeholders namely:

(i) Department of Science, Technology and Environment

a. Directorate of Environment and Climate Change

The Directorate of Environment and Climate Change will be responsible for overall coordination of the Action Plan for ensuring its successful implementation

b. Punjab Pollution Control Board

a) Regulation of STPs/ CETPs/ ETPs
b) Laying down discharge standards for STPs/CETPs/ETPs
c) Setting up of Infrastructure to monitor river water quality
d) Monitoring of quality of water of River Ghaggar & ground water
e) Monitoring of discharge from Industries including ETPs and CETPs
f) Monitoring of discharge from STPs and other disposal facilities
g) Monitoring of management of solid waste and other waste

(ii) Department of Local Government

As per the policy decision of the Department of Local Government, all Muncipal Corporations are responsible for execution of their water supply and sewerage works including setting up of

STPs while all Municipal Council will get the works executed through Punjab Water Supply and Sewerage Board. The policy is yet to be fully implemented as some Corporations are still relying on PWSSB for execution of works, on the other hand, some Municipal Councils are executing works on their own instead of PWSSB.

I. Design

a) Design projects to cover entire population with sewerage network system and its connection with STP.
b) Design Sewage Treatment Plants of adequate capacity
c) Design as per the prescribed standards

II. Construction

a) Monitor land acquisition closely as it is pre-requsite for setting up of STPs
b) Ensure reputed professional contractors
c) Construction of STPs as per timelines mentioned in the action plan
d) Ensuring regular flow of funds during construction

III. Operation and Maintenance

a) Arranging funds for operation and maintenance of STPs to ensuring regular operation and maintenance of STPs in a professional manner
b) Providing proper in-house laboratory facilities at each STP for maintaining record of characteristics of analysis of untreated as well as treated waste water
c) Installation, operation & maintenance of online continuous effluent monitoring system as well as CCTV cameras for the existing STPs as well as new STPs to be installed

IV. Solid Waste

a) Proper management & handling of municipal solid waste so as not to be thrown in river.

b) The municipal corporation is responsible for the scientific management and disposal of dairy waste (solid as well as liquid) being generated from dairies located within Muncipal Limits.

(iii) Department of Rural Development and Panchayat

The Department of Rural Development & Panchayats (DRDP) has to provide for necessary treatment facilities in village ponds so that no untreated or polluted water enters river directly or indirectly through various drains or creeks. The Department has the following responsibilities:

(i) Finalization of appropriate technology
(ii) Arrangement of Funds for treatment technology in various villages identified in the Action Plan
(iii) Reuse of water for agriculture purpose
(iv) Proper operation and maintenance of treatment facilities installed in village ponds
(v) DRDP is responsible for the scientific management & disposal of dairy waste (solid as well as liquid) being generated by Dairies located outside the Municipal limits.

(iv) Department of New & Renewable Energy

Punjab Energy Development Agency (PEDA) in collaboration with the concerned Municipal Corporation/Council shall facilitate the setting-up of CBG plants for the scientific management of

cow dung being generated from the dairies located within MC limits. Further, PEDA in collaboration with DRDP is responsible for facilitating the setting up of CBG plants for scientific management of cow dung being generated from the scattered dairies & Gaushalas located outside MC limits.

(v) Department of Housing and Urban Development

The Department and all the Development authorities under its control are responsible for various Urban Estates developed by them. In addition, the Government has entrusted construction and subsequent operation and maintenance of Sewerage network and Sewage Treatment Plants in some of the cities to various Urban Development Authorities. In all cases, where the Urban Development Authorities are discharging the functions, they shall have all the responsibilities listed out in clause 2.5.3 for Department of Local Government.

(vi) Department of Industries and Commerce

Department of Industries and Commerce through Punjab Small Industries & Export Corporation is responsible for management of Industrial Focal Points set up by it or transferred to it. PSIEC shall have all the responsibilities listed out in clause 2.5.3 for Department of Local Government in respect of Industrial Focal points.

(vii) Department of Water Supply and Sanitation

The Department of Water Supply and Sanitation along with Department of Rural Development and Panchayat will be responsible for treatment and sanitation facilities in rural areas. It has also been given some of the works in urban areas. It will accordingly discharge relevant responsibilities for rural and urban areas in respects of projects, which may be assigned to the Department.

(viii) Department of Agriculture

The Department of Agriculture through the Directorate of Soil and Water conservation is responsible for implementation of various schemes for utilizing the treated wastewater from urban and rural treatment facilities for irrigation by the farmers. It has the following responsibilities:

(i) Design the project as per the standards
(ii) Follow up with various funding agencies to arrange funds
(iii) Executing the schemes as per the timelines provided in the plan

(ix) Department of Health and Family Welfare

The Department of Health and Family Welfare has the following responsibilities:

(i) Checking of health indices of the in-habitants & maintaining database
(ii) Holding awareness camps in the catchment area of River Ghaggar to make the public aware regarding water borne diseases

(x) Department of Water Resources

The Department of Water Resources through the Chief Engineer, Drainage has the following responsibilities:

a) Measurement of flow at different locations
b) To stop unauthorised discharge in the drains
c) Groundwater Recharge Initiatives

d) Watershed Management
e) Protection and Management of Flood Plain Zones
f) E. Flow (Ecological/Environment Flow)
g) Release of fresh water in river to maintain water quality
h) To stop unauthorised discharge in the drains
i) Notification of drains/Choes/rivers/Nalahs
j) Removal of pollution points

(xi) Department of Forest & Wildlife Preservation & Punjab Bio-diversity Board

Department of Forest & Wildlife Preservation & Punjab Bio-diversity Board will be responsible for the following:

a) Plantation on both sides of river and in the Flood Plain Zones
b) Biodiversity Conservation

(xii) District Administration

District Administration will be responsible for monitoring of activities of the action plan at district level.

2.5 Nodal Department

The Department of Science, Technology and Environment is the nodal department for coordinating and monitoring activities of the plan.

2.6 Integration of Departmental plans

The Nodal Department will integrate plans of individual departments for control of pollution from various sources and prepare a comprehensive plan and will coordinate its execution by tracking the progress through a centralized IT platform.

2.7 Monitoring and Governance

(i) There will be rigorous monitoring of implementation of the comprehensive plan:

  (a) Monitoring of physical and financial progress of works being executed
  (b) Monitoring of operations and management of facilities set up
  (c) Monitoring of quality of water
  (d) Monitoring of health and diseases in the surrounding areas
  (e) Monitoring of awareness campaign

(ii) Setting up of IT platform for tracking progress and analysis.

(iii) The monitoring will be done at the district level i.e by the respective Deputy Commissioner and by the respective Divisional Commissioner on behalf of Chief Secretary, State Level i.e at the Level of Administrative Secretary, Environment, & Chief Secretary, Punjab.

Chapter 3 – Current Status of Water Quality, Biodiversity & Watershed Management

3.1 Monitoring Locations

The water quality of river Ghaggar is being monitored at 14 locations, starting from upstream of Mubarikpur (where it enters State of Punjab) upto Sardulgarh in Distt. Mansa on monthly basis:

a. Ghaggar at Mubarikpur Rest House
b. Ghaggar at Bhankarpur, Dera Bassi
c. Ghaggar at D/s Chattbir
d. Ghaggar at U/s Jharmal Nadi
e. Ghaggar at D/s Jharmal Nadi
f. Ghaggar at U/s Dhakansu Nallah
g. Ghaggar at D/s Dhakansu Nallah
h. Ghaggar at Rattanheri D/s of Patiala Nadi
i. Ghaggar at 100 m D/s of Khanauri
j. Ghaggar at Moonak
k. Ghaggar at U/s Sardulgarh
l. Ghaggar at D/s Sardulgarh
m. Ghaggar at U/s Sagarpara (wef May 2018)
n. Ghaggar at D/s Sagarpara (wef May 2018)

3.2 CPCB's norms for designated best use

The Central pollution Control Board has laid down criteria for designated best use class of the water of the water bodies, which is as under:

S. N.	Constituent Parameters	Designated Best Use Class				
		A	B	C	D	E
1.	Dissolved oxygen, mg/l, Min	6	5	4	4	-
2.	Biochemical Oxygen Demand, mg/l, Max	2	3	3	-	-
3.	Total coliform Organisms MPN/100 ml, Max	50	500	5000	-	-
4.	pH value	6.5-8.5	6.5-8.5	6-9	6.5-8.5	6-8.5
5.	Free ammonia (As N) mg/l, Max	-	-	-	1.2	-
6.	Electrical conductivity µs/cm max.	-	-	-	-	2250
7.	Sodium absorption ratio, Max.	-	-	-	-	2.6
8.	Boron, mg/l, Max	-	-	-	-	2

Note:

Class A: Drinking water sources without conventional treatment, but after disinfection
Class B: Organized outdoor bathing
Class C: Drinking water sources with conventional treatment followed by disinfection
Class D: Propagation of wild life and fisheries
Class E: Irrigation, Industrial cooling and controlled water disposal

(i) CPCB has published the report "Polluted River Stretches for Restoration of Water Quality-Sept.-2025" regarding identification of polluted river stretches in India. There are 2 polluted stretches identified in the State of Punjab as per the details given:

River	Focus River Stretch	Priority Class as per CPCB Report 2025	Target
Sutlej	Nangal to Harike	I	Class B
Ghaggar	D/S Parwanoo – D/S Sardulgarh	I	Class B

(ii) The river Beas has been designated as Model River of Punjab.

3.3 Current Status of Quality of Water in Ghaggar

(i) PPCB reported that water quality of River Ghaggar is Class-D quality when it enters the State of Punjab, which varies from Class-D to Class-E as shown in Annexure-1 due to mixing of different point sources carrying untreated domestic waste water. However, due to self-purification while travelling a distance of approximately 165 Km, water quality of River Ghaggar at the exit point of Punjab at Sardulgarh before entering the State of Haryana becomes Class-D.

(ii) The details of analysis results of surface water monitoring under National Water Monitoring Program (NWMP) for the year 2021-22, 2022-23 & 2023-24 are given in **Annexure-2.**

(iii) It is pertinent to mention here that earlier the river Ghaggar was a perennial water body, but, due to construction of check dams and watersheds, it has become a non-perennial water body carrying sewage and sullage of the habitation areas located in its catchment area. It finally terminates near Sardulgarh.

3.4 Ground Water Quality in the catchment area of river Ghaggar

(i) Sampling by Central Ground Water Board

The Central Ground Water Board (CGWB) has carried out ground water sampling in the year 2023 from 16776 locations of the Country, including 922 locations from the State of Punjab and has published the analysis reports of the samples collected by it on its website. As per this report of CGWB regarding quality of ground water is as under:

a) **Ground Water Quality**
The water samples were analyzed for major cations (Ca, Mg, Na, K) and anions (CO_3, HCO_3, Cl, NO_3, SO_4) in addition to pH, EC, F, PO_4 and TH as $CaCO_3$.

b) **Composition of Water**

Chemical analysis shows that the ground water is slightly to moderately alkaline in nature. The pH values range from 7.20 at Dhalewan in Mansa district to 8.86 Adamke in Mansa district. Hardness reported in terms of CaCO3 ranges from 60 at Baurhai Khurd in Sangrur to 1341 mg/l at Tepla in Patiala District. EC value of ground water in the area varies from 252 µS/cm at Khaira

Kalan in Mansa district to 6635 µS/cm at Dhalewan in Mansa district. Chloride content of ground water normally follows the distribution pattern of EC and it ranges from 14 mg/l to 681 mg/l in the Ghaggar Basin of the State. Chloride concentration above 400 mg/l gives salty taste to water, Nitrate in ground water above 5.0 mg/l reflects contamination at some stage of its percolation and circulation. Nitrate in water samples varies from traces to 574 mg/l at Derabassi in SAS Nagar district, whereas the fluoride concentration in ground water ranges from BDL to 11.20 mg/l at Adamke in Mansa District. Fluoride concentration upto 1.0 mg/l in drinking water is desirable, upto 1.5 mg/l is permitted and above 1.5 mg/l is injurious.

3.5 Ground water sampling in the vicinity of river Ghaggar

The Punjab Pollution Control Board has carried out monitoring of ground water at 08 locations near vicinity of River Ghaggar under NWMP biannually (April and October) from the years 2022 to 2024. The samples were collected & analyzed as per CPCB protocol for general parameters, heavy metals and pesticides. The analysis reports are also uploaded on Environment Water Quality Data Entry System (EWQDES) portal of CPCB. The list of Ground Water Stations mainly in the area of vicinity of River Ghaggar are as under:-

Sr. No	Station Name
1	Hand pump installed at Railway crossing, Lalru, Teh. Dera Bassi SAS Nagar
2	Hand pump near Peer Baba Samadh, Bhankarpur, Tehsil Dera Bassi, Distt. SAS Nagar.
3	Piezometer between Ash dyke & water reservoir, Nabha Power Limited, Village Nalash, Rajpura
4	Piezometer of M/s Patiala Distillers Pvt. Ltd.,Village Main
5	Submerssible installed in the premises of Baba Dramaya Ji Nath Mandir at village Rasouli (Sagar Para Drain meeting with river Ghaggar) Tehsil Patran

The analysis data for monitoring of Ground Water under NWMP for the year 2022 to 2024 is as per **Annexure 3A&B.**

3.6 Installation of Real Time Continuous Monitoring Systems at critical locations

Punjab Pollution Control Board has installed 2 continuous monitoring stations for surface water quality at various critical locations i.e. downstream Sagar para Drain at (Khanuri Brdge) and at Patiala Nadi (Village Ratanheri near Gurdwara Sahib).

3.7 Notification of drains/Choesirivers/Nalahs:

Section 38 of Canal and Drainage Act 2023 empowers State Govt. that in case an injury to any land or the public health or public convenience has arisen or may arise from the obstruction of any river, stream or drainage channel, such State Govt. may, by notification, the formation of any obstruction or may, within such limits, order the removal or other modification of such obstruction. Under this, the Department of Water Resources has notified a total of 849 drains till July 2025.

3.8 Environmental Flow (E. Flow)

'Environmental Flows' is minimum quantity of continued availability of water in the river to ensure downstream environmental, social & economic benefits as well as sustainability of its aquatic ecosystem. It should be measured at different locations and records be maintained by Department of

Water Resources, Punjab. Fresh water flowing through escape channels/small barrages should be checked. Good quality of water may be used for dilution to reduce concentration of pollutants to meet the desired level of water quality and extent of flow as per prescribed norms. Dilution of pollution will be used only after achieving degree of required treatment for municipal sewage and industrial effluents. There is no regulation point for Ghaggar being a non- perineal river. Further, Govt. of Haryana has been requested to release water from Kaushalya Dam to maintain E-Flow in river Ghaggar.

3.9 Flood Plain Zones

Efforts are underway to demarcate flood plains, remove illegal encroachments, and maintain minimum ecological flow in rivers like Sutlej and Beas. In this regard, the Notification of Rivers and rains is already underway. Satluj River in the Ferozepur and Tarn-Taran districts have already been notified via letter no. WRIRWR04/ 22/2023-IW3/319 Dated 25-09- 2023 and Notified vide letter No. 04/01/2023- IW3/364 dated 16-10-2023. In District Ferozepur and Tarn-Taran, the area as per the above notification was also notified in Flood Plain Zone.

3.10 Groundwater Recharge Initiatives:

a) 159 no's ground water recharges schemes were completed by the department in FY 2024-25.
b) 1156 no. Check Dams and 3957 soak pits are being proposed on various rivers/Nallahs of Punjab to recharge groundwater in current FY 2025-26.

3.11 Biodiversity Profile of river Ghaggar

Physiographically, the whole Ghaggar river basin area in Punjab, except foot hills of the Shivalik in the north, has undulating to flat topography. The soils of the area consist of alluvial deposits and ranges from looms to sandy looms. Seven (7) Wildlife Sanctuaries namely Sukhna, Chandigarh; Bir Moti Bagh; Bir Bhunerheri; Bir Dosanjh; BIr Mehas Wala; Bir Gurdialpura; Bir Bhadson, Patiala and Bir Aishwan, Sangrur having rich biodiversity fall under the Ghaggar River Basin area in Chandigarh (UT) and Punjab.

The biodiversity in the Ghaggar river catchment area is under threat due to growing population, intensive & extensive agriculture, and reclamation of barren land, pollution and habitat loss. The forest cover in the Ghaggar catchment ranges from the category of northern dry deciduous mixed forest, dry deciduous scrub forest and tropical desert throne comprising many tree species with dominance of Khairi (*Acacia Senegal),* Beri (*Zizphus mauritiana*), Reru (*Acacia Leucophloea*), Bohar (*Ficus bengalensis*), Peepal (*Ficus religiosa*), Mesquite (*Prosopis Juliflora*), Lasura (*Cordia dichotema*), Shisham (*Dalbergia sissoo*), Kikar (*Acacia nilotica*) and 10 species of shrubs including Castor (*Ricinus Communis*), Mallah (*Zizyphus nummularia*), Karir (*Capparis deciduas*), Ak (*Calotropis procera*), Vasaka (*Adhatoda vasica*), etc.

Further, various species of mammals, reptile, fish, amphibians and aquatic & terrestrial birds are also reported from Ghaggar and its adjoining areas

(i) Watershed Management in the Catchment Area of Ghaggar

Integrated Watershed Management Programme (IWMP) is one of the flagship programmes of the Government of India and aims at prevention of soil run-off, regeneration of natural vegetation, rain

water harvesting & recharging of the ground water table for restoring the ecological balances of an area. This programme also enables multi-cropping & introduction of diverse agro-based activities, which help in providing sustainable livelihoods to the people residing in the watershed area.

The Nodal Department for IWMP in Punjab i.e. Department of Soil & Water Conservation has implemented 6 projects amounting to Rs. 4395.84 Lacs in the catchment area of river Ghaggar in 2 Districts i.e. SAS Nagar and Patiala in F.Y. 2011-12 and 2013-14 for treatment of 36,632-hectare area. The major activities included construction of check dams/water harvesting structures, rain water storage and recharging, silt detention structures, stream bank protection, contour bunding, runoff check and drop structures, retaining walls & percolation tanks, vegetative hedges, efficient conveyance of water through underground pipeline system, artificial roof-top rainwater harvesting & recharging, renovation of village Ponds, agro forestry plantation, etc. The livelihood and farm production support was extended through formation of Self-help Groups for pickle and food processing etc., distribution of improved varieties & agriculture inputs and livestock support programmes to develop additional source of income for farmers and landless. Regular trainings were provided to all the beneficiaries to enhance their capacities

The infrastructure for 282.81 Kms long flood protection embankments along river Ghaggar has been created by Department of Water Resources, Punjab

Chapter 4 – Sources of Water Pollution in River Ghaggar

4.1 Major Drains

(i) There are 13 major drains/ choes/ nallahs which are directly discharging into the river Ghaggar. The details of these drains/ choes/ nallahs are given in **Annexure-4**. There are 29 creeks which are discharging into 13 major drains, which are given in **Annexure-5**. The 244.51 MLD waste water from 30 urban bodies is being directly/indirectly discharged into river Ghaggar (**Annexure-6)**. Further, 389 villages are also discharging 99.43 MLD waste water directly/indirectly in the river Ghaggar **(Annexure-7).**

4.2 Major Sources of Pollution

(i) There are following major sources polluting the river Ghaggar:

a. Sewage/ sullage generated from Urban Areas
b. Sewage/ sullage generated from Rural Areas
c. Industrial sources

4.3 Sewage/ sullage generated from Urban Areas

(i) There are 30 Urban local bodies (ULBs) falling in the catchment area of river Ghaggar which are discharging their wastewater either directly or indirectly into river Ghaggar. The total sewage generation in the catchment area of Ghaggar River has been estimated as 300.41 MLD with gap in sewage treatment as 55.58MLD.

(ii) 26 ULBs have installed. Out of 30 ULBs, 26 ULBs have installed treatment facilities (40 STPs of 327.30 MLD capacity) **Annexure-8** whereas, no treatment facilities exist in 4 ULBs.

(iii) Out of 26 ULBs, 7 ULBs namely Sirhind, Sangrur, Dera Bassi, Lalru, Zirakpur, Bassi Pathana & Samana have installed STPs meeting partial requirement for which 12 STPs are proposed to be set up.

4.4 Sewage/ sullage generated from Rural Areas

(i) There are 389 villages, which are discharging 99.43 MLD waste water through various creeks and drains into Ghaggar. In order to install necessary treatment facilities to treat the wastewater of rural areas, 389 villages have been prioritised into following phases:

Phase 1: 98 Villages having total discharge of 31.60 MLD

Phase 2: 203 Villages having total discharge of 43.62 MLD

Phase 3: 87 Villages having total discharge of 24.20 MLD

4.5 Industrial Sources

(i) Industrial units located at Dera Bassi and adjoining areas

a. There are 35 water polluting industries in the catchment area of river Ghaggar at Dera Bassi and adjoining areas. None of the industries is allowed to discharge the untreated / treated wastewater into the drains/ choes leading to river Ghaggar. A list of these

industries is as per **Annexure-9.** The brief detail about these industries is as under:

Sr.No.	Type of industry	No. of units	No. of industries installed ETPs	No. of industries installed online continuous monitoring system
1)	Pharmaceutical industries	11	11	5
2)	Pharmaceutical formulation units	3	3	0
3)	Dyeing units	**5**	**5**	0
4)	Pulp & Paper mills	2	2	2
5)	Electroplating industries	**4**	CETP*	0
6)	Engineering goods units	**1**	CETP	-
7)	Pesticide manufacturing	1	1	1
8)	Distillery unit	1	1	1
9)	Brewery unit	1	1	0
10)	Meat Plant	2	2	0
11)	Gelatine manufacturing unit	1	1	0
12)	Organic Chemical manufacturing units	2	2	0
13)	Resin Manufacturing	1	1	0
Total		**35**	**30**	**9**

**** Tied up with M/s Bantech Water Private Limited, Kurali, who is the operator of the CETP at Kurali meant for treatment of wastewater containing heavy metals.***

b. Electroplating & industrial unit industries located at Derra Bassi are discharging their untreated trade effluent into the Common Effluent Treatment Plant (CETP) of 0.3 MLD operated by M/s Bantech Water Private Limited, Kurali.

c. However, the screening plants of Dera Bassi area are partly discharging their wastewater into river Ghaggar, but, their wastewater neither contains any organic materials contributing BOD/ COD nor any chemicals. Therefore, the PPCB envisages to

pursue the industries to devise a mechanism for 100% recirculation of the wastewater generated from the washing of river bed material.

d. The Pharmaceutical industries located at Derra Bassi, are discharging their untreated trade effluent into the Common Effluent Treatment Plant (CETP) of 2 MLD CETP of M/S Saidpura Envirotech Pvt. Ltd at Derra Bassi.

(ii) Industrial units located in the catchment area of Patiala Nadi

a. There are 7 water polluting industries in Distt. Patiala in the catchment area of river Ghaggar. A list of these industries is attached herewith as **Annexure-10**. The break-up of these industries is as under:

Sr. No.	Type of industry	No. of units	No. of industries installed ETPs	No. of industries installed online continuous monitoring system
1	Pulp & Paper mills	4	4	3
2	Distillery unit	1	1	1
3	Board mills	2	2	0

b. Since, all these industries are located near the bank of Patiala Nadi/ Jacob drain, as such, there is need to monitor all these industries in odd hours to rule out the possibility for discharge of wastewater into said drains during odd hours.

Chapter 5 – Other sources of pollution and their management

5.1 Bio Medical Waste

(i) The bio-medical waste of all the Healthcare Facilities in the State is collected, transported, treated and disposed of by 6 authorized Common Bio-Medical Waste Treatment Facilities (CBWTF) located at Ludhiana, SAS Nagar, Amritsar, Pathankot, **Sri** Muktsar Sahib and Jalandhar. The Bio-Medical Waste generation in the State is in the range of 23-25 tons per day (TPD) depending upon patient load. The status of HCFs operating in towns falling in catchment areas of river Ghaggar is given in **Annexure-11.**

(ii) The collection vehicles of the CBWTF operators are equipped with Global Positioning System (GPS) with access to Punjab Pollution Control Board (PPCB). The CBWTF operators are using Bar-code based software system for collection of bio-medical waste from Healthcare Facilities since 2012 and the data of collection of bio-medical waste from the healthcare facility is sent online to server within 1-2 minutes and the access of same is available with PPCB. CCTV cameras are also installed in the processing areas of all the 6 CBWTF operators with access to PPCB to monitor the working of the facility.

(iii) The stack of the incinerator installed in all the **6** CBWTFs have been provided with Online Continuous Emission Monitoring System and the data is transferred online to PPCB and CPCB. This system helps in observing/monitoring the emissions discharged while treatment of bio-medical waste is being done.

(iv) Since, the Bio-Medical Waste generated in the catchment area of River Ghaggar is handled and managed in proper manner through the Common Bio-Medical Waste Treatment Facilities (CBWTF), as such, there is no impact of this waste on the water quality of River Ghaggar.

5.2 Hazardous Waste

(i) The Government of India has framed Hazardous and Other Wastes (Management and Trans-boundary Movement) Rules, 2016 for the scientific handling of hazardous waste. The occupier of the facility is to apply for authorization for handling, generation, collection, storage, packaging, transportation, use, treatment, processing, recycling, recovery, pre-processing, co-processing, utilization, offering for sale, transfer or disposal of the waste to the Board. A pass book is issued along-with authorization to the actual user of the hazardous waste.

(ii) As per the interim order dt. 14-10-2003 of Hon'ble Supreme Court in Writ Petition (Civil) No. 657 of 1995, regarding handling of hazardous waste and development of common treatment, storage and disposal facility, a Common Treatment, Storage and Disposal Facility (CTSDF) at Village Nimbuan, Tehsil Dera Bassi, Distt. SAS Nagar was constructed by M/s Nimbuan Green Field Punjab Limited (NGPL) and commissioned in October 2007. The TSDF is currently being operated by M/s Re-Sustainability Ltd. (Formerly Known as Ramky Enviro Engineers Ltd.), Hyderabad.

(iii) The total capacity of the facility is 7.0 lac MT. As on 31.03.2025, a total of 6.49 lac MT of hazardous waste has been landfilled at the site with a remaining available capacity of 50174 MT. The current rate of landfilling is about 4300 MT/month. Therefore, the capacity to store hazardous waste in the existing TSDF is sufficient upto December 2025. The TSDF is making efforts to increase its landfilling capacity up to year 2030. The vehicles used by the common facility operator for transportation of hazardous waste are equipped with GPS system.

(iv) At present no common incinerator has been installed at CTSDF and the same is under planning. All the major industries generating incinerable hazardous waste have installed captive incinerator in their premises for disposal of incinerable waste. In addition to the above, the incinerable waste from the remaining industries is received by the operator of CTSDF and is incinerated at the incinerator installed by the CTSDF at its another unit at Kanpur.

(v) Since, the Hazardous Waste generated by the industries in the catchment area of River Ghaggar is handled and managed in proper manner through the Common Treatment, Storage & Disposal Facility installed at Vill. Nimbuan, Tehsil Dera Bassi, Distt. SAS Nagar, as such, there is no impact of this waste on the water quality of River Ghaggar.

(vi) Data of quantity of hazardous waste generated during the period January, 2024 to December, 2024 is as under:

S.N.	Name of District	Quantity of hazardous waste generated (in TPA)		
		Incinerable	Disposable	Recyclable
1	Sangrur	65.55	6827.56	4625.387
2.	Mansa	2.76	2.3	27.76 & 4165 drums
3.	SAS Nagar	2883.7	14080.13	7035.33
4.	Patiala	127.102	577.109	2707.14

5.3 E-Waste

(i) Government of India has framed E-Waste (Management) Rules, 2022 as amended on 02.11.2022.8 nos. recyclers have obtained registration under the Rules at EPR Portal of CPCB with capacity to handle 46025 TPA of E-waste. Although, the channelization of E-Waste has recently been started, disposal of such waste has never been noticed in the River Ghaggar.

5.4 Solid Waste

(i) The Department of Local Government (DLG) vide notification dated 09.07.2018 has notified the Punjab State Solid Waste Management Policy, 2018. In view of the past experience, it has been decided to adopt both decentralized and centralized solid

waste management approach depending upon the profile of the locality.

(ii) The Ministry of Environment and Forests, GOI has notified Solid Waste Management Rules, 2016. Implementation of these Rules is being monitored by the Board. As per Rule 24 of the Solid Waste Management Rules, 2016, the local body shall submit its annual report to the Board on or before the 30th day of June every year. Further, the Board is required to submit the consolidated annual report to the Central Pollution Control Board and Ministry of Urban Development by the 31st day of July of each year. The same are regularly uploaded on the official website of the Board also.

(iii) Total 8436 no. of processing sites (honeycomb aerobic composting pits) have been set up in the State till the end of year 2023, for processing of the wet waste. Channelization of the recyclable waste is done through 266 Material Recovery Facilities (MRFs) and only inert waste will go the Sanitary Land Fill (SLFs) sites. 163 SLFs have been identified by the Department of Local Government out of which 61 have been constructed. Punjab Pollution Control Board is monitoring the implementation of the provisions of SWM Rules, 2016 and Monthly Progress Report (MPR) of the same is submitted to DECC, Punjab.

Chapter 6 – Utilization of Treated Wastewater and Sludge from STPs

6.1 The State Treated Waste Utilization Policy

(i) The Department of Local Govt. has notified "The State Treated Waste Policy -2017" to promote the recycling and reuse of treated sewage for non-potable application and to make sewage projects economical and environmentally sustainable.

(ii) The policy envisages to tackle the issues pertaining to the provisions of adequate wastewater collection and treatment facilities, consideration of treated effluent as resource for reuse in irrigation/industrial/other fields and thereby improvement of the socio-economic conditions in the areas to serve by the proposed systems.

(iii) The Department of Soil and Water Conservation, Punjab is executing projects for utilization of treated wastewater for irrigation of various towns/cities across the State by laying network of underground pipelines in agricultural fields.

(iv) The project involves laying network of underground pipelines from Sewage Treatment Plants for conveyance of treated sewage for irrigation in agricultural fields.

6.2 Utilization of treated wastewater in the catchment area of Ghaggar River

(i) The Department of Soil & Water Conservation, Punjab has already commissioned irrigation projects to utilise the treated wastewater of 12 STPs (78 MLD) for irrigating 2284 hectares of agricultural land.

(ii) The irrigation projects for utilizing the treated waste water of 7 STPs (38 MLD) are under progress for irrigating 1275 Ha of agriculture land. The irrigation projects for utilizing the treated wastewater of 3 STPs (35.3 MLD) are not feasible due to non-availability of irrigation command area as these STP's are located in urbanized area. Further, the irrigation projects for utilizing the treated waste water 35 STPs (267.2 MLD) are under planning stage and are likely to be initiated after the funds for these projects are tied up. The details of the projects already commissioned, under progress, not feasible and at planning stage are given in **Annexure-12.**

(iii) The following issues need to be addressed for utilizing the treated waste water of STP's for irrigation purposes:

a) In case of STPs based on SBR technology, the discharge of treated wastewater is not continuous and for the gap period of about 45 minutes, the pump through which treated wastewater is pumped for utilization onto land for irrigation is required to be shutdown, which discourages the farmers to utilize treated wastewater. Therefore, there is a need to provide a storage tank of sufficient capacity for treated wastewater so that without shutting down pumping station, the wastewater can be made available.

b) The payment of electricity bill is required to be regulated by fixing the responsibility of the concerned department and funds for this purpose need to be made available with the operating agency.

c) The farmers need to be educated and made aware about the advantages of use of treated wastewater for irrigation purpose.

Chapter 7 – Action Plan for control of water pollution and timelines

7.1 Action Plan

In order to control water pollution in river Ghaggar, following measures have been chalked out to stop the flow of untreated waste water or other waste directly or indirectly into river Ghaggar:

a. Setting up of STPs by ULBs in Urban areas
b. Setting up of Treatment facilities in Village Ponds in Rural areas
c. Setting up of Facilities for Reuse of Treated Wastewater
d. Modernization of existing slaughter house and Carcass plant at Ludhiana
e. Operation and Management Facilities
f. Installation of Online Continuous Effluent Monitoring System (OCEMS) for STPs
g. Installation of OCEMS by CETPs & ETPs
h. Setting up of online system for monitoring industrial effluents

7.2 Setting up of STPs by ULBs in Urban areas

a. The total sewage generation in the catchment area of Ghaggar River has been estimated as 300.41 MLD with gap in sewage treatment as 55.58MLD. The Department of Local Govt. (DLG) through Punjab Water Supply & Sewerage Board (PWSSB) has planned to set-up new STPs in 17 ULBs to address the gap in sewage management.

b. There are 30 Urban local bodies (ULBs) falling in the catchment area of river Ghaggar which are discharging their wastewater either directly or indirectly into river Ghaggar. 6 STPs of 28.5 MLD capacity are under installation in 6 ULBs & 11 STPs of 62.70 MLD capacity in 7 ULBs are under various stages of planning for establishment. The details of under construction, tender & DPR stage STPs are provided at **Annexure-13 & 14 respectively.**

(Stakeholder Department – PWSSB/DLG)

7.3 Setting up of treatment facilities for sewage/sullage in Rural areas

(i) There are 389 villages, which are discharging 99.43 MLD waste water through various creeks and drains into Ghaggar.
(ii) The Department of Rural Development & Panchayats (DRDP) shall provide treatment facilities for villages directly/indirectly discharging their waste water into River Ghaggar in a time bound manner.

(Stakeholder Department – DRDP)

7.4 Setting up of Irrigation Facilities for Reuse of treated wastewater

The Department of Soil & Water Conservation (DSWC) informed as under:

(i) The projects for reusing the treated waste water of 7 STPs (38 MLD) for irrigation are under progress and are likely to be completed by 30.06.2026.

(ii) The projects for reusing the treated wastewater of 3 STPs (35.3 MLD) for irrigation are not feasible due to non-availability of irrigation command area as these STP's are located in urbanized area.

(iii) The projects for reusing the treated waste water 34 STPs (265.2 MLD) are under planning stage and are to be initiated after the funds for these projects are tied up.

The details of the projects already commissioned, under progress, not feasible and are at planning stage are given in **Annexure-12.**

(Stakeholder Department – DSWC)

7.5 Operation and Management Facilities

(i) Installation of Online Continuous Effluent Monitoring System (OCEMS) for STPs

The Department of Local Govt. shall ensure that all the STPs are equipped with Online Continuous Effluent Monitoring Systems (OCEMS). The calibration of OCEMS shall be carried out as per prescribed protocols & connectivity shall be established with the dashboards/servers of CPCB & PPCB.

(Stakeholder Department – PPCB & DLG)

(ii) Installation of Online Continuous Effluent Monitoring System (OCEMS) by CETPs & ETPs

Punjab Pollution Control Board shall ensure that all the CETPs and individual industries having discharge 50 KLD or more have installed OCEMS (Annexure-14) at their outlets and their calibrations shall be carried out as per prescribed protocols from time to time. Further, the OCEMS of the CETPs and ETPs shall be connected with the servers/dashboards of CPCB & PPCB.

(Stakeholder Department – PPCB & DLG)

(iii) Operation & Maintenance (O&M) of STPs and CETPs

a) O&M of STPs & CETPs should be entrusted to reputed companies for achievement of the prescribed discharge standards.

b) All the STPs should have in-house laboratory facilities at each STP for maintaining record of characteristics of analysis of untreated as well as treated waste water.

c) Sludge generated from STPs is required to be analysed for the parameters as mentioned in the Schedule 2 of MSW Rules, 2016 for disposal of the same. The operator of the STP is required to maintain database in this regard.

d) All the STPs should have standby arrangements for smooth functioning during maintenance period and there should be standard operating procedure for the same. All the STPs should have adequate capacity of holding tank(s) or standby arrangements for storage of untreated sewage during maintenance or shut down if any. All upcoming STPs also should have the above provisions.

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e) All STPs should have a provision of uninterrupted power supply or power backup system including standby electrical and mechanical components for ensuring proper and effective operation of the STPs.

(Stakeholder Department – PWSSB/DLG, DHUD, DWSS, DIC, PPCB)

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Chapter 8 – Monitoring Requirements and Formats

8.1 Key components of Monitoring

There are following key components of monitoring

(i) Monitoring of progress of projects for setting up of new STPs
(ii) Monitoring of operations and management of STPs
(iii) Monitoring of ETPs and Industrial Effluents
(iv) Monitoring of Quality of Water of River Ghaggar
(v) Monitoring of Ground Water quality
(vi) Monitoring of adverse impact on health of the people in surrounding areas due to water pollution
(vii) Monitoring of characteristics of sludge
(viii) Monitoring of Awareness campaign
(ix) Monitoring of other violations of laws/ regulations

8.2 Monitoring of operations and management of existing STPs/CETP/ETPs

To ensure proper functioning of the STPs/CETPs, regular availability of funds for operation and maintenance has to be ensured. All the STPs/CETP should also have standby source of power. The O&M contracts shall clearly define the responsibilities of the Operator. Monthly reports as per **Annexure-15 & 16** will be submitted for monitoring.

8.3 Monitoring of progress of setting up of new/ upgradation STPs/CETPs/ETPs

The progress of projects for setting up of new STPs in various Urban Local Bodies, CETP by Special Purpose Vehicle and ETPs for the treatment of Dairy effluents will be monitored on regular basis. In order to ensure that all the stakeholder departments adhere to the timelines given for setting up of new STPs/CETPs/ETPs and upgradation of existing STPs/CETPs facilities, the department shall submit progress of the project on monthly basis in the proforma attached as **Annexure-17 & 18** for monitoring.

8.4 Monitoring of ETP's and Industrial Effluents

Punjab Pollution Control Board shall visit the industries located in the catchment area of River Ghaggar as per protocol regarding frequency of visit to the industries to carry out monitoring of Effluent Treatment Plants & ground water and maintain proper record of all these visits. PPCB will submit report as per the proforma given in **Annexure-19.**

8.5 Monitoring of Quality of Water of River Ghaggar

The Punjab Pollution Control Board shall continue to monitor the quality of water of River Ghaggar at 14 locations under National Water Monitoring Programme and shall report to State Level Special Task Force on monthly basis in the proforma as per Annexure-W. Further, the data from the 4 online continuous monitoring systems installed to get the real time data regarding quality of water of river Ghaggar, has been put in public domain for information of public in general.

8.6 Monitoring of Ground Water Quality

The Punjab Pollution Control Board will monitor the ground water quality by taking samples in the Industrial areas. The data from Central Ground Board will also be taken. The reports will be presented for review at the district and state level as per **Annexure-20**.

8.7 Monitoring of adverse impact on health of the people in surrounding areas

The District Level Special Task Force shall get organized / conducted the health check-up camps of the people in the catchment area of River Ghaggar and shall submit the monthly report in proforma as per **Annexure-21**, which will be reviewed by State Level Special Task Force and the Executing Committee.

8.8 Monitoring of Awareness campaign

The PPCB will organize awareness programme in partnership with the Department of Health & Family Welfare and other stakeholders in the habitation area falling in the catchment area in River Ghaggar to educate them about the harmful effects of water pollution. The PPCB shall submit monthly report in the proforma as per **Annexure-22**.

8.9 Monitoring of other violations of laws/ regulations

The PPCB will monitor any violation not covered above and shall take appropriate action against the violator and report in this regard to the State Level Special Task Force and Executing Committee.

8.10 Role of Nodal officers of Stakeholder departments

The Nodal officers of the stakeholder departments will be responsible to send the status reports of the projects related to their departments and monitoring reports in the prescribed proformas. The Departments will appoint Nodal Officers, who would have necessary authority and influence to collect and provide reports. Once the centralised web-based IT system is developed, the relevant officers shall directly update the information on the portal and Nodal officer shall monitor the same.

Chapter 9 – Governance and Supervision

8.1 Four Tier Monitoring

(i) Monitoring will be done by the concerned Departments/ Agencies, which are executing or responsible for particular activities and it will be their primary responsibility to ensure compliance of the Action Plan.

(ii) State is already implementing the 4 -Tier Governance Mechanism to review the progress of various activities (monitoring of existing STPs, setting up of new STPs, reuse of treated wastewater etc.) of Action Plans to control the pollution in rivers including Ghaggar with details of Committees as under:

- **District Environment Committees (DEC) -** Department of Science Technology & Environment, Government of Punjab vide notification dated 31.10.2019 has constituted DEC in compliance of NGT orders dated dated 26.09.2019 in O.A. No. 360/2018 under the chairmanship of Deputy Commissioner of concerned District and membes as ADC (Development), SSP Police, EO- Municipal Corporation, Chief Administrator, Urban Development Authority, RO- Punjab Pollution Control Board (PPCB), SE-PWD, Chief Agriculture Officer, Chief Surgeon, District, Development & Panchayat Officer, General Manager, District Industries Centre, Secretary, Regional Transport Authority.

- **River Rejuvenation Committee (RRC) -** Department of Science Technology & Environment, Government of Punjab vide order dated 19.11.2018 has constituted RRC in view of NGT orders dated 20.09.2018 in O.A. No. 673/2018 consisting of Director Environment, Director, Urban Development, Director, Industries and Member Secretary, Punjab Pollution Control Board as members. The RRC will function under the over all supervision & coordination of Principal Secretary to Government of Punjab, Department of Science, Technology & Environment.

- **State Level Task Force also called State Apex Committee (SAC)-** Department of Science Technology & Environment, Government of Punjab vide order dated 14.11.2018 has constituted SAC in view of NGT orders dated 07.08.2018 in O.A. No. 138-139/2016 consisting of Chief Secretary, Punjab, Administrative Secretary, Environment, Administrative Secretary, Urban Local Bodies, Administrative Secretary, Housing and Urban Development, Member Secreaty, Punjab Pollution Control Board.

- **Monitoring by Divisional Commissioners -** The State Govt. has issued directions to all the Divisional Commissioners on 17.01.2023 to monitor the District Environment Plans (DEPs) in their respective Districts on behalf of Chief Secretry, Punjab from 1.01.2023 onwards in compliance of NGT order dated 18.08.2022 in O.A. No. 360/2018. The Divisional Commissioners are regularly monitoring the DEPs & submitting their bi-monthly reports for further review in the meeting of State Apex Committee.

(iii) Department of Science, Technology and Environment through Directorate of Environment & Climate Change (DECC) is responsible for coordination and monitoring

of the various Environmental Action Plans including Action Plan for Clean River Ghaggar. DECC is collecting, collatating and analysing the data from all the concerned agencies and is escalating the issues and challenges to the appropriate level for expeditious resolution of the same.

8.2 River Rejuvenation Committee (RRC)

(i) The mandate of the RRC as per NGT orders dated 20.09.18 is as under:

(a) It will prepare action plans to restore the polluted river stretches to the prescribed standards in the State.

(b) It will have a website inviting public participation from educational institutions, religious institutions and commercial establishments. Achievement & failures may also be published on such website. The Committee may consider suitably rewarding those contributing significantly to the success of the project.

(c) It will have the authority to recover the cost of rejuvenation in Polluter Pays Principle from those who may be responsible for the pollution, to the extent found necessary. In this regard, principle laid down by the NGT in order dated 13.07.2017 in O.A. No. 200/2014, M.C. Mehta V/s. UoI will apply. Voluntary donations, CSR contribution, voluntary services and private participation may be considered in consultation with the RRC.

8.3 State Level Task Force also called State Apex Committee

(i) The mandate of this task force as per order dated 14.11.2018 issued by the Govt. of Punjab, Deptt. of Science, Technology & Environment is as under:

(a) It shall finalize the Action Plan with firm timelines and review the same.

(b) It shall submit quarterly report on action taken during the quarter to the Central Pollution Control Board.

(c) It will also ensure that the quarterly Action Taken Reports are uploaded on the website of Punjab Pollution Control Board.

(d) It shall Co-ordinate with the Executing Committee, appointed by NGT

(e) The State Level Task Force will accordingly hold regular meetings to review

8.4 District Environment Committes

(i) The mandate of this task force as per NGT order dated 18.08.2022 in O.A. No. 360/2018. issued is as under:

(a) To prepare District Environment Plan and revision from time to timew.r.t various areas of environment & in particular following specific thematic areas:

i. Compliance to Solid Waste Rules including Legacy Waste
ii. Compliance to Bio Medical Waste Rules
iii. Compliance to Construction & Demolition Waste
iv. Compliance to E-Waste Rules

v. Four Water Polluted Stretches in the State (Roopnagar to Harike Bridge in River Sutlej, Along Mukerian& Sultanpur Lodhi to confluence of Beas in River Beas and Mubarakpur to Sardulgar in River Ghaggar)
vi. Nine non-attainment cities namely Patiala, DeraBassi, Naya Nangal, Dera Baba Nanak, Mandi Gobindgarh, Khanna, Ludhiana, Jalandhar and Amritsar
vii. Industrial Clusters namely Mandi Gobindgarh, Ludhiana
viii. Status of STPs and Re-use of Treated Water
ix. Status of CETPs/ ETPs including performance
x. Ground Water extraction/ contamination and recharge
xi. Air pollution including noise pollution
xii. Illegal sand mining
xiii. Rejuvenation of Water Bodies
xiv. Crop Residue Burning

(b) To prepare District Plans for Climate Change & Mission Tandrust Punjab and to revise the same from time to time.

(c) To review the progress of District Environment Plans and other plans.

(d) To identify all persons responsible for violation of law and norms relating to water pollution, air pollution, noise pollution and waste management

(e) To review action by the competent authority w.r.t. civil and criminal action against the violators as well as those who fail to perform their duties in this regard.

(f) To involve civil society organizations and public participation for organizing awareness programs.

(g) To ensure periodic sampling of river water as well as ground water to check water quality

(h) Any Other function assigned to the Committee by the State Government on its own or in pursuance of directions of the Hon'ble Court or Hon’ble NGT from time to time.

Chapter 10 – Challenges in Implementation of Action Plan

10.1 Identification of Major Challenges in the Action Plan

The Action Plan to clean Ghaggar and restore the quality of water to the prescribed standards is a complex multi sectoral and multi-agency action plan. Successful implementation would face many challenges. Following major risks have been identified:

(i) Accuracy and completeness of Baseline Data

(ii) Accuracy and completeness of Project timelines

(iii) Financial closure and timely releases of funds

(iv) Discharge from unapproved habitation areas

(v) Tracking the Progress and program management

(vi) Resolution of Administrative and Technical Issues

(vii) Mixing of industrial effluent with domestic wastewater

10.2 Mitigation Plan for identified Challenges

It is important to devise strategies and plans to mitigate the identified challenges. Action plan will remain on paper if the bottlenecks and the risks are not dealt satisfactorily. Mitigation plan for each of the identified challenges has been prepared in the following paras.

10.3 Accuracy and completeness of Baseline Data

Due to paucity of time, the information about the sources of pollution, current treatment facilities, quantity and quality of discharges etc. could not be properly validated and there could be gaps in the same, which may lead to substantial alterations in the plans. In order to ensure accuracy and completeness of baseline data, another round of validation of the same would be got done through the respective Administrative Departments and Action plan updated accordingly. This will be completed in 30 days.

10.4 Accuracy and completeness of Project timelines

There could be gaps in the information about the project timelines. All the Stakeholder Departments would be asked to validate the project timelines carefully after taking into account all the relevant factors.

10.5 Discharge from unapproved habitation areas

There are certain unapproved colonies or villages, which have come under municipal limit, which are currently not covered in the plans but are discharging their untreated sewage directly or indirectly into river Ghaggar. The concerned authorities for urban and rural areas will be asked to identify such localities and plan for their connectivity with the main sewer or development of the sewer system shall be worked out.

10.6 Financial closure and timely releases of funds

Availability of funds for completing the projects on time is a major challenge. Some of the projects have still not achieved financial closure. It has also been observed that the release of funds is often not regular even though the project had appropriate financial approval. In order to overcome these challenges, the concerned stakeholder department shall make efforts for timely release of funds by the State Govt./Govt. of India.

In case of operation and maintenance, seeking firm commitment of ULBs/ Department of Local Government to treat this as committed expenditure according it highest priority and release the funds regularly. Further, arrangement may be worked out with the Administrative Department and Department of Finance that in case of default of ULB to pay to the operator, funds will be deducted from the grant to be released to ULB and paid directly to the Operator.

10.7 Tracking the Progress and program management

The action plan for clean Ghagar is a complex, multi department and multi-agency programme. In order to mitigate the challenge, the concerned stakeholder departments may set-up a dedicated team to collate data, analyse the same, prepare status updates, escalate issues and assist various committees in review and issue resolution.

10.8 Resolution of Administrative and Technical Issues

Some of issues such as acquisition of land can hold up the progress of the implementation of the Action Plan. Such issues need to be identified by the concerned stakeholder department and escalate to the appropriate level. The three-tier monitoring and review system will help in resolving the issues.

10.9 STPs under one Department

Presently, STPs are under the control of the different organisations and different organisations are planning in their own way and there is no proper co-ordination. All STPs should be under one authority so that it becomes easy for planning, commissioning and ensuring proper operation and maintenance of the existing or upcoming STPs.

10.10 Mixing of industrial effluent with domestic wastewater

(i) Industrial effluents of the cities or towns should not be allowed to mix up with the domestic sewage.

(ii) A number of scattered industries (running from households) are discharging their effluent directly into Municipal Sewer. A foolproof mechanism needs to be formulated for tapping the effluent of these industries.

Annexure 1 – Representative analysis of Surface Water Quality for the month of June 2025

S. N.	Point of Sample Collection	pH	DO mg/l	BOD mg/l	T. Coli. MPN/ 100ml	Cond µs/Cm	Boron mg/l	DBU Classification
1.	Ghaggar at Mubarikpur Rest House	7.4	6.8	10	17000	519	-	D
2.	Ghaggar at Bhankarpur	7.6	2.2	18	24000	824	-	E
3.	Ghaggar at Chattbir	7.6	2.5	18	24000	870	-	E
4.	U/s Jharmal Nadi	7.7	4.2	16	21000	735	-	E
5.	D/s Jharmal Nadi	7.7	2.5	20	28000	870	-	E
6.	U/s Dhakanshu Nallah	7.6	3.6	17	28000	710	-	E
7.	D/s Dhakanshu Nallah	7.6	2.6	22	28000	892	-	E
8.	Ghaggar at Rattanheri	7.8	2.4	23	35000	1002	-	E
9.	U/s Sagar Para	7.8	2.6	21	28000	938	-	E
10.	D/s Sagar Para	7.7	2.2	26	28000	1098	-	E
11.	Ghaggar at Khanauri	7.6	2.6	28	28000	1181	-	E
12.	Ghaggar at Moonak	7.6	2.1	29	35000	1241	-	E
13.	U/s Sardulgarh	7.6	5.8	11	17000	498	-	D
14.	D/s Sardulgarh	7.6	4.6	13	21000	675	-	D

Annexure 2 - Analysis Results of Surface Water Monitoring 2021-22 to 2023-24

S no.	Sampling points at river Ghaggar	DO (mg/l)			pH			BOD (mg/l)			T. Coliform (MPN/100ml)			D.B.U. classification		
		2021-22	2022-23	2023-24	2021-22	2022-23	2023-24	2021-22	2022-23	2023-24	2021-22	2022-23	2023-24	2021-22	2022-23	2023-24
1	Mubarkpur Rest House	5.67	5.2	6.1	7.8	7.8	7.5	11.6	10.7	8.3	19750	22083	19392	D	D	D
2	Bhankarpur, DeraBassi	3.36	3.5	3.5	7.8	7.6	7.3	20.1	19.3	16.5	24667	27583	24500	E	E	E
3	D/S Chattbir	3.34	3.3	3.3	7.6	7.6	7.2	21.4	19.8	17.8	27250	28667	27167	E	E	E
4	U/S Jharmal Nadi	3.86	3.8	3.9	7.8	7.5	7.5	15.3	13.6	11.8	23667	24250	22583	E	E	E
5	D/S Jharmal Nadi	3.30	3.2	3.2	7.6	7.7	7.5	18.6	15.7	15.1	28750	29167	26750	E	E	E
6	U/S Dhakansu Nallah	3.62	3.7	3.7	7.6	7.9	7.5	13.8	13.5	12.7	24417	26083	24667	E	E	E
7	D/S Dhakansu Nallah	3.10	3.2	3.0	7.6	7.7	7.5	17.7	16.8	16.8	28583	31167	29083	E	E	E
8	Rattanheri D/S of Patiala Nadi	2.74	3.1	3.0	7.9	7.8	7.5	19.2	16.7	17.6	28333	31750	30583	E	E	E
9	U/s Sagar Para	3.03	3.3	3.1	7.8	7.6	7.5	18.5	15.4	16.2	28333	30583	30583	E	E	E
10	D/s Sagar Para	2.64	2.9	2.6	7.9	7.7	7.5	21.4	18.3	20.3	32333	35750	29458	E	E	E
11	Ghaggar at Khanauri	2.93	3.2	3.2	7.9	7.8	7.6	17.7	16.9	17.8	28583	32083	31750	E	E	E
12	Ghaggar at Moonak	2.78	2.8	2.8	7.9	7.9	7.5	20.3	19.8	21.3	33500	38417	36500	E	E	E
13	U/s Sardulgarh	5.88	4.8	5.9	7.6	7.7	7.5	9.3	9.9	9.8	17750	20333	20167	D	D	D
14	D/s Sardulgarh	5.28	4.3	5.1	7.8	7.8	7.7	11.7	11.3	11.4	22083	23583	21833	D	D	D

Note. 1. BDL means Below Method Detection Limit

2. WQI means Water Quality Index (S means Satisfactory, N means not Satisfactory).
3. DBU means Designated Best Use (Class-A, B, C, D& E)

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Annexure 3A- Monitoring Results of Ground Water Samples under NWMP- 2024

Sr.No.	Point of Collection	pH	Turb NTU	Cond µs/cm	TSS mg/l	TDS mg/l	T.H as $CaCO_3$ mg/l	Ca mg/l	Mg mg/l	F mg/l	NO3 as N mg/l	Cl mg/l	TAlk as $CaCO_3$ mg/l	Na mg/l	K mg/l	PO_4 mg/l	SAR	% Na
1	Hand pump installed at Railway crossing, Lalru, Teh. Dera Bassi SAS Nagar	8.3	BDL	2573	BDL	152	343	277	158	0.7	0.7	291	448	310	77	BDL	13.1	32
2	Hand pump near Peer Baba Samadh, Bhankarpur, Tehsil Dera Bassi, Distt. SAS Nagar.	7.5	BDL	2095	BDL	125	1151	248	129	0.6	0.5	246	397	219	51	BDL	7.2	28
3	Piezometer between Ash dyke & water reservoir, Nabha Power Limited, Village Nalash, Rajpura	7.8	BDL	510	BDL	298	148	41	11	BDL	BDL	45	183	40	8	BDL	1.7	36
4	Piezometer of M/s Patiala Distillers Pvt. Ltd., Village Main	8.0	BDL	448	BDL	265	117	32	9	BDL	BDL	35	178	40	7	BDL	1.7	41
5	Submersible installed at Baba Dramaya Ji Nath Mandir at village Rasouli (Sagar Para Drain meeting with river Ghaggar) Tehsil Patran	7.4	BDL	487	BDL	293	181	46	16	BDL	BDL	35	187	41	9	BDL	1.7	32

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Annexure: 3B Monitoring Results of Ground Water Samples under NWMP 2024 (Metals)

Sr. no.	Point of Collection	Fe mg/l	Zn mg/l	Cu mg/l	Ni mg/l	T. Cr mg/l	Pb mg/l	Cd mg/l	As mg/l	Hg mg/l
1	Hand pump installed at Railway crossing, Lalru, Teh. Dera Bassi SAS Nagar	0.28	0.18	BDL	BDL	BDL	BDL	BDL	BDL	BDL
2	Hand pump near Peer Baba Samadh, Bhankarpur, Tehsil Dera Bassi, Distt. SAS Nagar.	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
3	Piezometer between Ash dyke & water reservoir, Nabha Power Limited, Village Nalash, Rajpura	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
4	Piezometer of M/s Patiala Distillers Pvt. Ltd.,Village Main	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
5	Submerssible installed in the premises of Baba Dramaya Ji Nath Mandir at village Rasouli (Sagar Para Drain meeting with river Ghaggar) Tehsil Patran	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
6	Hand pump installed at Railway crossing, Lalru, Teh. Dera Bassi SAS Nagar	Sample Not Collected								
7	Hand pump near Peer Baba Samadh, Bhankarpur, Tehsil Dera Bassi, Distt. SAS Nagar.	Sample Not Collected								
8	Piezometer between Ash dyke & water reservoir, Nabha Power Limited, Village Nalash, Rajpura	Sample Not Collected								
9	Piezometer of M/s Patiala Distillers Pvt. Ltd.,Village Main	Sample Not Collected								
10	Submerssible installed in the premises of Baba Dramaya Ji Nath Mandir at village Rasouli (Sagar Para Drain meeting with river Ghaggar) Tehsil Patran	Sample Not Collected								

Annexure 4 - List of 13 Major Drains directly discharging into river Ghaggar

Sno.	Name of the drain	Point of origin	Approx. Length (in Km)	Coordinates at which the drain meets river Ghaggar	Location at which it meets river Ghaggar	Approx. Discharge (MLD)
1.	Sukhna Choe	Sukhna Lake	8.17	30^{O} 36'49'' N 76^{O} 50'09'' E	450 m upstream of Bhankhapur Bridge	105
2.	Dera Bassi Choe	Near Village Haripur Hinduan, Dera Bassi	8.75	30^{O} 36'13'' N 76^{O} 48'51'' E	Near upstream of Village Satabgarh	17.5
3.	Jharmal Choe	Near village Rampur Sainian, Tehsil Dera Bassi, Distt. SAS Nagar	22.86	30^{O} 28'27'' N 76^{O} 46'11'' E	Near Village Tiwana	17.5
4.	Basauli Drain	Near Village Jaula Khurd, Distt. SAS Nagar	24.39	30^{O} 26'39'' N 76^{O} 44'54'' E	Near Village Sadhanpur	12.5
5.	Bagna Drain	Near Village Salempur, Distt. SAS Nagar	19.5	30.3397 76.6986	Village Nanheri, Rajpura	-
6.	Pachisdara Drain (Dakansu Choe)	Near PCS, Sector-2, Chandigarh under the name of N-choe	22	30.305197 76.627918	Near Village Sarala-Khurd	125
7.	Patiala Nadi	Village Cholti Kheri, Distt. Fatehgarh Sahib	73	30.078934 76.243909	Village Ratanheri	150
8.	Sagarpara Drain	Kurkshetra (Haryana)	7.92	29.8975741 76.169735	Village Sagara	180
9.	Kaithal Drain	From Keorak, Distt. Kaithal (Haryana)	6.4	29^{O} 50'50'' N 76^{O} 06'00'' E	Near Khanauri Bridge	15
10.	Jhambowali choe	Village Chanarthal Kalan, Distt. Fatehgarh Sahib	72	29.8291 76.0011	Village Chandu, Tehsil Moonak	32.5
11.	Lehragagga Main	Near Kalajar	67	29^{0}50'03'' 75^{0} 45' 41''	Near Village Bakshiwala, Distt. Sangrur	82.5
12.	Sirhind Choe	Near Bassi Pathana	166	29.7460 75.4726	Near Village Kheri, Haryana	300
13.	Miranpur Choe	Near Village Haripur, Sub Tehsil Ghanour	58.69	30.0980 76.3069	Near Village Khambera, Haryana	125

Note: Analysis of water of two points of origin i.e. at Sr. No. 1 & 8 has been carried out, whereas, for other points the same is to be determined in due course of time.

Annexure 5 - List of 29 creeks discharging into main drains

Sr. No.	Name of the creek
1.	Drain passing through K-area
2.	Singh Nallah
3.	Gazipur Drain
4.	Dhabi Nallah
5.	Banur Drain
6.	Chhoti Nadi
7.	Khadoli Drain
8.	Jacob Drain
9.	Model Town Drain
10.	Kalwano Drain
11.	L-6 Drain
12.	Nabha Drain
13	Sangrur Drain
14	Bareta Drain
15	Ladal Drain
16	Mander Drain
17	Toderpur Drain
18	Hargobindpura Datewas Drain
19	Khiwa Sahajada Drain
20	Dodra Drain
21	Bahadur Singh Wala Drain
22	Balian Drain
23	Bhagwanpura Link Drain
24	Dhuri Drain
25	Sahoke Main Drain
26	Jassarwal Drain
27	Buggar Link Drain
28	Shekhupura Adalatipura Drain
29	Hassanpura Drain

Annexure 6 - List of Rural/Urban areas discharging directly/indirectly into river Ghaggar

Sr No	Name of the source	Identification mark	Location / Coordinates at the outfall (latitude & Longitude)	Approximate Discharge (KLD)	Present treatment facility installed, if any
1	Village Mubarikpur, Distt. SAS Nagar	D-1	30.618993 76.852268	250	No
2	Village Bhankharpur, Distt. SAS Nagar	D-2	30°36'16 "N 76°49'23"E	1100	No
3	MC, Zirakpur	D-3	30.3609 76.4904	15000	17.3 MLD STP Installed
4	Village Manoli Surat, Distt. Patiala	D-4	30.515277 76.765277	668	Yes
5	Village Nanheri, Distt. Patiala	D-5	30.277222 76.692777	196	Yes
6	Village Samaspur, Distt. Patiala	D-6	30.365833 76.688333	196	No
7	Village Utsar, Distt. Patiala	D-7	30.365833 76.70716	225	Tender Done
8	Village Chamaru, Distt. Patiala	D-8	30.335555 76.661111	457	Tender Done
9	Village Rampur, Distt. Patiala	D-9	30.3302777 76.644722	349	Yes
10	Village Maru, Distt. Patiala	D-10	30.288424 76.6011796	451	Yes
11	Village Mandi/ Pur, Distt. Patiala	D-11	30.271858 76.550271	186	Yes
12	Village Sirkapra, Distt. Patiala	D-12	30.287427 76.580975	219	Tender Done
13	Village Hadana, Distt. Patiala	D-13	30.248568 76.545608	488	Yes
14	Village Hasanpur Kamboj, Distt. Patiala	D-14	30.209991 76.529837	320	Yes
15	Village RurkiBudh Singh, Distt. Patiala	D-15	30.198125 76.524154	355	Yes
16	Village Ram Nagar Chuniwala, Distt. Patiala	D-16	30.188423 76.517152	1202	Yes

17	Village Badla, Distt. Patiala	D-17	30.171519 76.487979	109	Yes
18	Village Kapuri, Distt. Patiala	D-18	30.183286 76.514487	278	No
19	Village Kheri Raju Singh, Distt. Patiala	D-19	30.15762 76.480933	207	No
20	Village Bhasmara, Distt. Patiala	D-20	30.151285 76.468842	192	Yes
Total				22448	
21	Village Mehmudpur, Distt. Patiala	D-21	30.149398 76.454012	315	Yes
22	Village SadhunagarurfJalahkheri, Distt. Patiala	D-22	30.142181 76.450986	22	No
23	Village Kotbhai Lakheya, Distt. Patiala	D-23	30.7788 76.2423	135	Yes
24	Village Ratanheri, Distt. Patiala	D-24	30.07788 76.2423	326	Yes
25	Village Marori, Distt. Patiala	D-25	30.6798 76.22828	754	Yes
26	Village Harchandpura Town, Distt. Patiala	D-26	30.03198 76.19351	94	Yes
27	Village HarchandpuraHavali, Distt. Patiala	D-27	30.02684 76.15519	75	Yes
28	Village Seona Kath, Distt. Patiala	D-28	29.983211 76.196813	825	Yes
29	Village Arnetu, Distt. Patiala	D-29	29.958466 76.196936	652	Yes
30	Village Karim Nagar Urf Chicarwala, Distt. Patiala	D-30	29.903727 76.171937	807	Yes
31	Village Rasoli, Distt. Patiala	D-31	29.903438 76.170917	320	Yes
32	Village Shatrana, Distt. Patiala	D-32	29.877390 76.137291	3447	Tender Done
33	Village Matoli, Distt. Patiala	D-33	29.871764 76.136660	520	Yes
34	Vill. Dera Jheel, Distt. Patiala.	D-34	29.940701 76.170949	110	Land Not available
			29°47'30.8"N 75°57'12.8"E	268.10	Yes

35	Vill. Makror Sahib, Distt. Sangrur (three outlets)	D-35	29°47'26.7"N 75°56'50.3"E 29°47'22.2"N 75°56'44.8"E		
36	Vill. Mandvi, Distt. Sangrur (three outlets)	D-36	29°49'05.6"N 75°59'21.8"E 29°48'40.3"N 75°59'11.3"E 29°48'29.8"N 75°59'01.2"E	427.35	Yes
37	Vill. Fulad, Distt. Sangrur	D-37	29°47'07.4"N 75°56'02.2"E	120.40	Yes
38	Vill. Shahpur Their, Distt. Sangrur	D-38	29°49'48.1"N 76°01'00.0"E	63.84	No
39	Vill. Chandu, Distt. Sangrur	D-39	29°49'41.7"N 75°59'58.8"E	112.28	No
	Total			9393.97	
40	M.C., Moonak, Distt. Sangrur	D-40	29.812017"N 5.889865"E	1500	STP of 3 MLD capacity installed
41	Village Phoos Mandi, Distt. Mansa	D-41	29.7025"N 75.2755"E	75	Land not available
42	MC, Sardulgarh, Distt. Mansa	D-42	29.6991"N 75.2391"E	4000	4 MLD STP installed
43	Village Rorki, Distt. Mansa	D-43	29.6892"N 75.2096"E	105	WSP installed
44	Village Jhanda Khurd, Distt. Mansa	D-44	29.6703"N 75.1783"E	210	Yes
45	Village Bhunder 1, Distt. Mansa	D-45	29.697150"N 75.226098	5	Land not available
46	Village Bhunder 2, Distt. Mansa	D-46	29.695267"N 75.224569"E	11	Land not available
47	Vill. Bhagwanpur Higna Distt.Mansa	D-47	29.685953"N 75.332885"E 29.687"N 75.335"E	7 3	Yes Yes
	Total			5916	
	Grand Total			**37757.97**	

Annexure 7 - List of urban / rural areas discharging indirectly into Ghaggar

S.N.	Name of the Source	Identification mark	Location of the outfall into drain	Coordinates at the outfall into the drain	Apprx. Discharge (KLD)	Present treatment facility installed, if any.
1.	**Sukhna Choe**					
1.1	**Drain passing near K-area**					
1	K-area (MC, Zirakpur)	IN-2.1.1.1	Bridge near Gurudwara Sahib	30.64 9651 76.83 71 57	180	Not connected to STP of 17.3 MLD
1.2.	**Singh Nallah**					
1.	Green City, Mamta Enclave / Baltana Area	IN-2.1.2.1	Dera Bassi, Kalka Road, Near Green city bridge	30.664357 76.843824	50	Not connected to STP of 17.3 MLD
1.3	**Gazipur Drain**					
1.	Gazipur (MC, Zirakpur)	IN-2.1.3.1	Confluence point ofGazipur Drain and Sukhna Choe	30.63 54 29 76.84 05 75	1000	Not connected to STP of 17.3 MLD
	Total				1230	
2	**Dera Bassi Choe**					
1.	Vill. Haibatpur	IN-2.2.1	Up steam of village Haibatpur approx. 1.5 Km	30°35'48"N 76°53'07"E	192	No
2.	M.C., Dera Bassi	IN-2.2.2	Near over bridge (two no. outlets)	30.593051 76.846355	2500	STP of 4 MLD Capacity installed & 3, 3.50 & 7.50 MLD are proposed.
3.	Vill. Issapur located within MC	IN-2.2.3	Habitpur drain passing into Issapur Road, near bridge.	30.60486 76.831447	140	No

2.1	**Dhabi Nallah**					
1.	Domestic effluent of industry through storm water sewer of Focal Point	IN-2.2.1.1	Bridge near M/s. Nibber Castings	30°36'26" 76°51'37"	20	
2.	STP (2 MLD), Industrial Area, Focal point Dera Bassi	IN-2.2.1.2	Industrial Area, Dera Bassi	30.604039 76.854303	500	2MLD
3.	Silver City	IN-2.2.1.3	Near PCCPL bridge	30.603779 76.849283	480	STP installed
3	**Jharmal Choe**					
1.	Vill.Gulabgarh located within limits of MC, Dera Bassi, Distt. SAS Nagar.	IN-2.3.1	D/s of Vill. Gulabgarh Near GBP Flats	30.577264 76.863174	100	No
	Total				3932	
2.	Vill.Mahiwala located within limits of MC, Dera Bassi, Distt. SAS Nagar.	IN-2.3.2	D/s of Vill. Mahiwala Near Bridge	30.570767 76.855121	40	No
3.	Vill. Jawaharpur, Distt. SAS Nagar. (within MC limits)	IN-2.3.3	Near Bridge	30.557355 76.832997	235	No
4.	Vill. Gholumajra, Distt. SAS Nagar. (within MC limits)	IN-2.3.4	Near Vill. Gholumajra	30°31'56''N 76°49'35''E	100	
5.	Vill. Kheri Gujran, Distt. SAS Nagar.	IN-2.3.5	Near bridge Vill. Kheri Gujran	30.557381 76.872394	180	Yes
6.		IN-2.3.6	Near bridge of	30°31'42''N	142	No

	Vill. Bijanpur, Distt. SAS Nagar.		Bijanpur	76°51’27’’E		
7.	Vill. Dapper within MC limits of Lalru, Distt. SAS Nagar.	IN-2.3.7	Near vill. Dapper	30°31’08’’N 76°48’55’’E	600	
8.	Vill. Chaundheri located within MC limits of Lalru, Distt.SAS Nagar.	IN-2.3.8	Near Bridge of Chaundheri	30.512129 76.812967	115	
Total					1412	
9.	Nagar Panchayat, Lalru, Distt. SAS Nagar.	IN-2.3.9	Entering into Jharmal Choe	30°29’21’’N 76°47’29’’E 30°29’14”N 76°47’32”E	2500	STP of 1.5 & 1 MLD capacity installed Another STPs of 3,1 &3.50 MLD are proposed
10.	Vill. Dehar within MClimits of Lalru, Distt. SAS Nagar.	IN-2.3.10	At the bridge, where from Jharmal Choepasses	30.478121 76.777919	170	No
11.	Vill. Tiwana, Distt.SAS Nagar	IN-2.3.11	Near village Tiwana	30°28’27” 76°46’10”	130	Land Not Available
3.1	**Hassanpura Drain**					
1.	Village Hassanpur	IN-2.3.1.1	From Vill. Hassanpur	30°30’53’’N 76°47’38’’E	120	No
2.	Dappar Colony (Within MC limits of Lalru)	IN-2.3.1.2	In Garden Estate	30°31’00’’N 76°47’00’’E	100	STP of 1MLD capacity installed

Total					3020	
4	**Basauli Choe**					
1	Vill. Jaula Khurd, Distt. SAS Nagar	IN-2.4.1	Up stream of Cad Chem Industry bridge	30.461867 76.878166	100	Yes
2.	Vill. Basauli, Distt. SAS Nagar	IN-2.4.2	Near bridge of village Basauli	30.449688 76.861485	150	No
3.	Vill. Kurli, Distt. SAS Nagar	IN-2.4.3	Near Vill. Kurli	30° 26'32" 76°47'35"	250	No
5	**Bhagna Nadi**					
1.	Village Bhasma, Distt. SAS Nagar	IN-2.5.1	Near village Bhasma	30.46555 76.72666	442	No
2.	Village Tepla, Distt. Patiala.	IN-2.5.2	Near Village Tepla	30.440000 77.003611	818	Tender Called
6	**Pachisdara Drain (Dhakansu Choe)**					
1.	Village Jagatpura, Distt. SAS Nagar	IN-2.6.1	Near Gurudwara Sahib	76.4537 30.4051	101	No
2.	Village Ambsahib Colony, Distt. SAS Nagar	IN-2.6.2	Near Culvert	76.4513 30.4044	300	No
3.	Village Kambala, Distt. SAS Nagar	IN-2.6.3	Bridge on Rudewal Road	76.4458 30.3953	300	No
Total					2461	
4.	Village Kambali, Distt. SAS Nagar	IN-2.6.4	Near Hot mix plant	76.4509 30.4031	250	No
5.	Village Papri, Distt. SAS Nagar	IN-2.6.5	Bridge on drain	76.4437 30.3923	150	No
6.	MC, SAS Nagar	IN-2.6.6	Near the STP	76.7238 30.6522	45000	45MLD capacity STP installed
7.		IN-2.6.7	Near S. Pyara	76.4320	320	No

	Village Manoli, Distt. SAS Nagar (Two outlets)		Singh Field	30.3343		
			Bridge on Drain	76.4327 30.3829		
8.	Village Chachumajra Distt. SAS Nagar	IN-2.6.8	Bridge on Drain	76.4441 30.3922	100	No
9.	Village Sainimajra (Prem Nagar), Distt. SAS Nagar	IN-2.6.9	Near Pakka Outlet to drain	76.4309 30.3801	70	No
10.	Village Chahumajra, Distt. SAS Nagar	IN-2.6.10	Near H/o Sewa Singh	76.4251 30.3736	160	No
Total					46050	
11.	Village Dehri, Distt.SAS Nagar	IN-2.6.11	Bridge on Drain	76.4133 30.3705	60	No
12.	Village Nageri, Distt.SAS Nagar	IN-2.6.12	Bridge on Drain	76.4109 30.3631	80	No
13.	Village Kaloli, Distt.SAS Nagar	IN-2.6.13	Bridge on Drain	76.4059 30.3508	85	No
14.	MC, Banur	IN-2.6.14	Near the STP	76.6925 30.5608	4000	STP of4 MLD capacity based on MBBR Technology is installed
15.	MC, Rajpura and FocalPoint area of Rajpura	IN-2.6.15	At Ambala Road Rajpura	30.47936, 76.60753	3700	STP of 7 & 10 MLD capacity installed on SBR technology
6.1	**Banur Drain**					
1.	Village Kaloli, Distt.Patiala	IN-2.6.1.1	Near village Kaloli	30.585555, 76.68277	378	In Progress
7	**Patiala Nadi**					
1.	Village Gauspur	IN-2.7.1	Near habitation area	30.255722 76.303608	105	Tender Called

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Total					8408	
2.	Village Shankarpura	IN-2.7.2	-do-	30.255881 76.303644	300	Tender Called
3.	Village FatehpurJattan	IN-2.7.3	-do-	30.25728 76.294283	247	No
4.	Village Mohabatpura	IN-2.7.4	-do-	30.255787 76.285561	89	No
5.	Village Kauli	IN-2.7.5	-do-	30.25555 76.302215	629	Yes
6.	Village Alampur	IN-2.7.6	-do-	30.245757 76.293879	312	No
7.	Village Bhateri	IN-2.7.7	-do-	30.23396 76.262062	353	Yes
8.	Village Doun Kalan	IN-2.7.8	-do-	30.24278 76.281014	940	No
9.	Village DounKhurd	IN-2.7.9	-do-	30.24233 76.24449	359	Tender Called
10.	Village Rasulpur Joran	IN-2.7.10	-do-	30.233654 76.262487	226	No
11.	Village Daulatpur	IN-2.7.11	-do-	30.222779 76.254515	150	No
12.	Village Kalwa	IN-2.7.12	-do-	30.423076 76.423715	320	Yes
13.	Village Mirjapur	IN-2.7.13	-do-	30.40663 76.43478	143	Site under Dispute
14.	Village Sefdipur	IN-2.7.14	-do-	30.2149039 76.2623697	202	Yes
15.	Village MehmoodpurAraian	IN-2.7.15	-do-	30.2149039 76.2623697	52	Yes
16.	Village Faloli	IN-2.7.16	-do-	30.211363 76.254298	83	No
17.	Focal Point, Patiala	IN-2.7.17	-do-	30.3756310 76.4292680	1250	No
Total					5655	
18.	Outlet of Shanti Nagar& Virk Colony within	IN-2.7.18	-do-	30.356682 76.429527	150	Outlet in Badi Nadi

	MC limits of Patiala					
19.	Nagar Panchayat, Sanour, Distt. Patiala.	IN-2.7.19	-do-	30.320038 76.417061	2500	STP of 26 MLD under construction by PDA
20.	Outlet of treated sewage of Urban Estate Patiala	IN-2.7.20	-do-	30.335933 76.425814	5000	STP of capacity 13MLD installedby PUDA
21.	Outlet of Storm watercarrying sewage / sullage of habitation area near Patiala Nadi	IN-2.7.21	-do-	30.336438 76.425488	1875	No
22.	Two no. Nalas falling into Badi Nadi from Internal area of Patiala City	IN-2.7.22	-do-	30.299030 76.390280	3000	No
23.	Village Rewas Brahmna	IN-2.7.23	-do-	30.28, 76.38	323	No
24.	Village Jalal Khera	IN-2.7.24	-do-	30.142181 76.450986	127	No
25.	Village Kalar Bhani	IN-2.7.25	-do-	30.24 76.33	471	In Progress
26.	Village Dhurad	IN-2.7.26	-do-	30.26 76.35	335	Tender Called
27.	Village Passiana	IN-2.7.27	-do-	30.29 76.37	809	Yes
Total					**14590**	
28.	Village Sher Majra	IN-2.7.28	-do-	30.22 76.32	501	Yes
29.	Village Main	IN-2.7.29	-do-	30.25 76.32	590	No
30.	Village Bhanra	IN-2.7.30	-do-	30.24 76.31	688	Yes

31.	Village Bhanri	IN-2.7.31	-do-	30.25 76.32	497	Yes
32.	Village Langroi	IN-2.7.32	-do-	30.24 76.31	375	In Progress
33.	Village Dakala (two outlets)	IN-2.7.33	-do-	30.13 76.32 30.23 76.19	1240	Yes
34.	Village Mavi Sappan	IN-2.7.34	-do-	30.18 76.28	397	In Progress
35.	Village Daroli	IN-2.7.35	-do-	30.21 76.29	267	Tender Called
36.	Village Darola	IN-2.7.36	-do-	30.34 76.34	250	In Progress
37.	Village Madho Majra	IN-2.7.37	-do-	30.21 76.37	234	No
38.	Village Train	IN-2.7.38	-do-	30.23 76.32	433	No
39.	Village Harinagar Khedki (two outlets)	IN-2.7.39	-do-	30.10 76.28 30.18 76.16	481	No
Total					5953	
7.1 Chhoti Nadi						
1.	Badha Road, Tej Bagh Colony, Patiala (Near slaughter House)	IN-2.7.1.1	Near Mathura Colony	30.328738 76.412954	1250	This outlet is to be connected with existing STP
2.	SST Nagar, PatialaNear, Chotti Masjid Muslim Colony	IN-2.7.1.2	Near transport area	30.334128 76.413971	750	-do-

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3.	Shree Santoshi Mata Mandir area	IN-2.7.1.3	Near Mandir	30.331478 76.413876	1675	-do-
7.2	**Khadoli Drain**					
1.	A part of the sewage of Rajpuratown located towards Patiala side	IN-2.7.2.1	Near the Habitation area	30.46910 76.56616	6000	STP of 7 & 10MLD capacity based on SBR Technology are installed and in operation.
	Total				9675	
7.3	**Jacob Drain**					
1.	Outlet of Dhillon Colony & Kesar Bagh,Patiala	IN-2.7.3.1	-do-	30.315532 76.399751	06	Individual untapped points on the embankments of Jacob drain will be connected with the STP of Shermajra of capacity 46 MLD sewer is initially laid in these colonies.
2.	Moti Bagh, Patiala &Darru Kutia area	IN-2.7.3.2	-do-	30.308700 76.381793	06	Individual untapped points on the embankments of Jacob drain will be connected with the STP of Shermajra of capacity 46 MLD sewer is initially laid in these colonies.
	Total				12	

3.	Dakala, Terin, Bhanari,Main Road, Sullar Colony, (From MilitaryArea) Within MC limit, Patiala	IN-2.7.3.3	Near Dargah ofSullar Colony	30.301800 76.375237	30	No
7.	Outlet of MES Patiala	IN-2.7.3.4	-do-	76.373482 76.373482	5500	MES has submitted the proposal to install STP based on MBBR technology ofcapacity6MLD by August,2020.
8.	Outlet of STP Shermajra (46 MLD)	IN-2.7.3.5	-do-	30.283308 76.365508	46000	STP of 46MLD capacity installed at Shermajra

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Annexure 8 – List of ULBs having installed STPs of full capacities

Sr. No.	ULB	District	Name of STP/ Town	Concerned Deptt.	Cap. (MLD)	Tech.	Cap. Being Utilized (MLD)
1	Banur	Mohali	Banur	PWSSB	4	MBBR	4
2	Bareta	Mansa	Bareta	PWSSB	3	WSP	3
3	Bhikhi	Mansa	Bhikhi	PWSSB	3	WSP	3
4	Budhlada	Mansa	Budhlada	PWSSB	6.5	MBBR	6.5
5	Khanauri	Sangrur	Khanauri	PWSSB	3	SBR	3
6	Lehragaga	Sangrur	Lehragaga	PWSSB	4	SBR	4
7	Mandi Gobindgarh	Fatehgarh Sahib	Mandi Gobindgarh	PWSSB	25	SBR	25
8	Moonak	Sangrur	Moonak	PWSSB	3	SBR	3
9	Patran	Patiala	Patran	PWSSB	4	SBR	4
10	Samana	Patiala	Samana	PWSSB	10	SBR	10
11	Sardulgarh	Mansa	Sardulgarh	PWSSB	4	WSP	4
12	Sunam	Sangrur	Sunam	PWSSB	8	MBBR	8
13	Zirakpur	Mohali	Zirakpur	PWSSB	17.3	SBR	17.3
14	Rajpura	Patiala	Rajpura-I	PWSSB	7	SBR	7
15	Rajpura	Patiala	Rajpura-II	PWSSB	10	SBR	10
16	Mohali	Mohali	Mohali	GMADA	45	UASB	-
17	Lalru	Mohali	Lalru	GMADA	1.5	SBR	1.5
18	Patiala	Patiala	Patiala-I (Shermajra)	MC	46	SBR	46
19	Patiala	Patiala	Patiala-II (Ablowal)	MC	10	SBR	10
20	Patiala	Patiala	Patiala-III	PUDA	13	FAB	6.5
21	Dera Bassi	Mohali	Dera Bassi	PSIEC	2	MBBR	3
22	Dera Bassi	Mohali	Dera Bassi	MC	4	SBR	4
23	Nabha	Patiala	Nabha	PSIEC	2.5	SBR	0.25
24	Patiala	Patiala	Patiala-IV (Shermajra)	PWSSB	15	SBR	15
25	Mandi Gobindgarh	FGS	Mandi Gobindgarh (focal Point PSIEC)	PSIEC	3	MBBR	0.5

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26	Patiala	Patiala	Patiala	MES	6	-	4.5
27	Banur	Mohali	Banur (Bassilsse Khan)	PWSSB	0.5	-	0.20
28	Patiala	Patiala	Bahadurgarh	DWSS	4	-	1.50
29	Mohali	Mohali	Aertocity	GMADA	10	-	10
30	Patiala	Patiala	Chaura	-	4	-	4
31	Nabha	Patiala	Nabha	PWSSB	12	-	7.81
32	Bassi Pathana	Fatehgarh Sahib	Bassi Pathana	PWSSB	3	-	2.43
33	Ghanour	Patiala	Ghanour	PWSSB	2	-	0.80
34	Sirhind	Fatehgarh Sahib	Sirhind	PWSSB	5	-	3.54
35	Boha	Mansa	Boha	PWSSB	2	-	1.63
36	Sangrur	Sangrur	Sangrur	PWSSB	4	-	2
37	Longowal	Sangrur	Longowal	PWSSB	5	-	3.26
38	Lalru	Mohali	Lalru	PWSSB	1	-	1
39	Amloh	Fatehgarh Sahib	Amloh	PWSSB	3	-	2.28
40	Mandi Gobindgarh	Fatehgarh Sahib	Mandi Gobindgarh	PWSSB	12	-	5

Annexure 9 - List of Industries located in Dera Bassi area

Sr. No.	Name and Address of industry	Type of industry	Water consum p-tion (KLD)	Effluent discharge (KLD)		ETP component	Mode of Disposal of treated wastewater authorized by the Board.
				Trade (KLD)	Domestic Effluent		
1.	T.C. Terrytex Limited, Village Sarsini, PO Lalru, Dera Bassi	Dyeing	2200	1800	50	Physico chemical followed by aerobic biological treatment and tertiary treatment	Onto land for plantation
2.	YCD Industries Ltd. (Formerly Bhandari Export Industries Ltd.), Village Sarsini, Dera Bassi	Dyeing	200	160	10	Physico chemical followed by aerobic biological treatment and tertiary treatment	Onto land for plantation
3.	Nahar Spinning Mills Ltd.(M & D Unit), Village Lehli, PO Dappar, Lalru, Dera Bassi	Dyeing	1850	1700	50	Physico chemical followed by aerobic biological treatment.	Onto land for plantation
4.	Nahar Industrial Enterprises Ltd. (Process House-I), Village Jalalpur, PO Dappar, Dera Bassi	Dyeing	2800	2300	200	Aerobic biological treatment followed by tertiary treatment.	Onto land for plantation
5.	Nahar Industrial Enterprises Ltd. (Process House-2), Village Jalalpur, PO Dappar, Dera Bassi	Dyeing	3500	2750	200	Aerobic biological treatment.	Onto land for plantation
6.	Mirha Exports (P) Ltd., Village Jaula Khurd, Dera Bassi (84276-77844)	Meat Plant	1910	1620	23.5	An-aerobic followed by aerobic biological treatment and tertiary treatment.	Onto land for plantation
7.	Suguna Foods (Earlier SHL Agro foods INC), Village Jaula Khurd, Dera Bassi	Meat Plant	100	75	13.68	Aerobic biological treatment and tertiary treatment.	Onto land for plantation

8.	Cad Chem Laboratories Ltd Village Jaula Kalan, Dera Bassi	Pharmaceutical	36	11	2.6	The industry is generating two type of effluent stream i.e. High TDS and Low TDS. The industry has installed MEE for the treatment of High TDS and installed ETP based on physio-chemical treatment for the low TDS.	Onto land for plantation
9.	Pure & Cure Lifesciences Ltd. (Earlier Parabolic Drugs Ltd.), Village Chachrouli, Dera Bassi	Pharmaceutical	15	12	1.5	MEE for high TDS stream and aerobic biological treatment system for low TDS stream.	ZLD
10.	Punjab Chemical & Crop Protection Ltd (Pharma Division), (Old name Alpha Drugs Ltd.), Village Samalheri, Dera Bassi	Pharmaceutical	118	27	10	MEE installed.	ZLD
11.	Nectar Lifesciences Ltd. Unit-2 (Old Name Surya	Pharmaceutical	220	200	15	MEE for high TDS stream and aerobic biological	Onto land for plantation
	Medicare Ltd.), Village Saidpura, Dera Bassi					treatment system for low TDS stream.	
12.	Allychem Laboratories (P) Ltd, E-68-69, focal point, Dera Bassi	Pharmaceutical	38	12	3	MEE installed.	--
13.	Essix Biosciences Ltd., B- 4 & 5, Focal Point, Dera Bassi	Pharmaceutical	10	7.2	2	Single stage evaporator for high TDS stream and aerobic	Onto land for plantation

						biological for low TDS stream.	
14.	Vardhman Chemtech Ltd., Focal Point, Dera Bassi.	Pharmaceutical	50	39.5	4.5	MEE installed.	ZLD
15.	Anuja Healthcare Ltd. (Old name Anuja Impex (P) Ltd.), C-26 & C-31, Focal Point, Dera Bassi	Pharmaceutical	176.5	9.5	1.764	MEE installed.	--
16.	Nectar Lifesciences Ltd. Unit-1 (Old Name Surya Medicare Ltd), Village Saidpur, Dera Bassi	Pharmaceutical	175	29	6	ETP common with Nectar Life Sciences Unit-2.	Please see the status of Nectar Life Scineces Unit-2 at S.No. 14.
17.	ARK Healthcare, D-12, Focal Point, Dera Bassi	Pharmaceutical	2.4	1.07	0.5	Low TDS treated through ETP based on physico chemical followed by biological treatment and high TDS teated through Single effect evaporator	--
18.	Panacea Biotech Ltd., Village Samalheri, Near Lalru, Dera Bassi	Pharmaceutical	100	83	13	The industry has installed ETP based on biological treatment.	Onto land for plantation
19.	Punjab Chemicals & Crop Protection Ltd (Agro Division)., Village	Pesticide	193	21	10	MEE installed.	ZLD

	Bhankharpur, Dera Bassi						
20.	Sarwal Pharmaceuticals, F-14, Focal Point, Dera	Pharmaceutical Formulation	3.4	0.2	1.2	Pan type evaporator	--
	Bassi						
21.	Austin Pharmaceuticals, E-40, Focal Point, Dera Bassi	Pharmaceutical Formulation	7	0.1	0.8	Pan type evaporator	--
22.	Ticoma Pharmacia, E-47, focal Point Dera Bassi	Pharmaceutical Formulation	1.2	0.06	0.4	Pan type evaporator	ZLD
23.	Steel Strips Wheels Ltd., Village Smalheri, Dera Bassi	Engineering Goods	500	293	75	Physico-chemical treatment.	Onto land for plantation
24.	Kiran Industries (Vipan Kumar), F-19, Focal Point, Dera Bassi	Electroplating	0.45	0.15	0.3	Joined CETP	-
25.	Kamal Hi-tech Engineers (P) Ltd, B-10-11, Focal Point, Dera Bassi	Electroplating	10	7.5	2	Joined CETP	-
26.	Morff International, E-27, Focal Point, Dera Bassi	Electroplating	1	0.1	0.4	Joined CETP	--
27.	Kaura Inds.Corp., D-2, Focal Point, Dera Bassi	Electroplating	0.525	0.4	0.1	Joined CETP	-

28.	Piyanshu chemicals (P) Ltd., D-22A & D-23, Focal Point, Dera Bassi	Resin manufacturing	5	0.3	0.5	No ETP installed as the quantity of generation of effluent is quite less. Therefore, the industry has installed electric heater.	ZLD
29.	Varindra Organica (P) Ltd., D-24, Focal Point, Dera Bassi	Organic Chemical industry	12	8	2.4	Physico-chemical treatment.	Treated wastewater is used in cooling water as make up water.
30.	Power Chem Plast Ltd.(Formerly Power Drugs Ltd), C-25, Focal Point, Dera Bassi	Organic Chemical industry	1	0	1	Reuse in Cooling Tower	--
31.	Vishal Papertech (India) Ltd., Village Mubarikpur, Dera Bassi	Pulp & Paper	1250	1224	8	Primary treatment followed by secondary aerobic biological treatment.	Onto land for plantation
32.	Nachiketa Papers Ltd., Village Mubarikpur, Dera Bassi	Pulp & Paper	196	6	5	Settling tank and sedi cell.	Reused
33.	Inbrew Beverages (Earlier Molson Coors india (P) Ltd.)Village Bhankharpur, Dera Bassi	Brewery	800	700	72	The industry has installed ETP based on physico chemical followed by biological treatment.	Onto land for plantation
34.	Chandigarh Distillers & Bottlers Ltd., Banur	Distillery	2500	2310	~~120~~ 20	MEE followed by drier for spent wash. Aerobic Biological	ZLD

						treatment system for other streams.	
35.	Rama Industries Ltd., Village Chaundheri, Lalru, Dera Bassi	Gelatine	4810	1615	10	Physico chemical followed by aerobic biological treatment and tertiary treatment.	Onto land for plantation

Annexure 10 - List of Industries located in Patiala area

S. No.	Name and Address of industry	Type of industry	Water consumption (KLD)	Effluent discharge (KLD)		ETP component	Mode of Disposal of treated wastewater authorized by the Board.
				Trade (KLD)	Domestic (KLD)		
1	Vishal Coater Pvt. Ltd., Vill. Khusropur, Patiala	Pulp & Paper	627	510	6	Aerobic biological treatment.	Onto land for plantation
2	Vishal Paper Industries Pvt. Ltd., Vill. Khusropur, Patiala	Pulp & Paper	1075	510	9	Aerobic biological treatment.	Onto land for plantation
3	SSG Paper Mills, Vill. Khusropur, Maine Road, Patiala	Pulp & Paper	235	90	10	Aerobic biological treatment.	Onto land for plantation
4	Shree Swami Card Board Mills, Bhanri Road, Vill. Main, Distt. Patiala	Paper Board	21	0	0.5	Recirulation system provided.	Reused in the process
5	Mittal Card Board Mills, Vill. Main, Tehsil and Distt. Patiala	Paper Board	18	0	0.5	Recirulation system provided.	Reused in the process
6	DSG Paper Mill, Vill. Bhanri road, Maine Road, Patiala	Pulp & Paper	1076	1000	18	Aerobic biological treatment	Onto land for plantation
7	Patiala Distillers & Mfrs. Pvt. Ltd., Vill. Main, Patiala	Distillery	4000	3000	5	Anaerobic treatment followed by aerobic biological treatment	Onto land for plantation. Presently, temporarily distillation process not in operation.

Annexure 11 - Status of HCFs operating in catchment areas of Ghaggar

Sr. No	Name of the town	No. of HCFs covered	No. of bedded HCFs	No. of non-bedded HCFs	No. of HCFs not made agreement with CBWTF
1	**SAS Nagar**	1287	273	1014	0
2	**Patiala**	790	360	430	0
3	**Sangrur**	466	138	328	0
4	**Mansa**	240	51	189	0
5	**Fatehgarh Sahib**	138	100	38	0

Annexure 12 – Status of irrigation schemes/projects to utilize the Treated Wastewater of STPs for irrigation purposes

Sr.	District	Name of STP/ Town	Concerned Deptt.	Cap. (MLD)	Tech.	STP Status	Area (ha)	Fund Requirement (Rs in Lakh)	Remarks
Comissioned Irrigation Projects									
1	Mohali	Banur	PWSSB	4.00	MBBR	Functional	121		
2	Mansa	Bareta	PWSSB	3.00	WSP	Functional	167		
3	Mansa	Bhikhi	PWSSB	3.00	WSP	Functional	152		
4	Sangrur	Khanauri	PWSSB	3.00	SBR	Functional	40		
5	Sangrur	Lehragaga	PWSSB	4.00	SBR	Functional	111		
6	Fatehgarh Sahib	Mandi Gobindgarh	PWSSB	25.00	SBR	Functional	439		
7	Sangrur	Moonak	PWSSB	3.00	SBR	Functional	115		
8	Patiala	Patran	PWSSB	4.00	SBR	Functional	121		
9	Patiala	Samana	PWSSB	10.00	SBR	Functional	328		
10	Mansa	Sardulgarh	PWSSB	4.00	WSP	Functional	190		
11	Sangrur	Sunam	PWSSB	8.00	MBBR	Functional	348		
12	Patiala	Rajpura-I	PWSSB	7.00	SBR	Functional	152		
				78.00			**2284**		
Irrigation Projects under progress									
1	Patiala	Rajpura-II	PWSSB	10.00	SBR	Functional	350		
2	Mohali	Lalru	GMADA	1.50	SBR	Functional	57		
3	Patiala	Patiala-II (Ablowal)	MC	10.00	SBR	Functional	325		
4	Sangrur	Sangrur	-	4.00		Functional	121		
5	Sangrur	Longowal	-	5.00	-	Functional	182		
6	Sangrur	Dhuri	-	5.00		STP Under Construction	125		
7	Sangrur	Cheema	-	2.50		STP Under Construction	115		
				38.00			**1275**		
Irrigation projects not faesible									
1	Patiala	Patiala	MES	6.00	-	Functional			MES is already using the treated water in their premises
2	Patiala	Nabha	PWSSB	12.00		Functional			The treated water is already being

									used by PSIEC for irrigating green belt
3	Mohali	Zirakpur	PWSSB	17.30	SBR	Functional			Dense urbanisation area and water quality not fit for irrigation
				35.30					
Funding required for irrigation projects									
1	Mansa	Budhlada	PWSSB	6.50	MBBR	Functional		292.50	
2	Mohali	Mohali	GMADA	45.00	UASB	Functional		2025.00	
3	Patiala	Patiala-I (Shermajra)	MC	46.00	SBR	Functional		2070.00	
4	Patiala	Patiala-III	PUDA	13.00	FAB	Functional		585.00	
5	Mohali	Dera Bassi	PSIEC	2.00	MBBR	Functional		90.00	
6	Mohali	Dera Bassi	MC	4.00	SBR	Functional		180.00	
7	Patiala	Nabha	PSIEC	2.50	SBR	Functional		112.50	
8	Patiala	Patiala-IV (Shermajra)	PWSSB	15.00	SBR	Functional		675.00	
9	FGS	Mandi Gobindgarh (focal Point PSIEC)	PSIEC	3.00	MBBR	Functional		135.00	
10	Mohali	Banur (Bassilsse Khan)	PWSSB	0.50	-	Functional		22.50	
11	Patiala	Bahadurgarh	DWSS	4.00	-	Functional		180.00	
12	Mohali	Aertocity	GMADA	10.00		Functional		450.00	
13	Patiala	Chaura	-	4.00		Functional		180.00	
14	Fatehgarh Sahib	Bassi Pathana	PWSSB	3.00		Functional		135.00	
15	Patiala	Ghanour	PWSSB	2.00		Functional		90.00	
16	Fatehgarh Sahib	Sirhind	PWSSB	5.00		Functional		225.00	
17	Mohali	Lalru	-	1.00	-	Functional		45.00	
18	Fatehgarh Sahib	Amloh	-	3.00	-	Functional		135.00	
19	Fatehgarh Sahib	Sirhind	-	4.00		STP Under Construction		180.00	
20	Patiala	Sanour	-	4.00		STP Under Construction		180.00	
21	Sangrur	Sangrur	-	11.00		STP Under Construction		495.00	
22	Patiala	Bhadson	-	2.00		STP Under Construction		90.00	

23	Fatehgarh Sahib	Mandi Gobindgarh	-	12.00		STP Under Construction		540.00	
24	Mohali	DeraBassi	PWSSB	3.00		STP proposed to be constructed		135.00	
25	Mohali	DeraBassi	PWSSB	3.50		STP proposed to be constructed		157.50	
26	Mohali	DeraBassi	PWSSB	7.50		STP proposed to be constructed		337.50	
27	Mohali	Lalru	PWSSB	3.50		STP proposed to be constructed		157.50	
28	Mohali	Lalru	PWSSB	3.00		STP proposed to be constructed		135.00	
29	Mohali	Lalru	PWSSB	1.00		STP proposed to be constructed		45.00	
30	Sangrur	Dhuri	PWSSB	6.50		STP proposed to be constructed		292.50	
31	Mohali	Zirakpur	PWSSB	22.50		STP proposed to be constructed		1012.50	
32	Fatehgarh Sahib	Sirhind	PWSSB	4.00		STP proposed to be constructed		180.00	
33	Fatehgarh Sahib	Bassi Pathana	PWSSB	0.20		STP proposed to be constructed		9.00	
34	Patiala	Samana	PWSSB	8.00		STP proposed to be constructed		360.00	
35	Boha	Boha	PWSSB	2.00		STP proposed to be constructed		90.00	
		Total		**267.20**				**11936**	
*** Completion of project is subject to timely completion of STP, timely availability of funds, availability of agricultural command area, consent/willingness of farmers and project being feasible**									

Annexure 13 – Details of STPs under construction

Sr. No.	River	District	ULB	Location of STP	Cap. (MLD)	Sewage Generation (MLD)	Completion Timeline
1.	Ghaggar	Sangrur	Dhuri	Dhuri	5	3	30.11.25
2.	Ghaggar	Fatehgarh Sahib	Sirhind	Sirhind	4	3	30.09.25
3.	Ghaggar	Patiala	Sanour	Sanour	4	4	
4.	Ghaggar	Sangrur	Sangrur	Sangrur	11	9.3	31.03.26
5.	Ghaggar	Patiala	Bhadson	Bhadson	2	0.93	31.12.25
6.	Ghaggar	Sangrur	Cheema	Cheema	2.5	1.63	30.06.26

Annexure 14 – Sewage treatment facilities proposed to be setup

Sr. No.	River	District	ULB	Location	Deptt.	Cap. (MLD)	Sewage Generation (MLD)	Status of Project	Completion Timeline
1.	Ghaggar	Mohali	DeraBassi	Derabassi	PWSSB	3	1.38	DNIT Stage	31.03.2027
2.	Ghaggar	Mohali	DeraBassi	Derabassi	PWSSB	3.5	1.5	DNIT Stage	31.03.2027
3.	Ghaggar	Mohali	DeraBassi	Derabassi	PWSSB	7.5	2.45	DNIT Stage	31.03.2027
4.	Ghaggar	Mohali	Lalru	Lalru	PWSSB	3.5	3.41	DNIT Stage	31.03.2027
5.	Ghaggar	Mohali	Lalru	Lalru	PWSSB	3	2	DNIT Stage	31.03.2027
6.	Ghaggar	Mohali	Lalru	Lalru	PWSSB	1	1	DNIT Stage	31.03.2027
7.	Ghaggar	Sangrur	Dhuri	Dhuri	PWSSB	6.5	4.19	DNIT Stage	31.03.2027
8.	Ghaggar	Mohali	Zirakpur	Zirakpur	PWSSB	22.5	12.7	Tender Stage	31.03.2027
9.	Ghaggar	Fatehgarh Sahib	Sirhind	Sirhind	PWSSB	4	3	DPR Stage	-
10.	Ghaggar	Fatehgarh Sahib	Bassi Pathana	Bassi Pathana	PWSSB	0.2	0.1	DPR Stage	-
11.	Ghaggar	Patiala	Samana	Samana	PWSSB	8	2	DPR Stage	-

Annexure 15 - Performa for operational record of the STP

Location of STP	Capacity of STP (MLD)	Reading of Water meter at 8 am	Quantity of waste water treated (in KLD)	Sludge wasted (kg/day)	Qty. of Chlorine used/ DAY (Kg/day)	Details of chemical used for dozing purpose and the component at which the same was imparted.	Name of the component remained out of order during the day and reasons thereof.	Qty of treated w/w reused for irrigation of agricultural land / irrigation of green area / construction purpose (KLD)	Qty of treated w/w discharged into drain leading to river Ghaggar (KLD)

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Annexure 16 - Performa for Operational Record of the CETPs

Location of CETP	Capacity of CETP (MLD)	Reading of Water/ Energy meter at 8 am	Quantity of waste water treated (in MLD)	Sludge wasted (kg/day)	Details of chemical used for dosing purpose and the component at which the same was imparted.	Name of the component remained out of order during the day and reasons thereof.	Qty of treated w/w reused for irrigation of agricultural land/ irrigation of green area/construction purpose (MLD)	Ultimate disposal of treated waste water (MLD) in river/drain	Name of drain/ river

Annexure 17 - Performa for keeping record of analysis result of STP

S. No.	Name of Town & Location	Department responsible for O&M	Capacity (MLD)	Date of Commissioning	Design Parameters		Discharge Standards to be acheived (PPCB)	Compliance of Discharge Standards (Yes/No)	Reasons for Non-Compliance										OperatorPayment Cleared upto Month/Yr	Outstanding Payment
					Inlet	Outlet			Lack of O& M Funds	Technology Related	Inadequate STP Capacity	Mixing with Industrial effluents	Mixing with Dairy Waste	Component breakdown	Non-availability of Power	Non-availability of Chlorine	Lack of skilled manpower	Any other reason		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

Annexure 18 - Performa for keeping record of Analysis Result of CETPs

Date of Sampling	Point of sampling	Values of the parameters in mg/l except pH						Sample Status (Pass/Fail) as per Norms
		pH	TSS	BOD	COD	T.Coli (MPN/100 ml)	Metals	

Annexure 19 - Proforma regarding inspection of industries by PPCB in the Catchment Area

Name of industry	Date of visit	Capacity	Discharge (KLD)	Compliant/ Non-compliant (parameters not complying)	% Variation in case of non-compliance	Observations noticed during visit	Action Taken in case of non-Compliant

Annexure 20 - Proforma for monitoring of water quality of River Ghaggar

Sr. no.	Sampling points at river Ghaggar	Date of Sampling	DO (mg/l)	pH	BOD (mg/l)	T.Coliform (MPN/100 ml)	D.B.U. classification

Annexure 21 - Proforma for submission of report regarding Health Check Camps

Sr. No.	Location of the camp	Date on which camp was organized	Name of the Doctor(s) & name of their organization	No. of people examined	No. of people found affected with water borne disease

Annexure 22 - Proforma for submission of report regarding awareness programme

Sr. No.	City / Town / Location where the awareness programme is organized	Name of the Officer(s) who hold this programme	Date	No. of participants	Brief detail about awareness detail

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Action Plan for Clean River Sutlej

Updated upto June-2025

Directorate of Environment and Climate Change,
Department of Science, Technology and Environment,
Government of Punjab

Table of Contents

Chapter 1 - Introduction

1.1 Punjab – Land of Rivers

(i) The word Punjab is a compound of two Persian words, panj ("five") and āb ("water"), thus signifying the land of five waters. The erstwhile Punjab State had five rivers namely Beas, Chenab, Jhelum, Ravi, and Sutlej. However, after the partition of India in 1947, only two rivers, the Sutlej and the Beas, lie within Punjab's territory, while the Ravi flows only along part of its western border.

(ii) The rivers in the State have been used as a source of irrigation, drinking purpose especially in southern Punjab, development of hydro-electric projects to meet the energy requirements in the State and various activities including industrial purposes. The rivers have played a significant role in the socio-economic and industrial development of the State.

1.2 Rapid Urbanization and Industrialization – Main cause of River Pollution

(i) The rapid urbanization and industrialization during the last few decades have adversely affected the environment of the State. The quantum of sewage and sullage generated from the habitation areas has significantly increased and finding its way into natural drains, eventually leading to river line system of the State. In the rural areas, due to increase in the population, the capacity of most of the ponds has been exhausted due to which this sewage and sullage has also started flowing into the natural drains and finally becoming a part of river waters.

(ii) Therefore, the quality of water flowing in the water bodies has deteriorated as these waters lack sufficient assimilation capacity for self-purification. This has been not only due to increase in the quantum of discharge of untreated sewage/ sullage, but, also due to decrease in the quantum of water in the water bodies owing to construction of dams & regulatory headworks on the upstream side.

1.3 About River Sutlej

(i) The River Sutlej enters India near Mansarover and flows North Westwards. It crosses great Himalayan ranges on its way from the Shipki pass. It flows upto Gobind Sagar Lake over which Bhakra dam is constructed. About 14 Kms. downstream of Bhakra dam, Nangal head-works are constructed at Nangal. From here onwards, the river takes southern direction. After flowing for another about 50 kms, it enters the plains near Ropar.

(ii) At Ropar, there is a Head-Works for canal system to provide irrigation to large parts of the state. The gradient in the plains is very gentle. The river flows slowly downstream head-works due to broad bed width and meager flow; its major part having been diverted to the irrigation canals.

(iii) It finally reaches Harike where it meets river Beas. During the monsoon period, the areas on both sides of river are prone to floods. The river leaves Punjab plains near Ferozepur and enters Pakistan.

(iv) The total length of river Sutlej in the state of Punjab is approximately 440 km. Average discharge of river Sutlej in the state of Punjab as measured at Ropar is approximately 500 m3/ sec. The total catchment area of river Sutlej in the state of Punjab is approximately 20303 Sq. km.

(v) There are 50 Urban Local Bodies (ULBs) falling in the catchment area of River Sutlej, which are discharging their effluent directly or indirectly into river Sutlej. The total sewage generation in the catchment area of Sutlej River has been estimated as 1236 MLD with gap in sewage treatment as 33.42 MLD.

(vi) There are 2759 water polluting industries falling in the catchment area of river Sutlej which are discharging their trade effluent directly or indirectly into river Sutlej.

1.4 State's Efforts to control pollution in River Sutlej

(i) The State Government had formulated Comprehensive Action Plan to control the pollution of River Sutlej and to achieve the desired river water quality i.e. "Class B" (BOD <3 mg/l and FC< 500 MPN/100 ml).

(ii) The progress of action plan is being regularly monitored by 4-Tier Governance Mechanism (at District Level by the respective Deputy Commissioner & Divisional Commissioners in the meetings of District Environment Committee, at State Level by the Secretary, Environment in the meeting of River Rejuvenation Committee and by the Chief Secretary in the meeting of State Apex Committee).

(iii) To address the pollution concerns, the State Government has undertaken Buddha Nallah Rejuvenation project with the financial assistance from Ministry of Housing & Urban Affairs under the scheme of Atal Mission for Rejuvenation & Urban Transformation with capital cost of Rs 519 Cr. Under this project, the Deptt. of Local Govt. has rehabilitated 2 No. Sewage Treatment Plants (STPs) of 111 MLD & 152 MLD capacity based on UASB technology at Bhattian & Balloke respectively, repaired 2 No. STPs of 50 MLD & 105 MLD capacity based on SBR technology at Bhattian & Balloke respectively and installed & commissioned 2 new STPs of 225 MLD & 60 MLD capacity based on SBR technology at Jamalpur & Balloke respectively to rejuvenate Buddha Dariya leading to improve upon the water quality of river Sutlej.

(iv) For sewage management, 66 STPs of 1389.05 MLD capacity are already functional in the State, 11 STPs of 32.5 MLD capacity are under installation & 5 STPs of 40 MLD capacity are under various stages of planning for establishment. The treated sewage of 24 STPs (165.50 MLD) is reused for irrigation in a command area of 4044 Ha.

(v) For the management of industrial effluent, 306 industries have installed Captive Effluent Treatment Plants (ETPs). 1599 small & medium scale industries are discharging their

effluent into Common Effluent Treatment Plant (CETP) of 0.8 MLD capacity at Ludhiana. Further, 413 small scale wire drying and pickling industries are discharging their effluent into reprocessing units for converting their waste into Ferrous Sulphate (Fe_2SO_4) ensuring zero liquid discharge. Further, 211 small & medium scale textile dying units located in the clusters at Focal Point, Tajpur Road & Bhadurke Road, Ludhiana are connected to 3 CETPs of 50 MLD, 40 MLD & 15 MLD respectively. 62 Tannery Units operating in Leather Complex, Jalandhar are connected to CETP of 5 MLD capacity.

(vi) For the management of dairy waste, 1 Compressed Bio-gas (CBG) Plant of 200 TPD capacity is functional & another CBG plant of 300 TPD capacity is proposed to be set up at Haibowal Dairy complex, Ludhiana. Further, 1 more CBG Plant of 300 TPD capacity is proposed to be set up at Tajpur Dairy Complex, Ludhiana. 1 CBG plant of 300 TPD capacity is already under construction at Jamsher Dairy Complex, Jalandhar. 2 ETPs of 2.25 MLD & 3.75 MLD capacity have been installed for the management of waste water being generated from the dairy complexes of Tajpur & Haibowal respectively under Buddha Dariya Project. Similarly, one ETP of 2.25 MLD capacity has been installed at Jamsher Dairy Complex at Jalandhar.

(vii) The State Govt. vide Order dated 13.11.2024 has constituted a Joint Group comprising representatives from the Central Govt. and all relevant Departments of the State of Punjab to diagnose the issues and to suggest corrective actions to control pollution of Budha Dariya responsible for pollution of river Sutlej. The Joint Group has submitted its report to the Ministry of Jal Shakti as well as to the State Govt. in August, 2025.

(viii) The State Govt. vide Notification dated 14.07.2025 has constituted a High-Level Committee under the chairmanship of Hon'ble Minister, Industries & Commerce and Chief Secretary, Punjab as Vice Chairperson Punjab and Punjab Development Commission, Administrative Secretaries of Industries & Commerce, Department of Science & Technology, Local Govt., Water Resources, CEO, PEDA, DC, Ludhiana, MC, Ludhiana, IIT Ropar as members. The Committee shall develop a comprehensive short and long-term action plan for the cleaning and rejuvenation of Buddha Dariya, fast-track current and future priority infrastructure such as CBG plants, IPS construction, and STP/CETP installations, to develop frameworks & SOPs for STPs, CETPs, cow dung collection etc.

(ix) The State Govt. vide notification no. 01-A/CAA/2022-23/10370 dated 25.07.2022 has also constituted a committee for the matter related to the issue of Buddha Dariya and River Ghaggar. This committee is conduting regular meetings with the stakeholder departments to monitor the progress of the rejuvenation of Buddha Dariya.

1.5 Directions issued by NGT

(i) O.A No. 138-139/2016

NGT vide Order dated 07.08.2018 in O.A. No. 138-139/2016 in the matter of in the matter of "Stench Grips Mansa's Sacred Ghaggar river with Yogender Kumar" directed that at the State level, the Special Task Force (STF) comprising of the Chief Secretary, the Environment

Secretary, the Secretary of Urban Development and Secretary of Local Bodies be constituted.

In compliance, the State of Punjab had constituted a State Level Special Task Force (also called as State Apex Committee) dated 14.11.2018 under the Chairmanship of Chief Secretary, Punjab.

(ii) O.A No. 673/2018

a. NGT vide order dated 20.09.18 in OA no. 673/2018 titled as, “News item published in "The Hindu" authored by Shri. Jacob Koshy titled "More river stretches are now critically polluted: CPCB" has directed the State to prepare Action Plans within two months for bringing all the polluted river stretches to be fit at least for bathing purposes (i.e BOD <3 mg/l and FC< 500 MPN/100 ml) within six months from the date of finalization of the action plans. Further, NGT vide said Order directed the State to constitute a committee of four-members called River Rejuvenation Committee (RRC). This Committee will also be the Monitoring Committee for execution of the action plan.

In compliance, RRC was constituted by the State Govt. vide Order dated 19.11.2018 under the Chairmanship of Administrative Secretary, Department of Science, Technology & Environment.

Further, NGT vide above said Order divided the polluted river stretches in five priority categories i.e. I, II, III, IV & V depending upon the level of BOD with criteria as under:

Criteria for Priority-I

- Monitoring locations exceeding BOD concentration 30 mg/l has been considered as it is the standard of Sewage Treatment Plant and in river it appears without dilution. (River location having water quality exceeding discharge standards for BOD to fresh water sources).
- All monitoring locations exceeding BOD concentration 6 mg/l on all occasions.
- Monitoring locations exceeding 3 mg/l BOD are not meeting desired water quality criteria but does not affect to dissolved oxygen level in water bodies. If BOD exceeds 6 mg/l in water body, the dissolved oxygen is reduced below desired levels.
- The raw water having BOD levels upto 5 mg/l does not form complex chemicals on chlorination for municipal water supplies. Hence the water bodies having BOD more than 6 mg/l are considered as polluted and identified for remedial action.

Criteria for Priority-II

- Monitoring locations having BOD between 20-30 mg/l.
- All monitoring locations exceeding BOD concentration 6 mg/l on all occasions.

Criteria for Priority-III

- Monitoring locations having BOD between 10-20 mg/l.

- All monitoring locations exceeding BOD concentration 6 mg/l on all occasions.

Criteria for Priority-IV

- Monitoring locations having BOD between 6-10 mg/l.

Criteria for Priority-V

- Monitoring locations having BOD between 3-6 mg/l.
- The locations exceeding desired water quality of 3 mg/l BOD.

b. NGT vide order dated 08.04.2019 in OA No. O.A No. 673 of 2018 directed State of Punjab to submit performance guarantee of Rs. 5.0 Crore for the 4 polluted river stretches falling in the State. PPCB vide letter dated 19.03.21 submitted the same with CPCB.
In compliance, Punjab Pollution Control Board has deposited Rs 5 Crores with CPCB on dated 19.03.2021.

c. NGT vide order dated 22.02.2021 in OA No. 673/2018 directed that States/UTs will be liable to pay compensation @Rs. 5 lakhs per month per drain for default in in-situ remediation, @Rs. 5 lakhs per month per STP for default in commencement of setting up of the STPs by 30.06.2020 and Rs. 10 lakhs per month per STP for default in commissioning of STPs by 30.06.2021.

In compliance, Punjab Pollution Control Board is imposing Environmental Compensation on Local Government for default in in-situ remediation, commencement of setting up of the STPs and commissioning of STPs.

(iii) O.A No. 148/2016

NGT vide Order dated 27.11.2018 in OA. No. 148/2016 (M.A. No. 686/2017) titled as Mahesh Chandra Saxena Vs South Delhi Municipal Corporation & Ors. has directed all the States & Union Territories to prepare and furnish their Action Plans for utilization of treated wastewater in their respective States/UTs within three months.

In compliance, the State had submitted the Action Plan for Reuse of Treated Wastewater to CPCB on 29.04.2019.

(iv) O.A No. 325/2015

a. NGT vide order dated 10.05.2019 in M.A. No. 26/2019 in O.A. No. 325/2015 titled "Lt. Col. Sarvadaman Singh Oberoi Vs UOI & Ors" directed that all States and UTs to review the existing framework of restoration all the water bodies by preparing an appropriate action plan.

In compliance, the State had submitted the Action Plan for Rejuvenation of Ponds to CPCB on 31.03.2020.

b. NGT vide Order dated 18.11.2020 in OA No. 325/2015 in the matter of Lt. Col. Sarvadaman Singh Oberoi V/s. Union of India & Ors., directed all States/UTs to designate a Nodal Agency for restoration of water bodies, wherever no such agency has so far been so designated.

In compliance, Punjab Pollution Control Board has been designated as Nodal Agency for Restoration of Water Bodies in the State of Punjab vide Govt. Order dated 15.12.2020.

(v) O.A No. 360/2018

a. NGT vide Order in O.A. No. 360/2018 dated 26.09.2019 in the matter of "Shree Nath Sharma V/s. Union of India" directed the State to constitute District Committee for preparing and monitoring the progress of District Environment Plans.

In compliance, the State of Punjab had constituted a District Environment Committees vide Notification dated 31.10.2019 under the Chairmanship of respective Deputy Commissioners.

b. NGT vide order dated 18.08.2022 in O.A. No. 360/2018, directed that after dissolution of Monitoring Committee headed by Justice Jasbir Singh, former judge, Punjab & Haryana High Court on 31.12.2022 that the monitoring work being undertaken by the said Committee may be taken over by the Chief Secretary for being continued through appropriate administrative monitoring mechanism under them.

In compliance, the State Govt. has issued directions to all the Divisional Commissioners on 17.01.2023 to monitor the District Environment Plans (DEPs) in their respective Districts on behalf of Chief Secretary, Punjab from 1.01.2023 onwards. The Divisional Commissioners are regularly monitoring the DEPs & submitting their bi-monthly reports for further review in the meeting of State Apex Committee.

(vi) O.A No. 606/2018

a. NGT vide dated 22.09.2022 in O.A. No. 606/2018 in the matter "Compliance of Municipal Solid Waste Management Rules, 2016 and other Environmental Issues" directed the State of Punjab to deposit Rs. 2080 crore in a separate ring-fenced account within 2 months, to be operated as per directions of the Chief Secretary and utilized for restoration measures.

In compliance, a Committee under the Chairmanship of Administrative Secretary, Dept. of Local Govt. was constituted vide STE Order no. 3/17/2020-STE (5)/457018/I dated 11.11.22 to regularly assess the progress in bridging the gaps in sewage & solid waste management and to periodically report to Chief Secretary, Punjab. Further, for ring fencing the funds of Rs. 2080 Cr, an order has been passed by the worthy Chief Secretary vide No. 3/17/2020-STE (5)/478 dated 22.11.22.

b. NGT vide order dated 25.07.2024 in O.A No. 606/2018 directed the State of Punjab through Chief Secretary to deposit Rs. 1026.19 Cr. towards Environmental Compensation with CPCB within one month and submit the compliance report.

In compliance, the NGT vide order dated 26.03.2025 directed that the Tribunal has examined the report filed by the State on 26.02.2025 & found the gaps and deficiency in solid waste management, liquid waste management & in ring fencing of account. NGT further directed the State to file a fresh report by at least one week before date of hearing i.e. 28.10.2025.

The State, in context of above said Order of Hon'ble NGT, has filed appeal before Hon'ble Supreme Court of India which is due for hearing on 06.02.2026.

(vii) O.A No. 976/2019

NGT vide its order in O.A No. 976/2019 dated 21.10.2022 directed that the process of planning and execution for utilization of Environmental Compensation (EC) Funds being collected by statutory regulators particularly State PCBs and State Environmental Impact Assessment Authority, Water Resource Authorities etc may be preferably entrusted to a High-Powered Committee of three Additional Chief Secretaries, identified by the Chief Secretary within one month. Such plans and progress in execution may be placed on websites of the States/UTs after every six months.

In compliance, High-Powered Committee comprising of three Administrative Secretaries of DLG, DRDP, & STE (Convenor) was constituted vide Notification No. 10/01/2023-STE2/03 dated 03.01.2023 which is regularly conducting the meetings of the Committee for utilization of EC funds.

(viii) O.A No. 225/2022

NGT vide Order dated 22.07.2025 titled "Nitin Dhiman v/s State of Punjab" has clubbed all the O.A.s including O.A No. 546/2024, 1325/2024, 1326/2024, 1327/2024, Appeal Nos. 40/2024, 41/2024, 48/2024, 51/2024, 18/2025, 20/2025 & Execution Application No. 46/2025, 45/2025, 42/2025. The said order is regarding the issue of the discharge of effluent through the sewer by the dyeing units in Buddha Nallah in the State of Punjab. The SPVs of the CETPs of 40 MLD, 50 MLD & 15 MLD have filed the appeals against the direction of PPCB under Section 33 A of The Water (Prevention and Control of Pollution) Act, 1974 issued to the SPVs of these CETPs for closure of outlets. NGT has directed PPCB to place on record the full details relating to the calculation of environmental compensation and status of its recovery imposed on these CETPs and MoEF&CC is directed to file the progress report/compliance affidavit regarding hearing to the representatives of the residents of the area and taking a decision at least one week before the next date of hearing.

(ix) Ministry of Jal Shakti, Govt. of India has requested the State vide letter dated 07.03.2025 to direct River Rejuvenation Committee (RRC) to update the Action Plans of Polluted River Stretches of Punjab identified as Polluted River Stretches of Priority -I, i.e., Sutlej and Ghaggar and review the implementation of these plans on regular basis.

Chapter 2 – Vision, Mission and Strategy

2.1 Vision for Clean River Sutlej

To restore the quality of water in River Sutlej to prescribed standards to ensure ecological balance and socio-economic well-being of the people.

2.2 Mission Clean River Sutlej

To prepare and implement a comprehensive action plan to clean River Sutlej:

(i) Creating awareness about the adverse impact of water pollution
(ii) Identifying the sources of water pollution
(iii) Setting up facilities for treating the pollutants
(iv) Ensuring effective operations of the facilities
(v) Ensuring effective monitoring of the quality of water
(vi) Mitigating adverse impact on health of the people in the surrounding areas

2.3 Strategy for Clean River Sutlej

The strategy for clean River Sutlej includes:

(i) Identification of Stakeholders
(ii) Identification of sources of pollution
(iii) Measures to control pollution and timelines
(iv) Nodal Departments
(v) Integration of Departmental Plans
(vi) Monitoring and Review
(vii) Risk Mitigation Plan

2.4 Identification of the Stakeholders and their roles

The State of Punjab envisages a comprehensive plan for cleaning of River Sutlej by involving all the Stakeholders namely:

(i) **Department of Science, Technology and Environment**

a. Directorate of Environment and Climate Change

Directorate of Environment and Climate Change shall be responsible for overall coordination of the Action Plan for ensuring its successful implementation through regular monitoring.

b. Punjab Pollution Control Board

i. Regulation of STPs/ CETPs/ ETPs
ii. Laying down discharge standards for STPs/CETPs/ETPs
iii. Setting up of Infrastructure to monitor river water quality
iv. Monitoring of quality of water of River Sutlej
v. Monitoring of discharge from Industries including ETPs and CETPs
vi. Monitoring of discharge from STPs and other disposal facilities
vii. Monitoring of management of solid waste and other waste

(ii) **Department of Local Government**

As per the policy decision of the Department of Local Government, all Municipal Corporations are responsible for execution of their water supply and sewerage works including setting up of STPs while all Municipal Council will get the works executed through Punjab Water Supply and Sewerage Board. The policy is yet to be fully implemented as some Corporations are still relying on PWSSB for execution of works, on the other hand, some Municipal Councils are executing works on their own instead of PWSSB.

Design

a) Design projects to cover entire population with sewerage network system and its connection with STP.
b) Design Sewage Treatment Plants of adequate capacity
c) Design as per the prescribed standards

Construction

a) Monitor land acquisition closely as it is pre-requisite for setting up of STPs
b) Ensure reputed professional contractors
c) Construction of STPs as per timelines mentioned in the action plan
d) Ensuring regular flow of funds during construction

Operation and Maintenance

a) Arranging funds for operation and maintenance of STPs to ensuring regular operation and maintenance of STPs in a professional manner
b) Providing proper in-house laboratory facilities at each STP for maintaining record of characteristics of analysis of untreated as well as treated waste water
c) Installation, operation & maintenance of online continuous effluent monitoring system as well as CCTV cameras for the existing STPs as well as new STPs to be installed.

Solid Waste

a) Proper management & handling of municipal solid waste so as not to be thrown in river.
b) The Municipal Corporation mainly of Ludhiana and Jalandhar are responsible for the Scientific Management & disposal of dairy waste (Solid as well as liquid) being generated from dairies located within Municipal limits.

(iii) **Department of Rural Development and Panchayat**

The Department of Rural Development (DRDP) has to provide for necessary treatment facilities in village ponds so that no untreated or polluted water enters river directly or indirectly through various drains or creeks. The Department has the following responsibilities:

a) Finalization of appropriate technology
b) Arrangement of Funds for treatment technology in various villages identified in the Action Plan
c) Reuse of water for agriculture purpose
d) Proper operation and maintenance of treatment facilities installed in village ponds
e) DRDP is responsible for the Scientific Management and disposal of dairy waste (solid as well as liquid) being generated by Dairies located outside the Municipal limits.

(iv) **Department of New & Renewable Energy**

Punjab Energy Development Agency (PEDA) in collaboration with the concerned Municipal Corporation/Council shall facilitate the setting-up of CBG plants for the scientific management of cow dung being generated from the dairies located within MC limits. Further, PEDA in collaboration with DRDP is responsible for facilitating the setting up of CBG plants for the scientific management of cow dung being generated from the scattered dairies & Gaushalas located outside MC limits.

(v) **Department of Housing and Urban Development**

The Department and all the Development authorities under its control are responsible for various Urban Estates developed by them. In addition, the Government has entrusted construction and subsequent operation and maintenance of Sewerage network and Sewage Treatment Plants in some of the cities to various Urban Development Authorities. In all cases, where the Urban Development Authorities are discharging the functions, they shall have all the responsibilities listed out in clause 2.4.3 for Department of Local Government.

(vi) **Department of Industries and Commerce**

Department of Industries and Commerce through Punjab Small Industries & Export Corporation (PSIEC) is responsible for management of Industrial Focal Points set up by it or transferred to it. PSIEC shall have all the responsibilities listed out in clause 2.4.3 for Department of Local Government in respect of Industrial Focal points.

(vii) **Department of Water Supply and Sanitation**

The Department of Water Supply and Sanitation along with Department of Rural Development and Panchayat will be responsible for treatment and sanitation facilities in rural areas. It has also been given some of the works in urban areas. It will accordingly discharge relevant responsibilities for rural and urban areas in respects of projects, which may be assigned to the Department.

(viii) **Department of Soil & Water Conservation**

The Department of Soil & Water Conservation is responsible for implementation of various schemes for utilizing the treated wastewater from urban and rural treatment facilities for irrigation by the farmers. It has the following responsibilities:

a) Design the project as per the standards
b) Follow up with various funding agencies to arrange funds
c) Executing the schemes as per the timelines provided in the plan

(ix) **Department of Health and Family Welfare**

The Department of Health and Family Welfare has the following responsibilities:

a) Checking of health indices of the in-habitants & maintaining database
b) Holding awareness camps in the catchment area of River Sutlej to make the public aware regarding water borne diseases.

(x) **Department of Water Resources**

The Department of Water Resources through the Chief Engineer, Drainage has the following responsibilities:

a) Measurement of flow at different locations
b) To stop unauthorised discharge in the drains
c) Groundwater Recharge Initiatives
d) Watershed Management
e) Protection and Management of Flood Plain Zones
f) E. Flow (Ecological/Environment Flow)
g) Release of fresh water in river to maintain water quality
h) To stop unauthorised discharge in the drains
i) Notification of drains/Choes/rivers/Nallahs
j) Removal of pollution points

(xi) **Mandi Board**

The Punjab Mandi Board shall be responsible for installing and operating the ETP for the treatment of effluent generated from Fish Market Tajpur Road, Ludhiana and explore alternative for mode of disposal such as ZLD or irrigation with the compliance of notification by Government of Punjab, dated 10.10.2019.

(xii) **Department of Forest & Wildlife Preservation & Punjab Bio-Diversity Board**

Department of Forest & Wildlife Preservation & Punjab Biodiversity Board shall be responsible for the following:

a) Plantation on both sides of river and in the Flood Plain Zones
b) Biodiversity Conservation and setting up of Biodiversity parks

(xiii) **District Administration**

District Administration shall be responsible for monitoring of activities of the action plan at district level.

2.5 Nodal Department

The Department of Science, Technology and Environment through Directorate of Environment & Climate Change shall be the Nodal Department for coordinating and monitoring activities of the plan.

2.6 Integration of Departmental plans

The Nodal Department will integrate plans of individual departments for control of pollution from various sources and prepare a comprehensive plan and will coordinate its execution by tracking the progress through a centralized IT platform.

2.7 Monitoring and Governance

(i) There will be rigorous monitoring of implementation of the comprehensive plan:

(a) Monitoring of physical and financial progress of works being executed
(b) Monitoring of operations and management of facilities set up
(c) Monitoring of quality of water
(d) Monitoring of health and diseases in the surrounding areas
(e) Monitoring of awareness campaign

(ii) Setting up of IT platform for tracking progress and analysis

(iii) The monitoring will be done at the district level i.e. by the respective Deputy Commissioner and by the respective Divisional Commissioner on behalf of Chief Secretary and at State Level at the Level of Administrative Secretary, Environment & Chief Secretary, Punjab.

Chapter 3 - Status of Water Quality, Biodiversity & Watershed Management

3.1 Monitoring Locations for Water Quality

The water quality of river Sutlej is being monitored at 10 locations by Punjab Pollution Control Board, starting from upstream of Nangal (where it enters State of Punjab) upto Hussainiwala in Distt. Ferozepur on monthly basis:

(i) River Sutlej D/S of Rishab- Paper Mills
(ii) River Sutlej U/S Buddha Nallah
(iii) River Sutlej at 100 mts D/s after Budha Nallah confluence, Ludhiana
(iv) River Sutlej at Boat Bridge, Dharamkot Nakodar Road
(v) River Sutlej at D/s East Bein
(vi) River Sutlej at Harike
(vii) Harike Lake D/S from canal
(viii) D/S Harike lake
(ix) U/S Hussainiwala H/W Ferozepur
(x) D/S Hussainiwala H/W Ferozepur

3.2 CPCB's norms for designated best use of water bodies

The Central pollution Control Board has laid down criteria for designated best use class of the water of the water bodies, which is as under:

S.No.	Constituent Parameters	Designated Best Use Class				
		A	B	C	D	E
1.	Dissolved oxygen, mg/l, Min	6	5	4	4	-
2.	Biochemical Oxygen Demand, mg/l, Max	2	3	3	-	-
3.	Total coliform Organisms MPN/100 ml, Max	50	500	5000	-	-
4.	pH value	6.5-8.5	6.5-8.5	6-9	6.5-8.5	6-8.5
5.	Free ammonia (As N) mg/l, Max	-	-	-	1.2	-
6.	Electrical conductivity µs/cm max.	-	-	-	-	2250
7.	Sodium absorption ratio, Max.	-	-	-	-	2.6
8.	Boron, mg/l, Max	-	-	-	-	2

Note:

Class A: Drinking water sources without conventional treatment, but after disinfection
Class B: Organized outdoor bathing
Class C: Drinking water sources with conventional treatment followed by disinfection
Class D: Propagation of wild life and fisheries
Class E: Irrigation, Industrial cooling and controlled water disposal

CPCB has published the report "Polluted River Stretches for Restoration of Water Quality-Sept.-2025" regarding identification of polluted river stretches in India. There are 2 polluted stretches identified in the State of Punjab as per the details given:

River	Focus River Stretch	Priority Class as per CPCB Report 2025	Target
Sutlej	Nangal to Harike	I	Class B
Ghaggar	D/S Parwanoo – D/S Sardulgarh	I	Class B

(i) The river Beas has been designated as Model River of Punjab.

3.3 Current Status of Quality of Water in River Sutlej

PPCB reported that the river water quality has improved at many points from Class-C to Class B as is given in **Annexure-1.** However, the downstream water quality has remained critical post Budha Darya confluence. The concerted efforts are being made w.r.t Budha Darya rejuvenation, Urban sewage treatment in Ludhiana & downstream towns and Sustained monitoring & stricter enforcement in high-impact zones.

The details of analysis results of surface water monitoring under National Water Monitoring Program (NWMP) for the year 2021-22, 2022-23, 2023-24 & 2024-25 is given in **Annexure-2.**

3.4 Installation of Real Time Continuous Monitoring Systems at critical locations

Punjab Pollution Control Board has installed 4 real time continuous monitoring stations for surface water quality at various critical locations including Ropar Headworks, D/S Budha Nallah Sindhwa bet (On bridge connected Jagroan Jalandhar Road), D/S East Bein (Makhu- Malsia Road at Village Gidder Pindi near Toll Plaza) and Harike Lake (Rajasthan Feeder).

3.5 Notification of drains/Choes/Nallahs

Section 38 of Canal and Drainage Act 2023 empowers State Govt. that in case an injury to any land or the public health or public convenience has arisen or may arise from the obstruction of any river, stream or drainage channel, such State Govt. may, by notification, the formation of any obstruction or may, within such limits, order the removal or other modification of such obstruction. Under this, the Department of Water Resources has notified a total of 849 drains till July 2025.

3.6 Environmental Flow (E. Flow)

'Environmental Flows' is minimum quantity of continued availability of water in the river to ensure downstream environmental, social & economic benefits as well as sustainability of its aquatic ecosystem. It should be measured at different locations and records be maintained by Department of Water Resources, Punjab. Fresh water flowing through escape channels/small

barrages should be checked. Good quality of water may be used for dilution to reduce concentration of pollutants to meet the desired level of water quality and extent of flow as per prescribed norms. Dilution of pollution will be used only after achieving degree of required treatment for municipal sewage and industrial effluents. A minimum of 15% of average lean season flow is being maintained in river Sutlej (640 cusecs).

3.7 Flood Plain Zones

Efforts are underway to demarcate flood plains, remove illegal encroachments, and maintain minimum ecological flow in rivers like Sutlej and Beas. In this regard, the Notification of Rivers and rains is already underway. Satluj River in the Ferozepur and Tarn-Taran districts has already been notified via letter no. WRIRWR04/ 22/2023-IW3/319 Dated 25-09- 2023 and Notified vide letter No. 04/01/2023- IW3/364 dated 16-10-2023. In District Ferozepur and Tarn-Taran, the area as per the above notification was also notified in Flood Plain Zone.

3.8 Groundwater Recharge Initiatives:

a) 159 no's ground water recharges schemes were completed by the department in FY 2024-25.

b) 1156 no. Check Dams and 3957 soak pits are being proposed on various rivers/Nallahs of Punjab to recharge groundwater in current FY 2025-26.

3.9 Biodiversity Profile

Physiographically, the whole Sutlej River basin area in Punjab, except foot hills of the Shivalik has undulating to flat topography. The soils of the basin area mostly consist of alluvial deposits. Three (3) Wildlife Sanctuaries namely Nangal and Jhajjar Bacholi, District Rupnagar and Harike, District Tarn Taran & Kapurthala having rich biodiversity falls under the Sutlej River Basin area in Punjab. Two wetlands of international significance under Ramsar convention i.e. Ropar & Harike and one National wetland i.e. Nangal Lake are also located on the river Sutlej. These wetlands are important aquatic eco system and harbouring many species of waterfowl, fish and other flora fauna.

The biodiversity in the Sutlej River catchment area is under threat due to growing population, intensive & extensive agriculture, reclamation of barren land, pollution and habitat loss. The forest cover in the Sutlej catchment ranges from the category of northern dry deciduous mixed forest and dry deciduous scrub forest comprising dominance tree species like Khair (*Acacia catechu*), Kikkar (*Acacia nilotica*), Black Siris (*Albizzia lebbek),* Safeda (*Eucalyptus tereticornis*), Kamala (*Mallotus phillipines),* Dak *(Melia azedarach*), Sukhchain *(Pongamia pinnata),* Tahli *(Dalbergia sissoo*), Toot *(Morus alba),* Mesquite (*Prosopis juliflora*),*etc and many species* of shrubs including Castor (*Ricinus Communis*), Mallah (*Zizyphus nummularia*), Karir (*Capparis deciduas*), Ak (*Calotropis procera*), Vasaka (*Adhatoda vasica*), Indirain (*Citrullus colocynthis*), Asgandha (*Withania somnifera*), Giloe (*Tinospora Cordifolia*)etc.

Further, various species of mammals, reptile, fish, amphibians and aquatic & terrestrial birds are also reported in river Sutlej and its adjoining areas.

3.10 Watershed Management in the Catchment Area

Integrated Watershed Management Programme (IWMP) is one of the flagship programmes of the Government of India and aims at prevention of soil run-off, regeneration of natural vegetation, rain water harvesting & recharging of the ground water table for restoring the ecological balances of an area. This programme also enables multi-cropping & introduction of diverse agro-based activities, which help in providing sustainable livelihoods to the people residing in the watershed area.

he major activities of Department of Soil & Water Conservation includes construction of check dams/water harvesting structures, rain water storage and recharging, silt detention structures, stream bank protection, contour bunding, runoff check and drop structures, retaining walls & percolation tanks, vegetative hedges, efficient conveyance of water through underground pipeline system, artificial roof-top rainwater harvesting & recharging, renovation of village Ponds, agro forestry plantation, etc. The livelihood and farm production support were extended through formation of Self-help Groups for pickle and food processing etc., distribution of improved varieties & agriculture inputs and livestock support programmes to develop additional source of income for farmers and landless. Regular trainings were provided to all the beneficiaries to enhance their capacities.

Chapter 4 - Sources of Water Pollution & Infrastructure Available

4.1 Major Drains

There are 30 major drains/ choes/ nallahs, which are directly discharging into the river Sutlej. The details of these drains/ choes/ nallahs are given in **Annexure-3**. Apart from this, there are 84 sub drains, which are meeting with above 30 major drains. The details of these sub drains are also given in the **Annexure-4**.

4.2 Major Sources of Pollution

There are following major sources polluting the river Sutlej:

(i) Sewage/ sullage generated from Urban Areas
(ii) Sewage/ sullage generated from Rural Areas
(iii) Industrial sources
(iv) Wastewater and Cowdung generated from Dairies
(v) Other Sources

4.3 Sewage/ sullage generated from Urban Areas

(i) There are 50 Urban Local Bodies (ULBs) falling in the catchment area of River Sutlej, which are discharging their wastewater directly or indirectly into river Sutlej. The total sewage generation in the catchment area of Sutlej River has been estimated as 1236 MLD with gap in sewage treatment as 33.32 MLD.

(ii) Out of 50 ULBs, 37 ULBs have installed treatment facilities (66 STPs of 1389.05 MLD capacity) **(Annexure-5)** whereas, no treatment facilities exist in the remaining 13 ULBs.

(iii) Out of 37 ULBs, 2 ULBs namely Sri Musktsar Sahib & Moga have installed STPs meeting partial requirement for which 2 No. STPs of 35 MLD capacity (5 MLD for Muktsar Sahib & 30 MLD for Moga) are proposed to be installed.

(iv) As per the findings of report of Joint Group of Central & State Govt. Departments constituted by Department of Science, Technology & Environment, Govt. of Punjab vide no. STE-STEB010/534/2024-STE4-Part (1)/783 dated 13.11.2024, the average discharge near the confluence point of Buddha Nallah with river Sutlej has been measured as 615.75 MLD with peak discharge as 671 MLD. The average total discharge into river Sutlej from Ludhiana city including Buddha Nallah and direct discharge of treated sewage from STP Bhattian has been estimated as 690 MLD. The status of capacity utilization of STPs in Ludhiana city is as under:

Description of STP	Installed Capacity (MLD)	Technology	Utilized Capacity (Feb 2025) (MLD)	Discharge into
Within Municipal Limits				
Jamalpur	225	SBR	166.46	Buddha Nallah
Bhattian	111	UASB	56.46	Sutlej
	50	SBR	19.46	Sutlej
Balloke	152	UASB	108.62	Buddha Nallah
	105	SBR	73.80	Buddha Nallah
	60	SBR	49.14	Buddha Nallah
Total	**703 MLD**		**473.94 say 475 MLD**	
Upstream Municipal Limits				
Macchiwara	4	SBR	2.54	Buddha Nallah
Sahnewal	7	SBR	4.62	Buddha Nallah
Overall Total	**714 MLD**		**7.16 MLD**	
Downstream Municipal Limits				
No township is discharging sewage into Buddha Nallah. Therefore, no STP is required.				

4.4 Sewage/ sullage generated from Rural Areas

There are 336 villages, which are discharging their wastewater either directly or indirectly through various drains / nallahs/ creeks. Out of 36 villages, the work for rejuvenation of ponds was completed in 75 villages, ongoing in 18 villages and yet to start 243 villages. The details of these villages are already given in **Annexure-6.**

4.5 Industrial Sources

(i) There are 2759 water polluting industries falling in the catchment area of River Sutlej, which are discharging their trade effluent either directly or indirectly into River Sutlej. Category and area wise details of these units are as under:

Sr. No.	Industrial sector	No. of industries					
		Ludhiana	Jalandhar	Phagwara	Hoshiarpur	Ropar	Moga
1.	Dyeing	251	1	1	0	0	0
2.	Pulp & Paper	1	~~0~~	0	0	1	0
3.	Thermal	0	0	0	0	1	0
4.	Chlor Alkali	0	0	0	0	1	0
5.	Cement	0	0	0	0	1	0
6.	Fertilizer	0	0	0	0	1	0
7.	Sugar Mills	0	0	1	1	0	0
8.	Electroplating / Surface treatment	1772	264	6	1	3	0
9.	Tannery	0	87	0	0	0	0
10.	Others (Washing of garments/ service station/ food processing/ milk plant etc.)	296	41	5	20	2	1

TOTAL	**2320**	**393**	**13**	**22**	10	**1**
Grand Total	**2759**					

(ii) The large-scale electroplating / surface coating units at Ludhiana have provided their captive treatment plants based on the Zero Liquid Discharge Technology (ZLD). Rest of the electroplating / surface coating / metal finishing units either have their captive treatment plants or are the member of CETP provided at Phase-8, Focal Point, Ludhiana.

(iii) The acid pickling units generating spent acid (H2SO4) are connected with the reprocessing units, which converts the spent acid into the products like ferrous sulphate.

(iv) The other industrial units have provided their own / captive treatment plants for the industrial wastewater being generated from their processes.

(v) 211 small & medium scale textile dying units located in the clusters at Focal Point, Tajpur Road & Bhadurke Road, Ludhiana are connected to 3 CETPs of 50 MLD, 40 MLD & 15 MLD respectively. The details of CETPs installed at Ludhiana city with respect to their capacity utilization, as reported in the report of Joint Group of Central & State Govt. Departments constituted by Govt. of Punjab vide order dated 13.11.2024 are as under:

Sr. No.	Description	No. of Member Units	Capacity (MLD)	Utilized Capacity (MLD)	Technology
1.	CETP Electroplating	1300	0.80	0.50	ZLD
2.	CETP Bahadurke Road	36	15	12.50	SBR
3.	CETP Tajpur Road	108	50	40	SBR
4.	CETP Focal Point	67	40	25.63	SBR

(vi) There are 54 scattered textile dyeing units. Out of the 54 scattered units, 14 units either have been closed or closed their wet processes. Rest of the units have their captive ETPs. These units are being persuaded either to connect with CETPs, or to adopt ZLD treatment systems so as to stop effluent discharge into public sewers. Majority of the units have submitted their proposals for ZLD or shifting and are in process of compliance.

(vii) 62 Tannery Units operating in Leather Complex, Jalandhar are connected to CETP of 5 MLD capacity. Treated effluent from this CETP is discharged into Kala Sanghian Drain after mixing with STP treated water. Kala Sanghian Drain ultimately leads to River Sutlej through East Bein. 14 bag tanning units have been connected to CETP of 35 KLD capacity at Phillaur, the treated effluent from CETP Phillaur is being discharged into Municipal sewer leading to STP, Phillaur (South) of capacity 03 MLD based on MBBR technology. The treated sewage from STP, Phillaur (South) of capacity 03 MLD is discharged into river Sutlej during no demand period and is utilized for irrigation purposes during demand period, which ultimately discharged their treated wastewater into Sutlej River.

4.6 Wastewater and Cowdung generated from Dairies

(i) Around 1300 dairies located at Tajpur & Haibowal Dairy Complex at Ludhiana and Nahal & Jamsher Dairy Complex at Jalandhar including scattered dairies are generating around 900 TPD of cow dung. These dairies are source of cow dung & liquid waste. The dairies located at Ludhiana are discharging their wastewater into Buddha Nallah whereas the dairies located at Jalandhar are discharging their waste water into Kala Sanghian drain.

(ii) As reported in the report of Joint Group of Central & State Govt. Departments, the cow dung generation from 851 dairies located within MC limits of Ludhiana has been estimated as 658.65 TPD with details as under:

Sr. No.	Description	No. of Dairies	No. of Animals	Cowdung Generation (TPD)
1.	Tajpur Dairy Complex	198	12170	182.55
2.	Haibowal Dairy Complex	466	26991	347.10
3.	Scattered	179	4973	75.00
4.	Gaushala	8	3573	54.00
	Total	**851**	**47707**	**658.65**

(iii) Around 70 dairies located upstream of Ludhiana city at Village- Bhukri Kalan, Bhukri Khurd, Bhamian Kalan & Khasi Kalan and other adjoining villages are directly disposing of their effluents into Buddha Nallah.

(iv) For the management of cow dung being generated from the dairies located at Haibowal Dairy complex, Ludhiana, 1 CBG plant of 200 TPD capacity is functional. Further for the treatments of liquid waste being generated from the dairy complexes of Tajpur & Haibowal, 2 ETPs of 2.25 MLD & 3.75 MLD capacity have been installed under Buddha Dariya Project. However, these ETPs are facing operational challenges due to the consistent influx of cow dung from dairies which is impacting their efficiency.

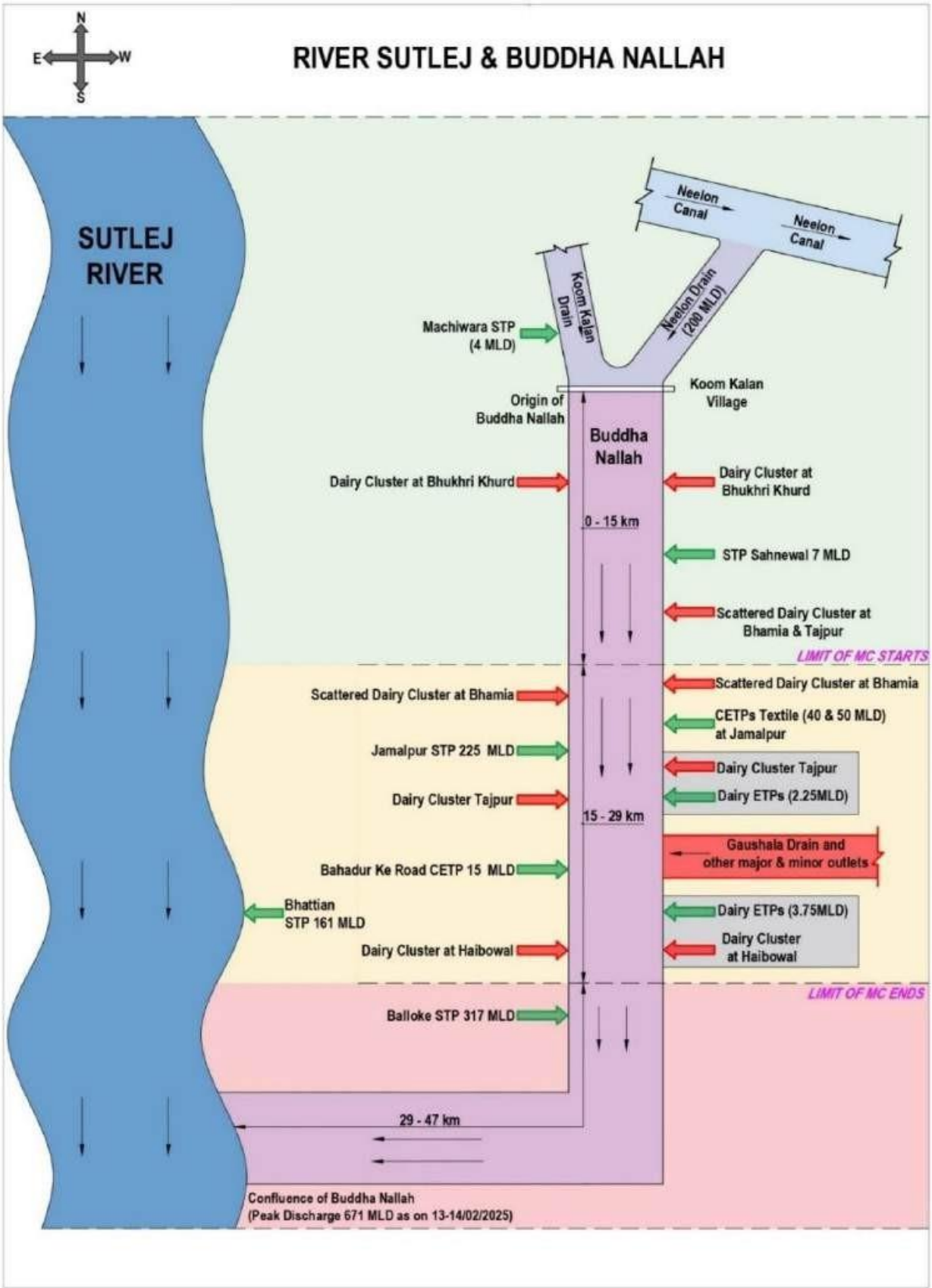
(v) The cow dung generation from 29 dairies located at Nahal dairy complex and 362 dairies at Jamsher Dairy Complex, Jalandhar has been estimated as 45 TPD & 200 TPD respectively. Further the liquid waste being generated from Jamsher Dairy Complex is being treated in ETP of 2.25 MLD capacity and the liquid waste being generated from Nahal Dairy Complex is discharged into Kala Sanghian Drain. However, the issue of untapped dairies which are not connected to the ETPs still remain unresolved.

4.7 Other Sources:

The other sources include leachate from municipal solid waste dump site, discharge from industries located in non-designated areas, discharge from fish markets, discharge from illegal colonies, carcass hadling unit etc.

4.8 Sources of Pollution into Buddha Nallah

(i) Buddha Nallah carries pollution caused by untreated industrial effluents and domestic sewage to river Sutlej. The Buddha Nallah can be broadly classified into three streams namely upstream (0-15 km), within MC limit (15-29 km) and downstream (29-47 km). As per the report of Joint Group of Central & State Govt. Departments, 156 outlets (domestic sewage, village ponds, dairies, storm water, CETPs, STPs) have been identified for discharging their waste water into Buddha Nallah. Out of 156 outlets, 96 outlets have been identified to be discharging their effluent upstream of Buddha Nallah, 3 outlets downstream of Buddha Nallah & 57 outlets within city limits. Out of 57 outlets, 42 outlets are from dairy complexes. The schematic diagram indicating the various sources of Pollution in Buddha Nallah is provided on the next page.


RIVER SUTLEJ & BUDDHA NALLAH
N
E
W
S
SUTLEJ RIVER
Neelon Canal
Neelon Canal
Koom Kalan Drain
Neelon Drain (200 MLD)
Machiwara STP (4 MLD)
Origin of Buddha Nallah
Koom Kalan Village
Buddha Nallah
Dairy Cluster at Bhukhri Khurd
Dairy Cluster at Bhukhri Khurd
0 - 15 km
STP Sahnewal 7 MLD
Scattered Dairy Cluster at Bhamia & Tajpur
LIMIT OF MC STARTS
Scattered Dairy Cluster at Bhamia
Scattered Dairy Cluster at Bhamia
CETPs Textile (40 & 50 MLD) at Jamalpur
Jamalpur STP 225 MLD
Dairy Cluster Tajpur
Dairy Cluster Tajpur
Dairy ETPs (2.25MLD)
15 - 29 km
Gaushala Drain and other major & minor outlets
Bahadur Ke Road CETP 15 MLD
Bhattian STP 161 MLD
Dairy ETPs (3.75MLD)
Dairy Cluster at Haibowal
Dairy Cluster at Haibowal
LIMIT OF MC ENDS
Balloke STP 317 MLD
29 - 47 km
Confluence of Buddha Nallah
(Peak Discharge 671 MLD as on 13-14/02/2025)

Chapter 5 - Other Sources of Pollution and Their Management

5.1 Bio Medical Waste

(i) The bio-medical waste of all the Healthcare Facilities in the State is collected, transported, treated and disposed of by 6 authorized Common Bio-Medical Waste Treatment Facilities (CBWTF) located at Ludhiana, SAS Nagar, Amritsar, Sri Muktsar Sahib, Jalandhar and Pathankot. The Bio-Medical Waste generation in the State is in the range of 24-27 tons per day (TPD) depending upon patient load. The status of HCFs operating in towns falling in catchment areas of river Sutlej is given in **Annexure 7.**

(ii) The collection vehicles of the CBWTF operators are equipped with Global Positioning System (GPS) with access to Punjab Pollution Control Board (PPCB). The CBWTF operators are using Bar-code based software system for collection of bio-medical waste from Healthcare Facilities since 2012 and the data of collection of bio-medical waste from the healthcare facility is sent online to server within 1-2 minutes and the access of same is available with PPCB. CCTV cameras are also installed in the processing areas of all the 6 CBWTF operators with access to PPCB to monitor the working of the facility.

(iii) The stack of the incinerator installed in all the 6 CBWTFs have been provided with Online Continuous Emission Monitoring System and the data is transferred online to PPCB and CPCB. This system helps in observing/monitoring the emissions discharged while treatment of bio-medical waste is being done.

(iv) Since, the Bio-Medical Waste generated in the catchment area of River Sutlej is handled and managed in proper manner through the Common Bio-Medical Waste Treatment Facilities (CBWTF), as such; there is no impact of this waste on the water quality of River Sutlej. Facility wise details of area catered by the CBMWTF's is given in **Annexure-8.**

5.2 Hazardous Waste

(i) The Government of India has framed Hazardous and Other Wastes (Management and Trans-boundary Movement) Rules, 2016 for the scientific handling of hazardous waste. The occupier of the facility is to apply for authorization for handling, generation, collection, storage, packaging, transportation, use, treatment, processing, recycling, recovery, pre-processing, co-processing, utilization, offering for sale, transfer or disposal of the waste to the Board. A passbook is issued along-with authorization to the actual user of the hazardous waste.

(ii) As per the interim, order dated 14-10-2003 of Hon'ble Supreme Court in Writ Petition (Civil) No. 657 of 1995, regarding handling of hazardous waste and development of common treatment, storage and disposal facility, a Common Treatment, Storage and Disposal Facility (CTSDF) at Village Nimbuan, Tehsil Dera Bassi, Distt. SAS Nagar was constructed by M/s Nimbuan Green Field Punjab Limited (NGPL) and commissioned in October 2007.

(iii) M/s Tetratech India Limited has designed the facility for 15 years capacity considering the generation of storable quantity of hazardous waste as 36,000 MTA based on the assessment

study carried out by it. The total capacity of the facility is 5,40,000 MT. The capacity to store hazardous waste in the existing CTSDF is sufficient upto year 2030 at the present rate of generation. The vehicles used by the common facility operator for transportation of hazardous waste are equipped with GPS system.

(iv) The status of hazardous waste generated in the industries in area of river Sutlej as on 31.3.2025 is given in **Annexure-9**.

(v) At present, no common incinerator has been installed at CTSDF and the same is under planning. Some industries generating incinerable hazardous waste have installed captive incinerator in their premises for disposal of incinerable waste. Ten such captive incinerators are in operation for the disposal of incinerable waste. In addition to the above, the incinerable waste from the remaining industries is received by the operator of CTSDF and is incinerated at the incinerator installed by the CTSDF at its unit at Kanpur.

(vi) Since, the Hazardous Waste generated by the industries in the catchment area of River Sutlej is handled and managed in proper manner through the Common Treatment, Storage & Disposal Facility installed at Vill. Nimbuan, Tehsil Dera Bassi, Distt. SAS Nagar, as such, there is no impact of this waste on the water quality of River Sutlej.

5.4 E-Waste

(i) Government of India has framed E-Waste (Management & Handling) Rules, 2016 as amended on 19.05.2025. PPCB has granted NOC / 'Consent to Operate' to one dismantling facility, M/s Ramky Enviro Engineers Limited, Vill. Nimbua, Tehsil DeraBassi, Distt. SAS Nagar with capacity to handle 4 TPD of E-waste.

(ii) PPCB has granted 'Consent to Establish' to two industries i.e. M/s Black Diamond Cements Pvt. Ltd., Tehsil Dera Bassi, district SAS Nagar and M/s Spreco Recycling, Tehsil Raikot, District Ludhiana to establish E-Waste recycling facility of capacities 30 TPD and 0.8 TPD respectively. These said industries have yet not commissioned the said facility. Two parties each in Amritsar and Jalandhar, have also been given go ahead by PPCB for setting up of the E-Waste recycling facilities. of capacity 30 TPD and M/s Spreco Recycling, Tehsil Raikot, District Ludhiana of capacity 0.8 TPD have been established. M/s Cosmos Recycling Pvt. Ltd., VPO Hambran Jagraon, Ludhiana of capacity 28.77 TPD M/s K.J Recycler, Sanjay Gandhi Nagar, Jalandhar of capacity of 1.64 TPD M/s Recycling Villa, Plot no. 127, Jashan City, Kohara-Sahnewal link road, Jandiali, Ludhiana refurbisher facility of capacity 1 TPD. Status of E-wastes Facility wise details of area catered by the E-wastes is given in **Annexure 10.**

(iii) Although, the channelization of E-Waste has recently been started, disposal of such waste has never been noticed in the River Sutlej.

5.6 Solid Waste

(i) The Department of Local Government (DLG) vide notification dated 09.07.2018 has notified the Punjab State Solid Waste Management Policy, 2018. In view of the experience, it has

been decided to adopt both decentralized and centralized solid waste management approach depending upon the profile of the locality.

(ii) Further, in compliance to the orders of the Hon'ble Punjab and Haryana High Court in CWP No. 7039 of 2010, a Common Action Plan containing 10 points was prepared in 2012 for viable alternative measures for disposal of garbage till setting up of Solid Waste Management Plants. The Directorate of Local Government is the implementing agency for this Action Plan and PPCB is monitoring the status of compliance. Out of 65 Urban Local Bodies (ULBs), 04 ULBs are complying, 43 ULBs are partially complying with the Common action plan and remaining 18 ULBs are yet to comply with the same.

(iii) The habitation areas along the banks of Budha Nallah are disposing off their solid waste into Budha Nallah due to improper collection mechanism in place by the Municipal Corporation, Ludhiana in the city. Besides, this solid waste generated by the dairy units is also disposed off in the Budha Nallah. Therefore, disposal of such solid waste in the said nallah is further degrading the quality of its water and has become a major problem for the city.

(iv) The Ministry of Environment and Forests, GOI has notified Solid Waste Management Rules, 2016. The Board is monitoring implementation of these Rules. As per Rule 24 of the Solid Waste Management Rules, 2016, the local body shall submit its annual report to the Board on or before the 30th day of June every year. Further, the Board is required to submit the consolidated annual report to the Central Pollution Control Board and Ministry of Urban Development by the 31st day of July of each year. The same are regularly uploaded on the official website of the Board also.

(v) The vulnerable pockets where garbage is dumped directly by people into Budha Nallah needs to be identified so that the preventive measures shall be taken to stop dumping of garbage directly into Budha Nallah.

Chapter 6 - Utilization of Treated Wastewater

6.1 The State Treated Waste Utilization Policy

(i) The Department of Local Govt. has notified "The State Treated Waste Policy -2017" to promote the recycling and reuse of treated sewage for non-potable application and to make sewage projects economical and environmentally sustainable.

(ii) The policy envisages to tackle the issues pertaining to the provisions of adequate wastewater collection and treatment facilities, consideration of treated effluent as resource for reuse in irrigation/industrial/other fields and thereby improvement of the socio-economic conditions in the areas to served by the proposed systems.

(iii) The Department of Soil and Water Conservation, Punjab is executing projects for utilization of treated wastewater for irrigation of various towns/cities across the State by laying network of underground pipelines in agricultural fields.

(iv) The project involves laying network of underground pipelines from Sewage Treatment Plants for conveyance of treated sewage for irrigation in agricultural fields.

6.2 Utilization of treated wastewater in the catchment area of Sutlej River

(i) The Department of Soil & Water Conservation, Punjab has already commissioned irrigation projects to utilise the treated wastewater of 24 STPs (165.50 MLD) for irrigating 4044 hectares of agricultural land.

(ii) The irrigation projects for utilizing the treated waste water of 9 STPs (176 MLD) are under progress for irrigating 4995 Ha of agriculture land. The irrigation projects for utilizing the treated wastewater of 17 STPs (923 MLD) are not feasible due to non-availability of irrigation command area as these STP's are located in urbanized area. Further, the irrigation projects for utilizing the treated waste water 32 STPs (187.5 MLD) are under planning stage and are likely to be initiated after the funds for these projects are tied up. The details of the projects already commissioned, under progress, not feasible and at planning stage are given in **Annexure-11.**

(iii) The following issues need to be addressed for utilizing the treated waste water of STP's for irrigation purposes:

a) In case of STPs based on SBR technology, the discharge of treated wastewater is not continuous and for the gap period of about 45 minutes, the pump through which the treated wastewater is pumped for utilization onto land for irrigation is required to be shutdown, which discourages the farmers to utilize the treated wastewater. Therefore, there is a need to provide a storage tank of sufficient capacity for treated wastewater so that without shutting down the pumping station, the wastewater can be made available to the farmers.

b) The payment of electricity bill is required to be regulated by fixing the responsibility of the concerned department and funds for this purpose need to be made available with the operating agency.

c) The farmers need to be educated and made aware about the advantages of use of treated wastewater for irrigation purpose.

Chapter 7- Action Plan for Control of Water Pollution & Timelines

7.1 Action plan

In order to control water pollution in river Sutlej, following measures have been chalked out to stop the flow of untreated waste water or other waste directly or indirectly into river Sutlej:

(i) Construction of New STPs in Urban Areas

a) Setting up of STPs by ULBs in various cities
b) Closure of Outlets directly discharging their waste water into Buddha Nallah, Ludhiana

(ii) Construction of New CETP & Upgradation of Existing CETP/ETP

a) Setting up of CETP for electroplating units at Jalandhar
b) Upgradation of existing 5 MLD CETP for Tannery Units at Jalandhar
c) Upgradation of ETP for fish market at Ludhiana
d) Shifting of scattered small/ medium scale dyeing units located in non-designated areas
e) Shifting of scattered small/ medium scale dyeing units located in designated areas

(iii) Management of Dairy Waste

(iv) Setting up of Treatment facilities in Village Ponds in Rural areas

(v) Setting up of Facilities for Reuse of Treated Wastewater

(vi) Modernization of existing slaughter house and Carcass plant at Ludhiana

(vii) Operation and Management Facilities

a) Installation of Online Continuous Effluent Monitoring System (OCEMS) for STPs

b) Installation of OCEMS by CETPs & ETPs

(viii) Release of 200 cusecs of Fresh Water into Buddha Nallah

7.2 Setting up of STPs by ULBs in Various Cities and Closure of Outlets Discharging into Buddha Nallah

(i) The total sewage generation in the catchment area of river Sutlej has been estimated as 1236 MLD with gap in sewage treatment as 33.32 MLD. The Department of Local Govt. (DLG) through Punjab Water Supply & Sewerage Board (PWSSB) has planned to set-up 16 New STPs to address the gap in sewage management.

(ii) There are 50 Urban Local Bodies (ULBs) falling in the catchment area of River Sutlej, which are discharging their wastewater directly or indirectly into river Sutlej. 16 STPs of 72.5 MLD capacity in 15 ULBs are proposed to be installed. Out of 15 ULBs, the sewage convenience system in 3 ULBs namely Barriwala, Mallanwala & Nihal singh wala is proposed to be provided besides installation of STP. Out of 16 STPs, 11 STPs of 32.5 MLD capacity in 10 ULBs are under construction & 5 STPs of 40 MLD capacity in 5 ULBs are under various stages of planning for establishment. The details of under construction, tender & DPR stage STPs are provided at **Annexure 12 & 13,** respectively**.**

(Stakeholder Department – PWSSB/DLG)

(iii) Closure of Outlets directly discharging their waste water into Buddha Nallah, Ludhiana

a) The Joint Group of Central & State Govt. Departments in their report has identified 156 outlets (domestic sewage, village ponds, dairies, storm water, CETPs, STPs) discharging their waste water into Buddha Nallah. Out of 156 outlets, 96 outlets have been identified to be discharging their effluent upstream of Buddha Nallah, 3 outlets downstream of Buddha Nallah & 57 outlets within city limits. Out of 57 outlets, 42 outlets are from dairy complexes

b) The Municipal Corporation, Ludhiana shall map and plug all the outlets (mainly of scattered dairies, cottage industries, leachate from solid waste dump site etc.) discharging their waste water into Buddha Nallah within city limits in a time bound manner. These outlets contributing significantly to the pollution load in Buddha Nallah. Further, MC Ludhiana shall expedite the setting up of CBG plants for the management of cow dung in Ludhiana to prevent the direct discharge of cow dung into Buddha Nallah.

c) The Municipal Corporation, Ludhiana (MCL) shall ensure that all the industrial outlets (treated, partially treated or untreated) except those allowed by the Punjab Pollution Control Board shall be plugged from municipal sewer so as to stop the mixing of industrial discharge with domestic sewage to improve upon the functioning of STPs.

d) The Department of Rural Development & Panchayats (DRDP) shall plug all the outlets discharging untreated sewage from villages in Buddha Nallah by providing adequate treatment & reuse facilities in these villages in a time bound manner. Further, the Department Rural Development & Panchayats shall also plan for providing treatment facilities for the management of liquid waste & solid waste (cow dung) being generating from dairies located upstream of Buddha Nallah.

e) Department of Animal Husbandry (DAH) will organize awareness camps for the scientific management and disposal of cow dung in coordination with concerned municipal corporation/council and Department of Rural Development & Panchayats.

f) Greater Ludhiana Area Development Authority (GLADA) shall map and plug all the outlets of illegal colonies (37 No.) discharging their waste water into Buddha Nallah in a time bound manner.

g) Punjab Pollution Control Board (PPCB) shall direct all the small & medium scale scattered textile dyeing units to install facilities for reusing their treated water are not connected to the any of the dyeing CETPs.

h) The SPVs of 3 CETPs (15 MLD, 40 MLD & 50 MLD), presently discharging their treated waste water into Buddha Nallah will explore the possibility for reusing their treated waste water.

(Stakeholder Department – MCL/DLG, DRDP, DAH, GLADA, PPCB)

7.3 Construction of New CETPs/Upgradation of Existing CETP/ETP

(i) Installation of CETP for Electroplating Units at Jalandhar

The Special Purpose Vehicle (SPV) namely Jalandhar Effluent Treatment Society (JETS) has planned CETP of 150 KLD capacity for 254 No. electroplating industries based on zero liquid discharge at Jalandhar. The Department of Industries (DIC) has informed that the construction work of this CETP has been stopped due to the stay given by the Hon'ble High Court in CWP 1483 of 2020 titled The Jalandhar Human Welfare Society (Regd.) V/s State of Punjab and Others.

(Stakeholder Department – DIC)

(ii) Upgradation of existing 5 MLD CETP for Tannary Units at Jalandhar

This CETP set-up by the Punjab Effluent Treatment Society (PETS) is catering to 58 Tanneries of Leather Complex, Jalandhar. The DPR for its upgradation has already been approved by DPIIT, Ministry of Commerce & Industry, GOI with project cost as Rs 28.64 Cr. The tender for its upgradation has already been awarded and the work is under progress. Department of Industries & Commerce, Punjab has informed that the said CETP is likely to be upgraded by 30.06.2026.

(Stakeholder Department – DIC)

(iii) Upgradation of ETP for Fish Market at Ludhiana

The Punjab Mandi Board (PMB) shall connect all the outlets of Fish Market with the existing ETP and plan for its upgradation in a time bound manner.

(Stakeholder Department – PMB)

(iv) Shifting of scattered small/ medium scale dyeing units located in non-designated areas

All the scattered small/ medium scale dyeing units located in non-designated areas are required to be shifted to the designated industrial areas having CETPs.

(Stakeholder Department – DIC & PPCB)

(v) Shifting of scattered small/ medium scale dyeing units located in designated areas

All the scattered small scale dyeing units located in designated areas where there is no feasibility to connect with the CETPs, are also required to be shifted to some designated industrial areas having feasibility to connect with the CETPs. CETPs so as to achieve the mandate for no industrial discharge into the municipal sewer. These units have the option to adopt alternative disposal methods, such as Zero Liquid Discharge (ZLD) technology or utilizing treated effluent for plantation. They can also consider relocating to areas with alternative disposal options (excluding municipal/public sewer).

(Stakeholder Department - DIC & PPCB)

7.4 Management of Dairy Waste

(i) For the management of dairy waste, 1 CBG plant of 300 TPD capacity is planned to be set up at Haibowal Dairy complex, Ludhiana by PEDA for MC, Ludhiana. The MoU has been signed amongst PEDA & HPCL Renewable and Green Energy Limited (HPRGE) and land lease agreement signed between MC, Ludhiana & PEDA. The land has been handed over by MC, Ludhiana to HPRGE. The project is expected to be operationalized by May, 2027.

(ii) 1 more CBG Plant of 300 TPD capacity is planned to be set up at Tajpur Dairy Complex, Ludhiana by PEDA for MC, Ludhiana.

(iii) 1 CBG plant of 300 TPD capacity is already under construction at Jamsher Dairy Complex, Jalandhar.

(iv) Department of Rural Development & Panchayats shall plan for providing treatment facilities for the management of liquid waste & solid waste (cow dung) being generating from dairies located outside MC limits.

(v) Punjab Energy Development Agency (PEDA) in collaboration with DRDP needs to explore of providing Biogas Plants/Bio digestors for the dairies located outside MC limits & scattered dairies for their cow dung management.

(vi) MC Ludhiana & GLADA shall explore the possibility of either connecting the scattered dairies & gaushalas (within & outside MC limits) or transporting their cow dung with the proposed CBG plants.

(Stakeholder Department – MCL, DRDP, PEDA)

7.5 Setting up of Treatment Facilities for sewage/sullage in Rural areas

(i) There are 336 Villages which are discharging their waste water either directly or indirectly through various drains/nallahas/creeks into river Sutlej.

(ii) The Department of Rural Development & Panchayats shall provide treatment facilities for villages directly/indirectly discharging their waste water into River Sutlej in a time bound manner.

(Stakeholder Department – DRDP)

7.6 Setting up of Irrigation Facilities for Reuse of treated wastewater

The Department of Soil & Water Conservation (DSWC) informed as under:

(i) The projects for reusing the treated waste water of 9 STPs (176 MLD) for irrigation are under progress and are likely to be completed by 30.06.2026.

(ii) The projects for reusing the treated wastewater of 17 STPs (923 MLD) for irrigation are not feasible due to non-availability of irrigation command area as these STP's are located in urbanized area.

(iii) The projects for reusing the treated waste water 32 STPs (187.5 MLD) are under planning stage and are to be initiated after the funds for these projects are tied up.

The details of the projects already commissioned, under progress, not feasible and are at planning stage are given in **Annexure-11**.

(Stakeholder Department – DSWC)

7.7 Modernization of existing slaughter house and Carcass plant at Ludhiana

(i) **Slaughter House**

The slaughter house set-up by Municipal Corporation Ludhiana is required to provide alternative mode of disposal such as ZLD or irrigation in a timebound manner.

(ii) **Installation of Carcass handling plant.**

The carcass utilization plant installed by Municipal Corporation, Ludhiana at Village Noorpur Bet, Humbran Road, Ludhiana could not be commissioned due to public agitation. The matter is under consideration of Hon'ble NGT. The proposal to shift the plant at any other location is under consideration of Municipal Corporation.

(Stakeholder Department – MCL)

7.8 Operation and Management Facilities

(i) **Installation of Online Continuous Effluent Monitoring System (OCEMS) for STPs**

The Department of Local Govt. shall ensure that all the STPs are equipped with Online Continuous Effluent Monitoring Systems (OCEMS). The calibration of OCEMS shall be carried out as per prescribed protocols & connectivity shall be established with the dashboards/servers of CPCB & PPCB.

(ii) **Installation of Online Continuous Effluent Monitoring System (OCEMS) by CETPs & ETPs**

Punjab Pollution Control Board shall ensure that all the CETPs and individual industries having discharge 50 KLD or more have installed OCEMS **(Annexure-14)** at their outlets and their calibrations shall be carried out as per prescribed protocols from time to time. Further, the OCEMS of the CETPs and ETPs shall be connected with the servers/dashboards of CPCB & PPCB.

(Stakeholder Department – PPCB & DLG)

(iii) **Operation & Maintenance (O&M) of STPs and CETPs**

a) O&M of STPs & CETPs should be entrusted to reputed companies for achievement of the prescribed discharge standards.

b) All the STPs should have in-house laboratory facilities at each STP for maintaining record of characteristics of analysis of untreated as well as treated waste water.

c) Sludge generated from STPs is required to be analysed for the parameters as mentioned in the Schedule 2 of MSW Rules, 2016 for disposal of the same. The operator of the STP is required to maintain database in this regard.

d) All the STPs should have standby arrangements for smooth functioning during maintenance period and there should be standard operating procedure for the same. All the STPs should have adequate capacity of holding tank(s) or standby

arrangements for storage of untreated sewage during maintenance or shut down if any. All upcoming STPs also should have the above provisions.

e) All STPs should have a provision of uninterrupted power supply or power backup system including standby electrical and mechanical components for ensuring proper and effective operation of the STPs.

(Stakeholder Department – PWSSB/DLG, DHUD, DWSS, DIC, PPCB)

7.9 Release of 200 cusecs of Fresh Water into Buddha Nallah.

The Department of Water Resources shall ensure consistent release of 200 cusecs of freshwater from Neelon drain into the Buddha Nallah to bring down the concentration of pollutants.

(Stakeholder Department – DWR)

Chapter 8 – Monitoring Requirements and Formats

8.1 Key components of monitoring

There are following key components of monitoring

- Monitoring of the progress of projects for setting up of New STPs/CETPs and upgradation of existing STPs/CETPs
- Monitoring of operations and management of STPs/CETPs
- Monitoring of ETPs and Industrial Effluents
- Monitoring of Quality of Water of River Sutlej
- Monitoring of adverse impact on health of the people in surrounding areas due to water pollution
- Monitoring of Awareness campaign
- Monitoring of other violations of laws/ regulations
- Monitoring of characteristics of sludge of STPs
- Monitoring of regular release of fresh water in Buddha Nallah
- Monitoring of solid waste disposal in Buddha Nallah

8.2 Monitoring of operations and management of existing STPs/CETPs/ETPs

To ensure proper functioning of the STPs/CETPs, regular availability of funds for operation and maintenance has to be ensured. All the STPs/CETPs should also have standby source of power. The O&M contracts shall clearly define the responsibilities of the Operator. Monthly reports as per **Annexure-15 & 16** will be submitted for monitoring.

8.3 Monitoring of progress of setting up of new/ upgradation STPs/CETPs/ETPs

The progress of projects for setting up of new STPs in various Urban Local Bodies, CETP by Special Purpose Vehicle and ETPs for the treatment of Dairy effluents will be monitored on regular basis. In order to ensure that all the stakeholder departments adhere to the timelines given for setting up of new STPs/CETPs/ETPs and upgradation of existing STPs/CETPs facilities, the department shall submit progress of the project on monthly basis in the proforma attached as **Annexure-17 & 18** for monitoring.

8.4 Monitoring of ETPs and Industrial Effluents

Punjab Pollution Control Board shall visit the industries located in the catchment area of River Sutlej as per protocol regarding frequency of visit to the industries to carry out monitoring of Effluent Treatment Plants & ground water and maintain proper record of all these visits. PPCB will submit report as per the proforma given in **Annexure-19.**

8.5 Monitoring of Water Quality of River Sutlej

The Punjab Pollution Control Board shall continue to monitor the quality of water of River Sutlej at 16 locations under National Water Monitoring Programme and shall submit report on monthly basis in the proforma as per **Annexure-20**.

8.6 Monitoring of adverse impact on Health of the people in surrounding areas

The Department of Health and Family Welfare shall organize / conduct the health check up camps of the people in the catchment area of River Sutlej and shall submit the monthly report in proforma as per **Annexure-21**.

8.7 Monitoring of Awareness campaign

The PPCB will organize awareness programme in partnership with the Department of Health & Family Welfare and other stakeholders in the habitation area falling in the catchment area of River Sutlej to educate them about the harmful effects of water pollution. The PPCB shall submit monthly report in the proforma as per **Annexure-22**.

8.8 Monitoring of characteristics of sludge of STPs

The PWSSB/PPCB and the operating agency shall get the sample of sludge of STPs analysed for the parameters mentioned in schedule 2 of MSW Rules, 2016 to find out its characteristics, atleast once in six months so that its usage/ disposal route may be adopted accordingly.

8.9 Monitoring of release of fresh water in Buddha Nallah

The Department of Water Resources shall ensure consistent release of 200 cusecs of freshwater from Neelon drain into the Buddha Nallah to bring down the concentration of pollutants.

8.10 Monitoring of solid waste disposal in Buddha Nallah

The disposal of solid waste into Budha Nallah by the habitation areas located along its banks due to improper collection mechanism and by the dairy units would be monitored on regular basis.

8.11 Monitoring of out falls into Budha Nallah & Kala Sanghian drain

The wastewater of many residential colonies/ dairies which are not connected to STP are being discharged into Budha Nallah & Kala Sanghian drain through storm water drain/ sewerage system without treatment thereby affecting the quality of river water. The outfalls into these drains needs to be monitored on regular basis for providing adequate treatment facilities by setting up of STPs/ ETPs.

Chapter 9 - Governance and Supervision

9.1 Four Tier Monitoring

(i) Monitoring shall be done by the concerned Departments/Agencies, which are executing or responsible for particular activities and it will be their primary responsibility to ensure compliance of the Action Plan.

(ii) State is already implementing the 4 -Tier Governance Mechanism to review the progress of various activities (monitoring of existing STPs, setting up of new STPs, reuse of treated wastewater etc.) of Action Plans to control the pollution in rivers including Sutlej with details of Committees as under:

- **District Environment Committees (DEC) -** Department of Science Technology & Environment, Government of Punjab vide notification dated 31.10.2019 has constituted DEC in compliance of NGT orders dated 26.09.2019 in O.A. No. 360/2018 under the chairmanship of Deputy Commissioner of concerned District and members as ADC (Development), SSP Police, EO- Municipal Corporation, Chief Administrator, Urban Development Authority, RO- Punjab Pollution Control Board (PPCB), SE-PWD, Chief Agriculture Officer, Chief Surgeon, District, Development & Panchayat Officer, General Manager, District Industries Centre, Secretary, Regional Transport Authority.
- **River Rejuvenation Committee (RRC) -** Department of Science Technology & Environment, Government of Punjab vide order dated 19.11.2018 has constituted RRC in view of NGT orders dated 20.09.2018 in O.A. No. 673/2018 consisting of Director Environment, Director, Urban Development, Director, Industries and Member Secretary, Punjab Pollution Control Board as members. The RRC will function under the over all supervision & coordination of Principal Secretary to Government of Punjab, Department of Science, Technology & Environment.
- **State Level Task Force also called State Apex Committee (SAC)-** Department of Science Technology & Environment, Government of Punjab vide order dated 14.11.2018 has constituted SAC in view of NGT orders dated 07.08.2018 in O.A. No. 138-139/2016 consisting of Chief Secretary, Punjab, Administrative Secretary, Environment, Administrative Secretary, Urban Local Bodies, Administrative Secretary, Housing and Urban Development, Member Secretary, Punjab Pollution Control Board.
- **Monitoring by Divisional Commissioners -** The State Govt. has issued directions to all the Divisional Commissioners on 17.01.2023 to monitor the District Environment Plans (DEPs) in their respective Districts on behalf of Chief Secretary, Punjab from 1.01.2023 onwards in compliance of NGT order dated 18.08.2022 in O.A. No. 360/2018. The Divisional Commissioners are regularly monitoring the DEPs & submitting their bi-monthly reports for further review in the meeting of State Apex Committee.

(iii) Department of Science, Technology and Environment through Directorate of Environment & Climate Change (DECC) is responsible for coordination and monitoring of the various Environmental Action Plans including Action Plan for Clean River Sutlej. DECC is collecting, collating and analysing the data from all the concerned agencies and is escalating the issues and challenges to the appropriate level for expeditious resolution of the same.

9.2 River Rejuvenation Committee (RRC)

- The mandate of the RRC as per NGT orders dated 20.09.18 is as under:

  (a) It shall prepare action plans to restore the polluted river stretches to the prescribed standards in the State.

  (b) It shall have a website inviting public participation from educational institutions, religious institutions and commercial establishments. Achievement & failures may also be published on such website. The Committee may consider suitably rewarding those contributing significantly to the success of the project.

  (c) It shall have the authority to recover the cost of rejuvenation in Polluter Pays Principle from those who may be responsible for the pollution, to the extent found necessary. In this regard, principle laid down by the NGT in order dated 13.07.2017 in O.A. No. 200/2014, M.C. Mehta V/s. UoI will apply. Voluntary donations, CSR contribution, voluntary services and private participation may be considered in consultation with the RRC.

9.3 State Level Task Force also called State Apex Committee

- The mandate of this task force as per order dated 14.11.2018 issued by the Govt. of Punjab, Deptt. of Science, Technology & Environment is as under:

  (a) It shall finalize the Action Plan with firm timelines and review the same.

  (b) It shall submit quarterly report on action taken during the quarter to the Central Pollution Control Board.

  (c) It shall also ensure that the quarterly Action Taken Reports are uploaded on the website of Punjab Pollution Control Board.

  (d) It shall Co-ordinate with the Executing Committee, appointed by NGT

  (e) The State Level Task Force will accordingly hold regular meetings to review

9.4 District Environment Committees

- The mandate of this task force as per NGT order dated 18.08.2022 in O.A. No. 360/2018. issued is as under:

  (a) To prepare District Environment Plan and revision from time to timew.r.t various areas of environment & in particular following specific thematic areas:

    i. Compliance to Solid Waste Rules including Legacy Waste
    ii. Compliance to Bio Medical Waste Rules
    iii. Compliance to Construction & Demolition Waste
    iv. Compliance to E-Waste Rules
    v. Four Water Polluted Stretches in the State (Roopnagar to Harike Bridge in River Sutlej, Along Mukerian& Sultanpur Lodhi to confluence of Beas in River Beas and Mubarakpur to Sardulgar in River Ghaggar)
    vi. Nine non-attainment cities namely Patiala, Dera Bassi, Naya Nangal, Dera Baba Nanak, Mandi Gobindgarh, Khanna, Ludhiana, Jalandhar and Amritsar
    vii. Industrial Clusters namely Mandi Gobindgarh, Ludhiana
    viii. Status of STPs and Re-use of Treated Water
    ix. Status of CETPs/ ETPs including performance
    x. Ground Water extraction/ contamination and recharge

xi. Air pollution including noise pollution
xii. Illegal sand mining
xiii. Rejuvenation of Water Bodies
xiv. Crop Residue Burning

(b) To prepare District Plans for Climate Change and to revise the same from time to time.

(c) To review the progress of District Environment Plans and other plans.

(d) To identify all persons responsible for violation of law and norms relating to water pollution, air pollution, noise pollution and waste management

(e) To review action by the competent authority w.r.t. civil and criminal action against the violators as well as those who fail to perform their duties in this regard.

(f) To involve civil society organizations and public participation for organizing awareness programs.

(g) To ensure periodic sampling of river water as well as ground water to check water quality

(h) Any other function assigned to the Committee by the State Government on its own or in pursuance of directions of the Hon'ble Court or Hon’ble NGT from time to time

Chapter 10 – Challenges in Implementation of Action Plan

10.1 Identification of Major Challenges in the Action Plan

The Action Plan to clean Sutlej and restore the quality of water to the prescribed standards is a complex multi sectoral and multi-agency action plan. Successful implementation would face many challenges. Following major risks have been identified

(i) Accuracy and completeness of Baseline Data

(ii) Accuracy and completeness of Project timelines

(iii) Financial closure and timely releases of funds

(iv) Discharge from unapproved habitation areas

(v) Tracking the Progress and program management

(vi) Resolution of Administrative and Technical Issues

(vii) Mixing of industrial effluent with domestic wastewater

10.2 Mitigation Plan for identified Challenges

It is important to devise strategies and plans to mitigate the identified challenges. Action plan will remain on paper if the bottlenecks and the risks are not dealt satisfactorily. Mitigation plan for each of the identified challenges has been prepared in the following paras.

10.3 Accuracy and completeness of Baseline Data

Due to paucity of time, the information about the sources of pollution, current treatment facilities, quantity and quality of discharges etc. could not be properly validated and there could be gaps in the same, which may lead to substantial alterations in the plans. In order to ensure accuracy and completeness of baseline data, another round of validation of the same would be got done through the respective Administrative Departments and Action plan updated accordingly. This will be completed in 30 days.

10.4 Accuracy and completeness of Project timelines

There could be gaps in the information about the project timelines. All the Stakeholder Departments would be asked to validate the project timelines carefully after taking into account all the relevant factors.

10.5 Discharge from unapproved habitation areas

There are certain unapproved colonies or villages, which have come under municipal limit, which are currently not covered in the plans but are discharging their untreated sewage directly or indirectly into river Sutlej. The concerned authorities for urban and rural areas will be asked to identify such localities and plan for their connectivity with the main sewer or development of the sewer system shall be worked out.

10.6 Financial closure and timely releases of funds

Availability of funds for completing the projects on time is a major challenge. Some of the projects have still not achieved financial closure. It has also been observed that the release of funds is often not regular even though the project had appropriate financial approval. In order to overcome these challenges, the concerned stakeholder department shall make efforts for timely release of funds by the State Govt./Govt. of India.

In case of operation and maintenance, seeking firm commitment of ULBs/ Department of Local Government to treat this as committed expenditure according it highest priority and release the funds regularly. Further, arrangement may be worked out with the Administrative Department and Department of Finance that in case of default of ULB to pay to the operator, funds will be deducted from the grant to be released to ULB and paid directly to the Operator.

10.7 Tracking the Progress and program management

The action plan for clean Sutlej is a complex, multi department and multi-agency programme. In order to mitigate the challenge, the concerned stakeholder departments may set-up a dedicated team to collate data, analyse the same, prepare status updates, escalate issues and assist various committees in review and issue resolution.

10.8 Resolution of Administrative and Technical Issues

Some of issues such as acquisition of land can hold up the progress of the implementation of the Action Plan. Such issues need to be identified by the concerned stakeholder department and escalate to the appropriate level. The three-tier monitoring and review system will help in resolving the issues.

10.9 STPs under one Department

Presently, STPs are under the control of the different organisations and different organisations are planning in their own way and there is no proper co-ordination. All STPs should be under one authority so that it becomes easy for planning, commissioning and ensuring proper operation and maintenance of the existing or upcoming STPs.

10.10 Mixing of industrial effluent with domestic wastewater

(i) Industrial effluents of the cities or towns should not be allowed to mix up with the domestic sewage.

(ii) A number of scattered industries (running from households) are discharging their effluent directly into Municipal Sewer. A foolproof mechanism needs to be formulated for tapping the effluent of these industries.

Annexure 1 - Comparative analysis results of Surface water monitoring under NWMP for Dec, 2018 to Dec, 2024

A. Parameter wise

Sr. No.	Sampling Location	pH		DO (mg/l)		BOD (mg/l)		Cond (µs/cm)		T. Coli (MPN/100 ml)		DBU Class	
		2018	2024	2018	2024	2018	2024	2018	2024	2018	2024	2018	2024
1	U/S Nangal	7.66	7.1	8.6	7.2	<1	BDL	215	305	170	70	B	B
2	D/S NFL	7.76	7.2	8.4	7.4	<1	BDL	265	324	210	46	B	A
3	100m D/S PACL	7.81	7.2	8.3	7.3	<1	BDL	262	321	210	49	B	A
4	D/S Nangal	7.98	7.4	8.4	7.4	<1	BDL	234	320	150	49	B	A
5	Kiratpur Sahib	7.86	7.5	8.1	8.9	<1	BDL	246	302	940	110	C	B
6	Ropar Headworks	7.13	7.6	7.9	8.3	<1	BDL	253	341	1400	220	C	B
7	D/S Rishabh Mill	7.86	7.6	7.3	8.7	1.6	BDL	460	334	2100	210	C	B
8	U/S Budha Darya	7.14	7.6	7	7.2	1.4	1.3	436	356	3200	430	C	B
9	100m D/S Budha Darya	7.07	7.2	3.6	3.8	26	19	723	697	7,90,000	9,40,000	E	E
10	Boat Bridge	7.03	7.3	5.2	8.1	9	5.2	542	544	94,000	21,000	D	D
11	D/S East Bein	7.7	7.2	3.8	5.1	10.2	6.8	610	621	35,000	63,000	E	D
12	Harike	8.1	7.5	6.2	8.2	4.2	1.2	306	272	14,000	1700	D	C
13	Harike Lake (D/S Canal)	7.9	8.0	7.5	8.2	1.8	1.6	234	244	3500	3300	C	C
14	D/S Harike Lake	7.7	7.1	7.4	8.2	2	1.7	242	240	3300	3400	C	C
15	U/S Hussainiwala	7.2	7.5	6.9	8.2	1	BDL	268	281	2200	490	C	C
16	D/S Hussainiwala	7.41	7.5	7	8.2	1.1	BDL	275	281	2100	490	C	C

B. Class wise

Sr. No.	Sampling Location	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23	Dec-24
1	Satluj at U/S Nangal	B	B	B	B	B	B	B
2	Satluj at D/S NFL	B	B	B	B	B	B	A
3	Satluj at 100m D/S PACL Nangal	B	B	B	B	B	B	A
4	Satluj at D/S Nangal	B	B	B	B	B	B	A
5	Satluj at Kiratpur Sahib	C	C	B	C	B	B	B
6	Satluj at Ropar Head-Works	C	C	C	C	C	C	B
7	Satluj at D/S of Rishab-Paper Mills	C	C	C	C	C	C	B
8	Satluj at U/S Buddha Dariya	C	C	D	C	C	C	B
9	Satluj at 100 m D/S Buddha Dariya confluence	E	E	E	E	E	E	E
10	Satluj at Boat Bridge, Dharamkot Nakodar Road	D	E	E	D	D	D	D
11	Satluj at D/S East Bein	E	E	E	E	D	D	D
12	Satluj at Harike	D	C	C	C	C	C	C
13	Harike Lake D/S from canal (Ferozpur feeder)	C	C	C	B	C	C	C
14	Satluj D/S Harike lake	C	C	C	C	C	C	C
15	Satluj at U/S Hussainiwala H/W Ferozepur	C	B	C	C	C	C	C
16	Satluj at D/S Hussainiwala H/W Ferozepur	C	B	C	C	C	C	C

Note. 1. BDL means Below Method Detection Limit

2. WQI means Water Quality Index (S means Satisfactory, N means not Satisfactory).

3. DBU means Designated Best Use (Class-A, B, C, D& E)

Annexure 2 - Data of Surface Water Monitoring under NWMP (Average values)

Year	Location	pH	DO mg/l	COD mg/l	BOD mg/l	Total Coliform MPN/100ml	Fecal Coliform MPN/100ml	Class as per DBU
2021-2022	River Sutlej at U/S Nangal	8	7.7	0	0	132	39	B
2022-2023		7.9	8.2	0	0	190	65	B
2023-2024		7.8	7.7	0	0	90	27	B
2024-2025		7.8	8	0	0	81	27	B
2021-2022	Sutlej at 1 km D/S of Shree Rishab Papers	7.9	8.1	0	0	2193	887	C
2022-2023		7.9	8.1	0	0	1547	610	C
2023-2024		7.8	8	1.2	0.2	871	268	C
2024-2025		7.7	8.1	4.8	0.4	736	205	C
2021-2022	Sutlej at U/S Budha Darya (Upper)	7.7	6.3	10.8	1.5	3558	1468	C
2022-2023		7.9	7	5.7	1	2592	992	C
2023-2024		7.8	7.4	9	1.3	1054	378	C
2024-2025		7.8	7.4	13.8	1.6	1405	436	C
2021-2022	Sutlej at 100m D/S Budha Darya Confl., Ludhiana	7.3	1.5	107	24.5	4291667	1950833	E
2022-2023		7.4	1.6	140.4	37.3	2295000	880833	E
2023-2024		7.5	1.3	155.8	39.7	1898333	631583	E
2024-2025		7.5	1.9	120.4	30.6	1157500	297250	E
2021-2022	Sutlej at Boat	7.3	3.6	48.9	8.7	483333	168583	E
2022-2023	Bridge Dharamkot Nakodar Road, Jalandhar	7.6	3.6	60.8	14.5	353333	142833	E

Year	Location	pH	DO mg/l	COD mg/l	BOD mg/l	Total Coliform MPN/100ml	Fecal Coliform MPN/100ml	Class as per DBU
2023-2024		7.5	4	54.6	12.4	352417	140492	D
2024-2025		7.5	4.5	53.4	10.3	77083	26658	D
2021-2022	Sutlej at D/S East Bein	7.3	2.8	57.7	10.7	676667	288333	E
2022-2023		7.6	3.1	61.5	13.4	512000	190083	E
2023-2024		7.5	3.6	55.8	13.2	447417	189658	E
2024-2025		7.4	3.6	64.2	13.7	117000	44150	E
2021-2022	Sutlej at Bridge Harike	7.6	6.1	16.4	2.5	4475	1667	C
2022-2023		7.7	6.4	14.5	2.3	4183	1505	C
2023-2024		7.7	6.4	18.8	2.4	3875	1468	C
2024-2025		7.7	7.2	19.9	2.3	3017	1138	C

Annexure 3 - List of 30 Major Drains directly discharging into River Sutlej

Sr. No.	Name of the drain	Point of origin	Approx length (in Km)	Location at which it meets river Sutlej	Approx. Carrying Capacity (MLD)
1.	Adhera Choe/Siswan nadi/Dulchi nadi	Siswan Dam	38.11	village beli kalan, Sri Chamkaur Sahib	200570
2.	Hussainpura Drain	Village Ladal and Hussainpur	3.04	village Katli, through ropar wet land	244.5
3.	Phool Drain	village phool	3.06	village Bara Phool	244.5
4.	Budh ki nadi	Himachal	36.58	Village Nanowal	129637
5.	Sarsa Nadi	Himachal Pradesh	6.10	Village Avaan Kot	
6.	Ladl Choe	Himachal Pradesh	3.04	Village Katli	537.90
7.	Main Seepage	Village Lodhipur	8.15	Through Nakia Khadd near Gurudwara Patalpuri Sahib	579.46
8.	Kiratpur Choe	From hills near Kiratpur Sahib	1.0	Through Nakia Khadd near Gurudwara Patalpuri Sahib	36.68
9.	Charan Ganga	From Nallah of Sri Anandpur Sahib	3.5	Near Village Lodhipur	22
10.	M.C.M. Drain (Lower)	Near Chamkaur Sahib	21.65	Mattewara Forest	909.876
11.	Budha Nallah	Near Machhiwara	40	Near Vill. Walipur	2768
12.	Jassowal Extension Drain	Khadoor	1.07	Near Vill. Sherewal	20730.754
13.	Kishanpura outfall drain	Near Village Kamaal ke, Tehsil Dharamkot, Distt. Moga	11.28	Near Satluj, Village Sherewala, Tehsil Dharamkot, Distt. Moga	638.55
14.	Makhu drain	Near Village Nangal / Jogewala, Distt. Ferozepur	17.98	Near Village Dinne ke, downstream of Harike Head Works, Tehsil Zira, Distt. Ferozepur.	320.5
15.	Sukkar Nala Drain	Village Badowal, Distt. Moga	99.10	Near Village Masteke, Tehsil & Distt. Ferozpur	2083.76
16.	Phidda drain	Near Village Burj Duna, Distt. Moga	68.29	Near Village Langeana, close to international boundry, Tehsil & Distt. Ferozepur.	1663.67
17.	Luthar Drain	Village Luthar, Tehsil & Distt. Ferozpur	5.18	Near Village Waghe Wala	280.6
18.	Mamdot Drain	Village Changa Makhana, Tehsil & Distt. Ferozpur	11.89	Near Village Mamdot Hithar	409.92
19.	Phidda outfall drain	Near Village Sehjadi, Tehsil & Distt. Ferozepur.	52.59	Near Village Gajni Wala, Tehsil Guru Har Sahai, Distt. Ferozepur.	12428.6

Sr. No.	Name of the drain	Point of origin	Approx length (in Km)	Location at which it meets river Sutlej	Approx. Carrying Capacity (MLD)
20.	Jiwan Arain Drain	Village Mohan Ke Uttar, Tehsil Guru Har Sahai, Distt. Ferozpur	12.95	Near Village Issa Panj Grain, Tehsil Guru Har Sahai, Distt. Ferozpur	
21.	Jalalabad mauzzam drain	Near Village Chak Janisar, Tehsil Jalalabad, Distt. Fazilka	19	This drain fall into creek of river Satluj, at Village Walle Shah Uttar / Hasta Kalan, Tehsil & Distt. Fazilka.	--
22.	Salemshah Drain	Near Village Theh Qulandar, Tehsil & Distt. Fazilka	11.7	This drain falls into creek of river Satluj at village Muhar Jamsher, Tehsil & Distt. Fazilka	--
23.	Fazilka Drain	Near to Fazilka town	5.3	Actual meeting poing with Sutlej in is Pakistan terriatory 2 km from international boundary near to sulemanke headworks	--
24.	Rahon Drain	Usmanpur to Kazampur Road	8.47	Near Vill. Saidpur Kalan	5.62
25.	Balachaur Choe	South side of the road balachaur to ropar road	7.1	Balachaur discharge into Balachaur choe and does not reach to River Sutlej	450
26.	Lasara Kadiana	Village Pandrawal	10.67	Near Darbar Baba Jhandipir	-
27.	Theing Drain	Village Theing, Phillaur	5.4	Near Crossing Dhusi Bandh at Phillaur	03
28.	East Bein	Nawan Shahar	214.62	Near Mandala Pind	5000
29.	Patti Nalah	Village Rampur, District Gurdaspur	103.4	Village Kot Budha	625
30.	Kasur Nalah	Village Tibbar, District Gurdaspur	157.276	Village Kalas	1125

Annexure 4 – Subdrains leading to Main drains directly discharging into River Sutlej

Sr. No.	Name of the Sub drain	Point of origin	Approx Length (in Km)	Location at which the sub drain meets main drain	Approx. Carrying Capacity (MLD)
	M.C.M. Drain (lower)				
1	M.C.M. Drain	Chamkaur Sahib	23.78	Near Panjgaraiyan	1891.846
2	Powat Drain	Near Village Powat	1.37	Near Powat	4.972
3	Old Machhiwara Drain	Near Machhiwara	5.12	Near Ropar Road, Machhiwara City	156.618
4	Burj Drain	Burj	6.10	Lakhowal Khurd	315.722
	Buddha Nallah				
5	Kum Link Drain	Near Panjgaraiyan	14.29	Koom Kalan	933.45
6	Rakh Drain	near kum kalan	11.12	Village Koom	716.88
7	Rajgarh Drain	Village Rajgarh	3.65	Village Bhaman Kalan	363.42
8	Rakh feeder	Near	1.52	Marewal	154.33
9	Neelon Drain	Neelon Khurd	12.92	Near village Kum	1195.766
10	Dhande Drain	Near Neelon	4.27	Near village Kum on Ropar, Rahon Road	9.944
11	Dhande L/Drain	Near Neelon	1.37	Near village Kum on Ropar, Rahon Road	-
12	Neelon Feeder	Near Neelon	1.52	Near Neelon	4.972
13	Koom Drain	Near Koom	4.08	Near village Kum	295.834
14	Sherian 15Drain	Near Neelon	4.42	Near Village Kum Kalan	94.468
15	Koom Feeder Drain	Near Kum Khurd	1.52	NearKum Kalan	79.552
16	Jamalpur Drain	Jamalpur awana	3.66	Ludhiana	49.72
17	Barewal Drain	Near Barewal	2.90	Near Barewal	62.15
18	Birmi Drain	Near Birmi	4.5	Bardar Road, Kurali	89.496
19	Buddha Nallah (lower)	Near Jamalpur	32.62	Near Walipur	626.472
20	Porain Drain	Near Walipur	4.73	Near Walipur	310.75
21	Porain Link Drain	Near Walipur	3.96	Near Walipur	218.768
22	Bhiaini Arayian Drain	Near Arayian	2.38	Near Arayian	154.132
23	Jassowal Drain	Chhokran	55.4	Hayatwala	11823.416
24	Sidhwan Bet Drain	Baraich	24.45	Malsian Bhaike	591.668
25	Swaddi Drain	Swaddi Kalan	9.45	Chimara	2120.558
26	Lalton Pamal Drain	Baddowal	14.27	Raqba	867.614
27	Jassowal Extension Drain	Bliah	8.38	Mohi	1362.328
	Kishanpura Outfall Drain				
28	Kishanpura Drain	Near village Kishanpura Kalan, Tehsil Dharamkot, Ditrict Moga	9.1	Near village Ferozewala Bada, Tehsil Dharamkot	
	Sukkarnala Drain				
29	Zira Link Drain		15.2	Into Sukkarnala drain at Village Alipur.	
30	Sarhali Drain	Near Village Fatehgarh Sabrawan	19.6	Into Sukkarnala drain at town Mallanwala.	
	Phidda Drain				
31	Ferozeshah Drain	Near Village Ratol Rohi, Tehsil Zira, Distt. Ferozepur	19.5	Village Bhamba Landa, Tehsil & Distt. Ferozepur.	-

Sr. No.	Name of the Sub drain	Point of origin	Approx Length (in Km)	Location at which the sub drain meets main drain	Approx. Carrying Capacity (MLD)
32	Talwandi Bhai Drain	Vill. Kaliewala, Tehsil & Distt. Moga	12.4	vill. Haraj, Tehsil & Distt. Ferozpur	-
33	Daulatpura drain	Vill. Daulatpura, Tehsil & Distt. Moga	11.6	Into Talwandibhai Drain at vill. Mahesari sandhwan, Tehsil & Distt. Moga.	-
34	Moga Drain	Near Jagraon town	48.5	Village Chota Ghar, Tehsil Baghapurana Distt. Moga.	-
35	Ajitwal Drain	Near Jagraon town	21.3	Into Moga drain near village Mehna, Tehsil & District Moga.	
36	Dagru Drain	Near village Khosa Kotla, Tehsil & District Moga	14.1	Near Village Phidda, Tehsil & District Ferozepur	
37	Buttar Drain	From Pond of village Buttar, Tehsil Nihal Singh Wala, District Moga	33.2	At Village Chota Ghar, Tehsil Baghapurana Distt. Moga.	
38	Attari Drain	Near vill attari		Near Village Phidda.	590.4
	Jalalabad Mauzzam Drain				
39	Jalalabad main drain	Near Village Mare Khurd, Tehsil Guruharsahai, Distt. Ferozepur	39	Village Saide ke uttar, Tehsil Jalalabad, Distt. Fazilka.	2006.55
40	Barkat Wah Drain	Near Village Saido ke, Tehsil Guruharsahai Distt. Ferozepur.	31.6	Into Jalalabad main drain at Village Chak Sontaria, Tehsil Jalalabad, Distt. Fazilka.	921.2
41	Ladhuka drain	Near Village chack Sona Sandhar, Tehsil Jalalabad & Distt. Fazilka.	11	Into Jalalabad main drain at Village Chak Khunde, Tehsil Jalalabad, Distt. Fazilka.	774.2
42	Tarobari drain	Near Village Nurpur Kirpal ke, Tehsil & Distt. Muktsar.	18.4	Into Jalalabad main drain at Village Chak Hamid, Tehsil Jalalabad, Distt. Fazilka.	2557.8
43	Langeana drain	Near Village Nathoke, Near to Channu wala Head Works of Abohar Branch, Tehsil Baghapurana Distt. Moga.	45.3	Into Langeana drain at Village Nurpur Kirpal ke, Tehsil & Distt. Muktsar, and combined drain is named as Tarobari drain.	1773.8
44	Langeana drain - 2	Near Village Nathoke, Near to Channu wala Head Works of Abohar Branch, Tehsil Baghapurana Distt. Moga.	12.3	Into Langeana Drain at village Demru Kalan, Tehsil Baghapurana.	997.15
45	Kaleka drain	Near Village Kaleka, Tehsil Baghapurana, Distt. Moga	6.4	Into Langeana drain at Village Kotla Mehar Singh, Tehsil Baghapurana, Distt. Moga.	3600

Sr. No.	Name of the Sub drain	Point of origin	Approx Length (in Km)	Location at which the sub drain meets main drain	Approx. Carrying Capacity (MLD)
46	Gholia Drain	Near Village Gholia, Tehsil Baghapurana, Distrct Moga	5.8	Into Langeana - 2 drain at Village Kotla Mehar Singh, Tehsil Baghapurana, Distt. Moga.	510
47	Deviwala drain	Near Village Deviwala, Tehsil Kotkapura Distt. Faridkot	9.6	Into Langeana drain at Village Nangal, Tehsil & Distt. Faridkot.	12369
48	Golewala drain	Near Village Sappanwali, Tehsil & Distt. Ferozepur	42.1	Into Langeana drain at Village Nurpur Kirpal ke, Tehsil & Distt. Muktsar and combined drain is named as Tarobari drain.	1000
49	Mudki drain	Near town Mudki, Tehsil & Distt. Ferozepur.	31.5	Into Golewala drain at Village Shivpura, Tehsil & Distt. Muktsar.	1000
50	Pacca diversion drain	Near Village Mahla Kalan, Tehsil Baghapurana, Distt. Moga	35	Into Langeana drain at Village Landa Roda, Tehsil & Distt. Muktsar.	12000
51	Mahla Drain	From Village Pond of village Mahla Khurd	7.6	Into Pacca Diversion Drain at village Jandwala, Tehsil & District Ferozepur.	505
52	Chandbhan Diversion drain	From vill. Chandbhan, Tehsil Gangsar Jaito Distt. Faridkot	28	Vill. Chak suhelawala, Tehsil Jalalabad Distt. Fazilka	17084.946
53	Bhullar Link Drain	From Vill. Bhullar Tehsil & Distt. Sh. Mukatsar Sahib	5.11	Into Chandbhan Diversion drain near vill. Sotha, Tehsil & Distt. Sh. Mukatsar Sahib.	1100
54	Bassian Drain	From Vill. Bassian, Near Jagraon Distt Ludhiana	29.4	Into Chandbhan Diversion drain near vill. Krishangarh, Distt. Moga.	8569
55	Badhni Drain	Start from near abohar branch near Golian Kalan		Into Bassian drain near Village Minian	3000
56	Smadh Bhai Drain	Near Village Manooke Gill, Tehsil Nihal Singh Wala, District Moga	19.0	Into Chandbhan Diversion Drain at village Chandbhan, Tehsil Jaito, District Faridkot	728
57	Mari Drain	Near village Mari Mustfa, Tehsil Baghapurana, District Moga	12.8	Into Smadh Bhai Drain, Near Village Kothe Santa Singh Wala.	1500
58	Bura Gujjar drain	From Vill. Bura Gujjar, Tehsil & distt. Mukatsar Sahib	19.21	Into Jalalabad Mauzzam drain at vill. Chak suhelawala, Tehsil Jalalabad Distt. Fazilka	-
59	Akal garh Link Drain	From Vill. Kotali Dewan, Tehsil & Distt. Sh. Mukatsar Sahib	5.10	Into Bura Gujjar drain at vill. Badhai, Tehsil & Distt. Sh. Mukatsar Sahib	-
	Fazilka Drain				
60	Sabuana Drain	From Vill. Sabuana, Tehsil & distt. Fazilka	7.1	Near vill. Karian, Tehsil & Distt. Fazilka.	-

Sr. No.	Name of the Sub drain	Point of origin	Approx Length (in Km)	Location at which the sub drain meets main drain	Approx. Carrying Capacity (MLD)
61	Abhul Khurana out fall Drain	Uperscale of Bikaner kanal near Vill. Daneala Tehsil Abhor, Distt. Fazilka.	13.8	Into Sabuana Drain Near vill. Sabuana, Tehsil & Distt. Fazilka.	-
62	Abhul Khurana Drain	From Vill. Abhul Khurana, Tehsil- Malout, Distt. Sh. Mukatsar Sahib	66.9	Into Abhul Khurana out fall Drain Near vill. Danewala, Tehsil Abhor & Distt. Fazilka.	-
63	Wahab Wala Drain	From Vill. Raike Kalan, Tehsil &Distt. Bathinda.	54.27	Into Abhul Khurana Drain Near vill. Wahab Wala, Tehsil Abhor & Distt. Fazilka.	-
64	Malout Drain	From Vill. Ghumhiar khera, tehsil Malout, Distt. Sh. Mukatsar Sahib	23.6	Into Abhul Khurana Drain Near vill. Bhadur Khera, Tehsil Abhor & Distt. Fazilka.	-
65	Aspal Drain	Vill. Karniwala, Tehsil Malout, Distt. Sh. Mukatsar Sahib	37.33	IntoKhuikhera drain near vill. Khuikhera.	578
66	Bam Drain	Vill. Bam, Tehsil Malout, Distt. Sh. Mukatsar Sahib	20.28	Into Aspal drain near vill. Dharingwala, Distt. Fazilka.	149
67	Mehraj Link Drain	Near Vill. Lakhmirwala, Distt. Sh. Mukatsar Sahib	19.79	Into Aspal drain near vill. Gaddandob, Distt. Fazilka.	222
	East Bein				
68	Kala Singhia Drain	Near vill Raowali	45.58	At Dhadha Lehna	672.8
69	City Outfall Drain	Near Urban Estate, Jalandhar	10.06	VillagePondari Rajputan	200
70	Taragarh choe	Adampur	16.76	Bohani	3204.71
71	Jhandu Singhia Drain	Kishangarh	17.8	Nangal Fateh Khan	885.66
72	Lessriwal Drain	Dholike	11.70	Kapur Pind	2035.55
73	Alawalpur Drain	Alwalpur	4.6	Lessriwal	282.5
74	Chomman Drain	Chommon	3.0	Satowali	1
75	Nasrala Choe	starts in hoshiarpur	15.24	Dug	
76	Phagwara Sullage Drain	Plahi Gate Phagwara	14	Kukkar Pind	50
76	Jandiala Drain	Rurka Kalan	17.68	Chananpur	5
77	Kail Nallah	Behram	22.85	Madhopur	732.5
78	Khalwara Bahua	Bishanpur	6.24	Dhak Khalwara	1
79	Langroya Drain	Langroya	5.85	Near Gujjarpur Kalan	3.75
80	Bangi Gopalpur Drain	Kangraur	14.63	Near Goplapur	8.125
81	Mehlanwali Choe	Vil Chaunni Kalan	36		73.5
82	Chounni Choe	Vill Chak Sadhu	10		24.5
83	Changgran Choe	Vill Mal Mazara	09		19.6
84	Rajni Devi Choe	Vill cheta	36		49.0

Annexure 5 -List of Urban Towns discharging directly / indirectly into River Sutlej with STPs completed

Sr. No.	ULB	District	Name of STP	Deptt.	Capacity (MLD)	Capacity utilized (MLD)	Tech	Disposal
1.	Ludhiana	Ludhiana	Bhattian-I	DLG	111	100	UASB	Buddha Nallah
2.	Ludhiana	Ludhiana	Bhattian-II	DLG	50	45	SBR	
3.	Ludhiana	Ludhiana	Balloke-I	DLG	152	135	UASB	
4.	Ludhiana	Ludhiana	Balloke-II	DLG	105	95	SBR	
5.	Ludhiana	Ludhiana	Jamalpur	DLG	225	200	SBR	
6.	Ludhiana	Ludhiana	Balloke	DLG	60	50	SBR	
7.	Machhiwara	Ludhiana	Machhiwara	DLG	4	2	SBR	Buddha Nallah
8.	Sahnewal	Ludhiana	Sahnewal	DLG	7	5	SBR	Buddha Nallah
9.	Jagraon	Ludhiana	Jagraon-I	DLG	12	3	SBR	Nanaksar & Malik Drain
10.	Jagraon	Ludhiana	Jagraon-II	DLG	16	5.5	SBR	
11.	Jalandhar	Jalandhar	Pholriwal-I	DLG	100	100	UASB	Kala Sanghian drain, Garha drain, jaindu singh drain & MES drain
12.	Jalandhar	Jalandhar	Pholriwal-II (Eco Chem Unit-I)	DLG	25	25	SBR	
13.	Jalandhar	Jalandhar	Pholriwal-III (Eco Chem Unit-II))	DLG	25	25	SBR	
14.	Jalandhar	Jalandhar	Basti Peer Dad	DLG	50	50	SBR	
15.	Jalandhar	Jalandhar	Bambian Wali Cantt	DLG	10	5.5	SBR	
16.	Jalandhar	Jalandhar	Jaitewali	DLG	25	18	SBR	
17.	Jalandhar	Jalandhar	Pholriwal	DLG	50	50	SBR	
18.	Jalandhar	Jalandhar	Basti Peer Dad	DLG	15	12	SBR	
19.	Phillaur	Jalandhar	Phillaur-I	DLG	3	2.15	WSP	Tehang
20.	Phillaur	Jalandhar	Phillaur-II	DLG	3	2.6	MBBR	
21.	Nakodar	Jalandhar	Nakodar	DLG	6	4	SBR	East Bein

Sr. No.	ULB	District	Name of STP	Deptt.	Capacity (MLD)	Capacity utilized (MLD)	Tech	Disposal
22.	Jalandhar	Jalandhar	East Jalndhar Cantt-I	MES	3.00	2.5	MBBR	Drain near village Sufi Pind, Jalandhar and further into Chitti Bein near village Bambian
23.	Jalandhar	Jalandhar	East Jalndhar Cantt-II	MES	3.00	2.5	MBBR	
24.	Jalandhar	Jalandhar	East Jalndhar Cantt-III	MES	0.40	0.3	MBBR	
25.	Jalandhar	Jalandhar	West Jalandhar Cantt-I	MES	1.50	1.2	MBBR	Garha drain
26.	Jalandhar	Jalandhar	West Jalandhar Cantt-II	MES	1.50	1.2	MBBR	
27.	Phagwara	Kapurthala	Phagwara-I	DLG	20	20	UASB	Phagwara Drain
28.	Phagwara	Kapurthala	Phagwara-II (Hadibad)	DLG	8	8	MBBR	
29.	Phagwara	Kapurthala	Phagwara-III (Palahi Road)	DLG	8	8	MBBR	
30.	Nawashahar	SBS Nagar	Nawashahar	DLG	6	5.50	SBR	East Bein
31.	Banga	SBS Nagar	Banga	DLG	3	3	SBR	East Bein
32.	Balachaur	SBS Nagar	Balachaur	DLG	4	3.10		Gadhi Drain
33.	Rahon	SBS Nagar	Rahon	DLG	3	2.30	-	Machhiwara Drain
34.	Hoshiarpur	Hoshiarpur	Hoshiarpur	DLG	30	2.50	MBBR	Nasrala drain to east drain
35.	Garshankar	Hoshiarpur	Garshankar	DLG	3	2.50	-	East Bein
36.	Nangal	Rupnagar	Naya Nangal (Mojowal)	DLG	8	6	ASP	Sutlej
37.	Nangal	Rupnagar	Burari Nangal	DLG	5	3	ASP	
38.	Ropar	Rupnagar	Ropar-I (Badi Haveli)	DLG	10	6	SBR	Phool drain, budhkinadi hussainpur drain
39.	Ropar	Rupnagar	Ropar-II (Rasoolpur)	DLG	3	1	SBR	
40.	Ropar	Rupnagar	Ropar-III (Sadabarat)	DLG	2	0.1	SBR	
41.	Anandpur Sahib	Rupnagar	Anandpur Sahib	DWSS	8	8	MBBR	Sutlej

Sr. No.	ULB	District	Name of STP	Deptt.	Capacity (MLD)	Capacity utilized (MLD)	Tech	Disposal
42.	Nangal	Rupnagar	Nangal	BBMB	6.75	5	ASP	onto land for plantation
43.	Morinda	Rupnagar	Morinda	DLG	6	3	SBR	Dulchi Nadi
44.	Kiratpur Sahib	Rupnagar	Kiratpur Sahib	PWSS B	2	1.04	-	Lohundkhud
45.	Goniana	Bathinda	Goniana	DLG	3	3	WSP	Chanchan drain
46.	Moga	Moga	Moga	DLG	27	27	SBR	Fidda Drain
47.	Dharamkot	Moga	Dharamkot	DLG	4	3.20	SBR	Masita Drain
48.	Baghapurana	Moga	Baghapurana	DWSS	4	2.12	-	Local Drain
49.	Abohar	Fazilka	Abohar	DLG	25	25	SBR	Abul Khurana Drain
50.	Jalalabad	Fazilka	Jalalabad	DLG	8	8	MBBR	Jalalabad Drain
51.	Malout	Muktsar	Malout-I	DLG	3	3	WSP	Ennakhera link Drain
52.	Malout	Muktsar	Malout-II	DLG	10	7	MBBR	
53.	Muktsar	Muktsar	Muktsar Sahib-I	DLG	8.7	8.7	MBBR	Chand Bhan Drain
54.	Muktsar	Muktsar	Muktsar Sahib-II	DLG	5.7	5.7	MBBR	
55.	Muktsar	Muktsar	Muktsar Sahib-III	DLG	3.5	3.5	MBBR	
56.	Gidderbaha	Muktsar	Gidderbaha	DLG	7	5	MBBR	Bawania Drain leading to Malout drain
57.	Makhu	Ferozepur	Makhu	DLG	4	3	SBR	Makhu Drain
58.	Talwandi Bhai	Ferozepur	Talwandi Bhai	DLG	4	3.2	SBR	Ferozshah Drain
59.	Zira	Ferozepur	Zira	DLG	8	7	MBBR	Zira Drain
60.	Ferozepur	Ferozepur	Ferozepur	DLG	18	18	SBR	Local Drain
61.	Kurali	Mohali	Kurali	DLG	5	4	SBR	Partially for irrigation and rest in Adhera Choe
62.	Jaito	Faridkot	Jaito	DLG	6	2	SBR	Jaito Drain
63.	Kotakapura	Faridkot	Kotakapura	DLG	8	4	MBBR	Deviwala Drain
64.	Kotakapura	Faridkot	Kotakapura	DLG	6	2.5	-	

Sr. No.	ULB	District	Name of STP	Deptt.	Capacity (MLD)	Capacity utilized (MLD)	Tech	Disposal
65.	Faridkot	Faridkot	Faridkot	DLG	14	12.6	-	Chand Bhan Drain
66.	Patti	Tarn Taran	Patti	PWSSB	8	5.9	-	Rohi Drain

Annexure 6 - List of Rural Areas discharging directly / indirectly into River Sutlej

The details of 336 villages along with their status of rejuvenation of ponds is as under:

Annexure 6 (i) - List of Rural Areas where rejuvenation work is completed :

Overall S.No.	Name of district	Name of Block	Name of Villages	Discharge in KLD	Directly/Indirectly Discharge	Estimated Cost (in lacs)	Population
1	Moga	Moga-2	Wadda Ghar	259	Sutlej	39.98	2590
2	Moga	Dharamkot At Kot Ise Khan	Shere Wala	45	Sutlej	36.63	450
3	Moga	Moga-2	Chottian Khurd	62	Sutlej	19.61	620
4	Moga	Moga-2	Thamanwala	95	Sutlej	19.76	950
5	Moga	Kot Ise khan	Ijjatwala	49	Sutlej	39.9	490
6	Moga	Nihal Singh Wala	Dinna	403	Sutlej	37.63	4432
7	Moga	Baghapurana	Langeana Purana	299	Sutlej	37.5	3286
8	Moga	Moga-1	Bhona	295	Sutlej	35.15	3240
9	Moga	Nihal Singh Wala	Patto Jawahar Singh	97	Sutlej	27.9	970
10	Moga	Moga-1	Bugipura	450	Sutlej	31.74	4500
11	Moga	Moga-1	Charrik pati sarkar	380	Sutlej	34.2	4180
12	Moga	Nihal Singh Wala	Ransih Kalan	272	Sutlej		2987
13	Ludhiana	Machiwara	Behlolpur	262	Sutlej	6.2	2620
14	Ludhiana	Ludhiana-2	Bhaman khurd	73	Sutlej	26.14	730
15	Ludhiana	Machiwara	Rajgarh	63	Sutlej	4.16	630
16	Ludhiana	Sudhar	Jassowal	219	Sutlej	27.94	2190
17	Ludhiana	Sudhar	Sohain	262	Sutlej	29.3	2620
18	Ludhiana	Sidhwan bet	Gureh	321	Sutlej	24.57	3210
19	Ludhiana	Ludhiana-2	Marewal	32	Sutlej	19.08	320
20	Ludhiana	sudhar	Jangpur	274	Sutlej	31.80	2740
21	Ludhiana	Sudhar	Aitiana	305	Sutlej	21.52	3050
22	Ludhiana	Ludhiana-2	Kot Gangurai	229	Sutlej	37.80	2290
23	Ludhiana	Ludhiana-2	Koom kalan	274	Sutlej	32.9	2740
24	Ludhiana	Sidhwan Bet	Talwandi Kalan	289	Sutlej	26.15	2890
25	Jalandhar	Jalandhar East	Hazara	120	Sutlej		1200
26	Jalandhar	Adampur	Raowali	147	Sutlej		1470
27	Fazilka	Jalalabad	Bare Wala	35	Sutlej	40.00	350
28	Fazilka	Jalalabad (W)	Halim Wala	303	Sutlej	40.00	3863
29	Fazilka	Jalalabad (W)	Hauz Khaas	217	Sutlej	40.00	2648
30	Ropar	Ropar	Rattanpura	90	Sutlej	-	900
31	Sri Mukatsar Sahib	Sri Mukatsar Sahib	Chaktamkot	265	Sutlej		978
32	Sri Mukatsar Sahib	Gidderbaha	Bhunder	448	Sutlej		2960
33	Sri Mukatsar Sahib	Sri Mukatsar Sahib	Rupana	208	Sutlej		9079
34	SBS Nagar	Aur	Bharta Kalan	175	Sutlej	20.7	1750
35	Faridkot	Kotakpura	Nathewala	50	Sutlej	23	500
36	Hoshiarpur	Mahilpur	Dihana	57	Sutlej	-	570
37	Mukatsar Sahib	Mukatsar Sahib	Bhullar	448	Sutlej	20.44	4483

38	Mukatsar Sahib	Mukatsar Sahib	Barkandi	275	Sutlej	18.75	2750
39	Mukatsar Sahib	Gidderbaha	Lundewala	207	Sutlej	17.33	2070
40	Mukatsar Sahib	Gidderbaha	Sotha	364	Sutlej	22.26	3639
41	Mukatsar Sahib	Mukatsar Sahib	Lande Rode	105	Sutlej	21.56	1460
42	Mukatsar Sahib	Malout	Karam Patti	147	Sutlej	32.12	1359
43	Mukatsar Sahib	Malout	Shergarh	186	Sutlej	15.14	1738
44	Mukatsar Sahib	Mukatsar Sahib	Dhigana	178	Sutlej	27.92	1779
45	Mukatsar Sahib	Malout	Midha	309	Sutlej	42.89	2781
46	Mukatsar Sahib	Malout	Lakkarwala	265	Sutlej	44.59	2466
47	Mukatsar Sahib	Malout	Karniwala	58	Sutlej	14.88	581
48	Ferozpur	Ferozpur (rural)	Mohkamwala	101	Sutlej	43.04	1012
49	Ferozpur	Ferozpur (rural)	Naraingarh bhangali	162	Sutlej	44.3	1615
50	Sri Mukatsar Sahib	Malout	Sarawan Bodla Distt- Muktsar Sahib	560	Sutlej	64.63	5065
51	Sri Mukatsar Sahib	Malour	Aspal Distt- Muktsar Sahib	204	Sutlej	63.81	2063
52	Fazilka	Jalalabad	Chak Sarian	74	Sutlej	18.66	914
53	Fazilka	Jalalabad	Dhani Mohari Ram	27	Sutlej	43.55	225
54	Fazilka	Jalalabad	Janisar	44	Sutlej	34.23	634
55	Fazilka	Jalalabad	Blaki Wala	30	Sutlej	20.91	517
56	Fazilka	Jalalabad	Chak Sohna Sandar	95	Sutlej	18.95	1154
57	Fazilka	Jalalabad	Chak Sukhera	85	Sutlej	19.29	945
58	Fazilka	Jalalabad (W)	Chak Araian Wala	404	Sutlej	19.12	3856
59	Fazilka	Jalalabad (W)	Chak Janisar	239	Sutlej	27.60	2984
60	Fazilka	Jalalabad (W)	Araian Wala	101	Sutlej	66.92	1334
61	Fazilka	Jalalabad (W)	Chak Roran Wala	108	Sutlej	18.65	1424
62	Fazilka	Jalalabad	Basti Mohar Singh Wala	41	Sutlej	20.42	410
63	Fazilka	Jalalabad	Jafra Dibbi Pura	44	Sutlej	18.92	440
64	Fazilka	Jalalabad	Kottu Wala	33	Sutlej	23.76	330
65	Fazilka	Jalalabad (W)	Jalalabad (Rural)	276	Sutlej	22.85	1964
66	Fazilka	Jalalabad (W)	Kathgarh	300	Sutlej	69.04	3992
67	Fazilka	Jalalabad (W)	Chak Kabar Wala	63	Sutlej	19.65	869
68	Fazilka	Jalalabad	Chhota Tiwana	36	Sutlej	19	360
69	Moga	Moga-2	Korewala Kalan	124	Sutlej	51.14	1240
70	Moga	Nihal Singh Wala	Khai	353	Sutlej	56.04	3885
71	Moga	Moga-1	Charrik patti jangir	393	Sutlej	117.86	4321
72	Ludhiana	Sidhwan Bet	sadarpura	141	Sutlej	23.52	1410
73	Ferozepur	Ghall Khurd	Mishri Wala	119	Sutlej	42.2	1193
74	Ferozpur	Mamdot	Hamad		Sutlej	59.39	2852
75	Ferozpur	Guruhar Sahai	Kahan Singh Wala	71	Sutlej	43.17	706

Annexure 6 (ii) - List of Rural Areas where rejuvenation work is ongoing:

S.No.	Name of district	Name of Block	Name of Villages	Discharge in KLD	Directly/Indirectly Discharge	Estimated Cost (in lacs)	Population
1	Moga	Moga 1	Nahal	69	Sutlej	36.6	690
2	Ludhiana	Sudhar	Chownkimaan	382	Sutlej	36.56	3820
3	Ludhiana	Ludhiana-2	Khasi Kalan	108	Sutlej	25.78	1080
4	Ropar	Anandpur Sahib	Brahmpur Lower & Bandhlehri	193	Sutlej	9	1930
5	SBS Nagar	Nawanshahr	Langroya	398	Sutlej	60	3980
6	SBS Nagar	Nawanshahr	Usmanpur	201	Sutlej	20.4	2010
7	SBS Nagar	Nawanshahr	Mehndipur	129	Sutlej	35	1290
8	SBS Nagar	Nawanshahr	Kulam	106	Sutlej	20	1060
9	SBS Nagar	Nawanshahr	Sauna	162	Sutlej	34	1620
10	SBS Nagar	Nawanshahr	Kot Ranjha	150	Sutlej	20	1500
11	SBS Nagar	Nawanshahr	Pallian Kalan	59	Sutlej	18	590
12	Fazilka	Jalalabad	Jalalabad	43	Sutlej	17.75	716
13	Moga	Nihal Singh Wala	nihal singh wala	884	Sutlej	53.51	9727
14	Moga	Baghapurana	baghapurana	374	Sutlej	36	4117
15	Moga	Nihal Singh Wala	nihal singh wala	243	Sutlej	50	2670
16	Jalandhar	Jalandhar East		150	Sutlej	29.14	1500

17	Ludhiana	Ludhiana-2	Tajpur	115	Sutlej		-
18	Ferozpur	Zira	Mansoor Deva	267	Sutlej	41.92	2670

Annexure 6 (iii) - List of Rural Areas where rejuvenation work is yet to be started:

S.No.	Name of district	Name of Block	Name of Constituency	Name of Villages	Discharge in KLD	Directly/Indirectly Discharge	Estimated Cost (in lacs)	Population	Area of Ponds (in Acres)	No of ponds
1	Hoshiarpur	Hoshiarpur-1	Sham Chaurasi	Khalwana	53	Sutlej	16.16	530	0.5	
2	Kapurthala	Phagwara	Phagwara	Naseerabad Distt Kapurthala	121	Sutlej	33.23	1212	0.44	1
3	Kapurthala	Phagwara	Phagwara	Malikpur Distt Kapurthala	202	Sutlej	34.63	1487	1	2
4	Faridkot	Kotakpura	Kotkapura	Vill. Deviwala	187	Sutlej	51	1870	9.31	2
5	Faridkot	Kotakpura	Kotkapura	Vill. Sirsari	133	Sutlej	28	1330	3.71	1
6	Sri Mukatsar Sahib	Malout	Malout	Bam	432	Sutlej	77.54	3967	2.04	3
7	Fazilka	Jalalabad	Jalalabad	Lakhe Ke Musahib	89	Sutlej	48.19	1219	1.1478	1
8	Fazilka	Jalalabad	Jalalabad	Sarian	82	Sutlej	70.89	1170	1.9448	1
9	Fazilka	Jalalabad	Jalalabad	Gumani Wala	55	Sutlej	34.43	970	0.6645	1
10	Fazilka	Jalalabad	Jalalabad	Chak Manne Wala	75	Sutlej	37.42	826	0.6605	1
11	Fazilka	Jalalabad	Jalalabad	Chak Rum Wala	72	Sutlej	99.12	995	2.9362	1
12	Fazilka	Jalalabad	Jalalabad	Chak Dhab Khushal Joian	59	Sutlej	32.42	785	0.5941	1
13	Fazilka	Jalalabad	Jalalabad	Chak Dumal	88	Sutlej	75.68	995	2.1131	1
14	Fazilka	Jalalabad	Jalalabad	Chak Jand Wala	90	Sutlej	39.27	1174	0.8345	1
15	Fazilka	Fazilka	Fazilka	Walleh Shah Utar	237	Sutlej	26.5	2118	0.3	1
16	Fazilka	Jalalabad (W)	Jalalabad (W)	Bahmni Wala	332	Sutlej	40	3875	2.3155	1
17	Fazilka	Jalalabad (W)	Jalalabad (W)	Chak Mauzdin Wala	221	Sutlej	20.16	2707	0.2066	1
18	Fazilka	Jalalabad (W)	Jalalabad (W)	Basti Bawrian	30	Sutlej	23.4	1625	0.7611	1
19	Fazilka	Jalalabad (W)	Fazilka	Behak Hasta Uttar	75	Sutlej	64.79	992	1.7308	1
20	Fazilka	Jalalabad (W)	Jalalabad (W)	Nukerian	341	Sutlej	23.35	3944	0.7836	1
21	Fazilka	Jalalabad (W)	Jalalabad (W)	Kamre Wala	152	Sutlej	19.45	2534	0.3949	1

22	Fazilka	Jalalabad (W)	Jalalabad (W)	Sohna Sandar	108	Sutlej	23.75	1294	0.7376	1
23	Fazilka	Jalalabad (W)	Jalalabad (W)	Arni Wala	108	Sutlej	88.86	1391	2.5757	1
24	Fazilka	Jalalabad (W)	Jalalabad (W)	Chak Lamochar	109	Sutlej	19.65	893	0.3437	1
25	Fazilka	Jalalabad (W)	Jalalabad (W)	Dhab Khushal Joian-1	144	Sutlej	67.67	2236	1.8319	1
26	Fazilka	Jalalabad (W)	Jalalabad (W)	Simre Wala	135	Sutlej	22.15	1958	0.5224	1
27	Fazilka	Jalalabad (W)	Jalalabad (W)	Chak Pakhi	157	Sutlej	23.4	2138	0.6262	1
28	Fazilka	Jalalabad (W)	Fazilka	Hauz Gandar	148	Sutlej	24.05	1940	0.6568	1
29	Fazilka	Jalalabad (W)	Jalalabad (W)	Khuranj	142	Sutlej	84.99	1899	3.7	2
30	Fazilka	Jalalabad (W)	Jalalabad (W)	Roran Wala	171	Sutlej	74.7	2322	2.0787	1
31	Fazilka	Jalalabad (W)	Jalalabad (W)	Chak Singhe Wala	70	Sutlej	43.84	976	1.85	2
32	Fazilka	Jalalabad (W)	Jalalabad (W)	Singhe Wala	42	Sutlej	48.94	538	1.1743	1
33	Fazilka	Jalalabad (W)	Jalalabad (W)	Chak Khere Wala	85	Sutlej	21.35	1226	0.5491	1
34	Fazilka	Jalalabad (W)	Jalalabad (W)	Janisar	44	Sutlej	24.65	634	0.9679	1
35	Fazilka	Jalalabad	Jalalabad	Sh Udham Singh Nagar	37	Sutlej	21.77	370	0.22	1
36	Fazilka	Jalalabad	Jalalabad	Chak Bhabra	38	Sutlej	61.07	380	1.6	1
37	Fazilka	Jalalabad	Jalalabad	Chak Bhamba Wattu	37	Sutlej	47.97	370	1.14	1
38	Moga	Kot Ise khan	Dharamkot	Balkhandi	110	Sutlej	30.8	1100	2.5+1.25=3.75	2
39	Moga	Kot Ise khan	Moga	Chur chak	176	Sutlej	38	1936	2	1
40	Moga	Nihal Singh wala	Nihal Singh Wala	Burj Dunna	148	Sutlej	66.19	1480	2.2	1
41	Moga	Nihal Singh wala	Nihal Singh Wala	Kishangarh	185	Sutlej	53.22	1850	1.2	1
42	Moga	Nihal Singh wala	Nihal Singh Wala	Beer Badhni	108	Sutlej	25.2	1080	0.7	1
43	Moga	Baghapurana	baghapurana	Cheda	197	Sutlej	32.2	1970	1.5+3=4.5	2
44	Moga	Kot Ise khan	Dharamkot	Bagge	53	Sutlej	35	530	1	1
45	Moga	Moga-2	baghapurana	Chottian Tobba	88	Sutlej	48.83	880	2	1

46	Moga	Moga-2	Moga	Mothawali	99	Sutlej	53.05	990	1.5	1
47	Moga	Moga-1	Nihal Singh Wala	Kokri Kalan	829	Sutlej	155	8290	23	1
48	Moga	Moga-2	Moga	Daroli Bhai	601	Sutlej	135	6010	10.5	6
49	Moga	Baghapurana	baghapurana	Samalsar	1119	Sutlej	70	7261	10	3
50	Moga	Baghapurana	baghapurana	Rajiana	849	Sutlej	39	3267	2	1
51	Moga	Baghapurana	baghapurana	Budh Singh Wala	280	Sutlej	37	3081	6.5	2
52	Moga	Baghapurana	baghapurana	Mahla Kalan	506	Sutlej	65	5561	4	2
53	Moga	Nihal Singh Wala	nihal singh wala	Himmatpura	800	Sutlej	79.7	8795	2.09	3
54	Moga	Nihal Singh Wala	nihal singh wala	Saidoke	777	Sutlej	114.25	8548	8.15	4
55	Moga	Nihal Singh Wala	nihal singh wala	Malleana	303	Sutlej	42.8	3336	1	1
56	Moga	Nihal Singh Wala	nihal singh wala	Rania	724	Sutlej	55.72	7962	1	1
57	Moga	Nihal Singh Wala	nihal singh wala	Nangal	276	Sutlej	41.89	3038	8.41	1
58	Moga	Nihal Singh Wala	nihal singh wala	Patto Heera Singh	661	Sutlej	39.57	7274	3.53	1
59	Moga	Baghapurana	baghapurana	Tharaj	531	Sutlej	35	4207	7	3
60	Moga	Baghapurana	baghapurana	Kotla Mehar Singh Wala	313	Sutlej	29	3441	3.5	1
61	Moga	Baghapurana	baghapurana	Ladhai ke	206	Sutlej	25	2262	5	1
62	Moga	Baghapurana	baghapurana	Sekha Kalan a	483	Sutlej	65	5317	6.5	3
63	Moga	Moga-2	moga	Mangewala	246	Sutlej	39.46	2700	2.5	1
64	Moga	Moga-2	moga	Nidhanwala	202	Sutlej	33.55	2140	2.05	1
65	Moga	Moga-2	moga	Kaliye wala	202	Sutlej	39.12	2016	13.7	2
66	Moga	Moga-2	baghapurana	Jaimal Wala	340	Sutlej	37.86	3742	1	1
67	Moga	Moga-2	baghapurana	Chand Nawan	411	Sutlej	16.1	4522	2.88	2
68	Moga	Moga-2	moga	Dagru	313	Sutlej	41.63	3441	1.63	1
69	Moga	Moga-2	moga	Baghelewala	592	Sutlej	37.68	1533	1.5	2
70	Moga	Moga-2	moga	Jhandeana Garbi	359	Sutlej	40.67	3946	2.1	1
71	Moga	Moga-1	nihal singh wala	Buttar kalan	498	Sutlej	96.2	5478	13.21	4
72	Moga	Moga-1	nihal singh wala	Buttar patti bhullar	482	Sutlej	75.43	5302	4.3	3

73	Moga	Dharamkot At Kot Ise Khan	Dharamkot	Kot Sadar Khan	259	Sutlej	37.46	2590	4	2
74	Ludhiana	Sidhwan Bet	Malsihan Bhaike	malsia bhaike	94	Sutlej	20.67	940	0.33	"
75	Ferozpur	Ghall Khurd	Ferozepur (Rural)	Mana Singh Wal	185	Sutlej	31.65	1851	3	1
76	Ferozpur	Ghall Khurd	Ferozepur (Rural)	Fidde	160	Sutlej	23	1597	2.5	1
77	Ferozpur	Guruharsahai	Guruharsahai	Nidhana	180	Sutlej	38.9	1804	1.5	1
78	Moga	Dharamkot At Kot Ise Khan	Dharamkot	Attari	95	Sutlej	39.73	950	1	1
79	Moga	Baghapurana		Sekha Khurd	130	Sutlej	38	1350	3	1
80	Moga	Dharamkot At Kot Ise Khan	Dharamkot	Indergarh	395	Sutlej	74.85	3950	4	-
81	Moga	Moga-2	Bagah purana	Gill	237	Sutlej	37.4	2370	2	1
82	Moga	Moga-2	Moga	Daulatpur Niwan	332	Sutlej	19.94	3320	4	-
83	Moga	Moga-2	baghapurana	Chotta Ghar	120	Sutlej	-	1200		-
84	Moga	Moga-2	Moga	Daulatpura Ucha	193	Sutlej	-	1930	1	-
85	Moga	Moga-1	Dharamkot	Mehna	449	Sutlej	85	4490	1.5	1
86	Ludhiana	Ludhiana-2	Sahnewal	Harian	325	Sutlej	38.54	3250	2	
87	Ludhiana	Ludhiana-2	Sahnewal	Sidhupur	400	Sutlej	38.47	4000	2	
88	Ludhiana	Sudhar	Raipur	Hissowal	217	Sutlej	27.94	2170	1.5	
89	Ludhiana	Sudhar	Dakha	Raqba	305	Sutlej	20.91	3050	0.5	
90	Ludhiana	Sudhar	Dakha	Hans Kalan	487	Sutlej	28.58	4870	2	
91	Ludhiana	Sudhar	Raikot	Halwara	276	Sutlej	106.38	2760	3	
92	Ludhiana	Sidhwan bet	Dakha	Talwandi Khurd	233	Sutlej	6.6	2330	-	
93	Ludhiana	Dehlon	Gill	Gopalpur	250	Sutlej	21.4	2500	3.25	
94	Ludhiana	Ludhiana-1	Gill	Baranhara	146	Sutlej	29.76	1460	1	
95	Ludhiana	Ludhiana-1	Gill	Talwara	106	Sutlej	38.78	1060	-	
96	Ludhiana	Sidhwan Bet	Dakha	Kotmana	110	Sutlej	6.6	1100	-	
97	Ludhiana	Ludhiana-2	Sahnewal	Panjeta	176	Sutlej	35.45	1760	2.5	
98	Ludhiana	Sudhar	Dakha	Heran	282	Sutlej	32.1	2820	4	
99	Ludhiana	Ludhiana-2	Sahnewal	Bhaman kalan	114	Sutlej	33.58	1140	1	

100	Ludhiana	Sidhwan Bet	Dakha	Gorsian Kadar Bakash	65	Sutlej	6.6	650	-	
101	Ludhiana	sudhar	Raikot	Rattowal	207	Sutlej		-		
102	Ludhiana	Ludhiana-2		Gounspur	74	Sutlej				
103	Ludhiana	Ludhiana-2		Koom khurd	57	Sutlej				
104	Ludhiana	Sudhar			373	Sutlej				
105	Ludhiana	Samrala	Samrala	Neelon Khurd	95	Sutlej	-			
106	Ludhiana	Machiwara	Samrala	Tanda Kalia	64	Sutlej	-			
107	Jalandhar	Jalandhar East		Diwali r	124	Sutlej	-	1368	-	-
108	Jalandhar	Jalandhar East		Dhadda\	198	Sutlej	-	484	0.5	1
109	Jalandhar	Jalandhar East		Jaitewali\	210	Sutlej	-	2323	-	-
110	Jalandhar	Jalandhar East		Chandpur \	108	Sutlej	-	1185	-	-
111	Jalandhar	Jalandhar East		Kabulpur\	141	Sutlej	-	1550	-	-
112	Jalandhar	Jalandhar East		Singhpur Dona	59	Sutlej	-	644	-	-
113	Jalandhar	Jalandhar East		Bulandpur\ r	48	Sutlej	-	3027+ 134 =3161	3.87+0.17 =4.04	2
114	Jalandhar	Jalandhar East		Khunkhun \	75	Sutlej	-	2825	-	-
115	Jalandhar	Lohian Khas		Nawa Pind Khalewal	92	Sutlej	-	850	-	-
116	Jalandhar	Shahkot		Mehmadpu r	90	Sutlej	-	464	-	-
117	Jalandhar	Jalandhar East	Jalandhar Cantt.	Kukadpind	273	Sutlej	-	3003	-	-
118	Jalandhar	Shahkot	Shahkot	Sahla Nagar	248	Sutlej	-	2478	-	-
119	Jalandhar	Nakodar	Nakodar	Kang Sahib Rai	269	Sutlej	34.6 7	1386	1.5	1
120	Jalandhar	Nakodar		Kangana	220	Sutlej	-	2419	-	-
121	Jalandhar	Jalandhar West	Kartarpur	Athola	216	Sutlej	108. 46	2164	1.5	1
122	Jalandhar	Jalandhar East	Jalandhar Cantt.	Pholriwal (Upstream Point Source)	204	Sutlej	-	2210	-	0
123	Jalandhar	Jalandhar East	Jalandhar Cantt.	Pholriwal (Downstrea m Point Source)	204	Sutlej	-	2274	-	0
124	Jalandhar	Jalandhar East	Jalandhar Cantt.	Jamsher Khas r	844	Sutlej	-	9844	-	-
125	Jalandhar	Jalandhar East	Adampur	Patara	261	Sutlej	-	2866	-	-
126	Jalandhar	Adampur	Adampur	Daroli Kalan	202	Sutlej	-	2610	-	-

127	Jalandhar	Adampur	Adampur	Kalra	286	Sutlej	-	1819	-	-
128	Jalandhar	Rurka Kalan	jalandhar Cantt.	Bundala	688	Sutlej	-	6929	-	-
129	Jalandhar	Rurka Kalan	jalandhar Cantt.	Kahna Dhesian	332	Sutlej	-	3324	-	-
130	Jalandhar	Rurka Kalan	jalandhar Cantt.	Samrai	451	Sutlej	-	5408	-	-
131	Jalandhar	Rurka Kalan	jalandhar Cantt.	Jandiala	849	Sutlej	-	8437	-	-
132	Jalandhar	Rurka Kalan	jalandhar Cantt.	Kanganiwal	204	Sutlej	25	1180	1	1
133	Jalandhar	Phillaur	Phillaur	Tehang	280	Sutlej	-	449	-	-
134	Jalandhar	Phillaur	Phillaur	Garha	287	Sutlej	-	3155	-	-
135	Jalandhar	Jalandhar East	Adampur	Parasrampur	163	Sutlej	-	1794	-	0
136	Jalandhar	Adampur	Adampur	Arjanwal	170	Sutlej	-	1432	-	-
137	Jalandhar	Shahkot	Shahkot	Akalpur	199	Sutlej	-	1993	-	-
138	Jalandhar	Shahkot	Shahkot	Malsian	194	Sutlej	-	1944	-	-
139	Jalandhar	Shahkot	Shahkot	Laksian	136	Sutlej	-	1357	-	-
140	Jalandhar	Shahkot	Shahkot	Haveli	132	Sutlej	-	1324	-	-
141	Jalandhar	Nakodar	Nakodar	Mallian Kalan	116	Sutlej	-	1216	-	-
142	Jalandhar	Phillaur	Phillaur	Sifabad and Parkash Colony (Two Outlets)	167	Sutlej	-	1834	-	-
143	Jalandhar	Nurmehal	Nakodar	Gag Dhagara	50	Sutlej				
144	Jalandhar	Shahkot	Shahkot	Khurampur	94	Sutlej				
145	Jalandhar	Nakodar	Kartarpur	Begampur	85	Sutlej				
146	Jalandhar	jalandhar West	Kartarpur	Chamiara	86	Sutlej				
147	Jalandhar	Nakodar	Nakodar	Baghpur	26	Sutlej				
148	Ferozpur	Zira	Zira	Zira New	70	Sutlej	25	700	0.75	1
149	Ferozpur	Ghall Khurd	Ferozepur Rural	Piareana	97	Sutlej	29.47	970	0.75	1
150	Ferozpur	Mamdot	Guruhar sahai	Ali Ke Jhughia	68	Sutlej	23.18	680	0.5	1
151	Ferozpur	Zira	Zira	Talwandi Mange Khan	356	Sutlej	41.18	3560	2.25	1
152	Ferozpur	Zira	Zira	Talwandi Jalle Khan	260	Sutlej	41.25	2600	3	1
153	Ferozpur	Zira	Zira	Sukhe Wala	324	Sutlej	41.92	3240	3.8	1
154	Ferozpur	Zira	Zira	Alipur	228	Sutlej	35.71	2280	1	1
155	Ferozpur	Mamdot	Guruhar sahai	Basti Labh Singh	25	Sutlej	58.55	250	1.4	1
156	Ferozpur	Mamdot	Ferozepur Rural	Murak Wala	45	Sutlej	50.9	450	1.5	1
157	Ferozpur	Mamdot	Ferozepur Rural	Shaheed Jarnial Singh	70	Sutlej		700		

158	Ferozpur	Mamdot	Guruhar sahai	Har Gobindpur a	31	Sutlej	46.48	310	1.5	1
159	Ferozpur	Mamdot	Guruhar sahai	Basti Jatta Singh	30	Sutlej		300		
160	Ferozpur	Mamdot	Guruhar sahai	Dona Matter Hittar	81	Sutlej	33.05	810	1.5	1
161	Ferozpur	Guruhar sahai	Guruhar sahai	Sekhra	44	Sutlej	30.4	440	2	1
162	Ferozpur	Guruhar sahai	Guruhar sahai	Haddi Wala	90	Sutlej	58.9	900	2.27	1
163	Ferozpur	Mamdot	Ferozepur (Rural)	Basti Amrik Singh	60	Sutlej	-	356	^	-
164	Ferozpur	Guruhar sahai	Guruharsa hai	Basti Bohrian	55	Sutlej	-	900	^	-
165	Ferozpur	Ghall Khurd	Ferozepur (Rural)	Rukna Begu	203	Sutlej	-	2028	1.42	1
166	Ferozpur	Ghall Khurd	Ferozepur (Rural)	Ghall Khurd	216	Sutlej	43.22	2160	1.25	1
167	Ferozpur	Ghall Khurd	Ferozepur (Rural)	Kot Karor Kalan	398	Sutlej	49.99	3980	2	1
168	Ferozpur	Mamdot	Guruharsa hai	Dilaram	200	Sutlej	-	2000	^	-
169	Ferozpur	Ghall Khurd	Ferozepur (Rural)	Haraz	322	Sutlej	-	3218	4	1
170	Ferozpur	Guruharsa hai	Guruharsa hai	Mohan Ke Uttar	447	Sutlej	-	4470	-	-
171	Ferozpur	Guruharsa hai	Guruharsa hai	Panje Ke Uttar	416	Sutlej	60.48	4164	0.5	1
172	Ferozpur	Zira	Zira	Ratol Bet	163	Sutlej	41.05	1634	1.25	1
173	Ferozpur	Zira	Zira	Malloke	179	Sutlej	42.24	1790	2.5	1
174	Ferozpur	Ghall Khurd	Ferozepur (Rural)	Valoor	127	Sutlej		1274	-	1
175	Ferozpur	Mamdot	Guruharsa hai	Matter Hittar	140	Sutlej	-	1400	-	-
176	Ferozpur	Mamdot	Ferozepur (Rural)	Lakhmir Ke Uttar	155	Sutlej	-	1550	-	-
177	Ferozpur	Mamdot	Guruharsa hai	Dona Mattar	155	Sutlej	-	1550	-	-
178	Ferozpur	Ghall Khurd	Ferozepur (Rural)	Sulhani	197	Sutlej	59.05	1974	3	1
179	Ferozpur	Guruharsa hai	Guruharsa hai	Basti Saroop Wali	151	Sutlej	-	1510	-	-
180	Ferozpur	Guruharsa hai	Guruharsa hai	Chak Nidhana	159	Sutlej	-	1588	-	-
181	Ferozpur	Guruhar Sahai	Guruhar Sahai	Thathera Wala	68	Sutlej				
182	Ferozpur	Guruhar Sahai	Guruhar Sahai	Jamalgarh	81	Sutlej	45.38	806	3.5	1
183	Ferozpur	Guruhar Sahai	Guruhar Sahai	Basti Jawai Singh Wali	81	Sutlej				

184	Fazilka	Jalalabad	Jalalabad	Chak Suhele Wala	175	Sutlej		1858		
185	Fazilka	Jalalabad	Jalalabad	Mandi Amin Ganj	62	Sutlej		2169		
186	Fazilka	Jalalabad	Jalalabad	Chak Mochan Wala	63	Sutlej		736		
187	Fazilka	Jalalabad	Jalalabad	Chak Punna Wala	76	Sutlej		988		
188	Fazilka	Jalalabad	Jalalabad	Chak Sotrian	85	Sutlej		727		
189	Fazilka	Jalalabad	Jalalabad	Dhab Khushal Joian-2	85	Sutlej		711		
190	Fazilka	Jalalabad	Jalalabad	Dhani Prem Singh	52	Sutlej		893		
191	Fazilka	Jalalabad	Fazilka	Jhuge Lal Singh	75	Sutlej		985		
192	Fazilka	Jalalabad	Jalalabad	Jhuge Tek Singh	35	Sutlej		284		
193	Fazilka	Jalalabad	Jalalabad	Khund Wala Sainia	41	Sutlej		479		
194	Fazilka	Jalalabad	Jalalabad	Dhani Kartar Singh	53	Sutlej		455		
195	Fazilka	Jalalabad	Jalalabad	Dhani Resham Singh	28	Sutlej		745		
196	Fazilka	Jalalabad	Jalalabad	Dhani Sardool Singh	28	Sutlej		351		
197	Fazilka	Jalalabad	Jalalabad	Mine Wala	56	Sutlej		920		
198	Fazilka	Jalalabad	Jalalabad	Basti Ranjeet Singh	41	Sutlej		477		
199	Fazilka	Jalalabad	Jalalabad	Chak Panni Wala Distt. Fazilka	42	Sutlej		599		
200	Fazilka	Jalalabad	Jalalabad	Basti Dilawar Singh Distt. Fazilka	45	Sutlej		405		
201	Fazilka	Jalalabad	Jalalabad	Bharoli Wala	62	Sutlej		842		
202	Fazilka	Jalalabad	Jalalabad	Chak Totian Wala	75	Sutlej		812		
203	Fazilka	Jalalabad	Jalalabad	Falian Wala Distt. Fazilka	45	Sutlej		518		
204	Fazilka	Jalalabad	Jalalabad	Jhuge Fangian Distt. Fazilka	45	Sutlej		425		

205	Fazilka	Jalalabad	Jalalabad	Jhuge Jawahar Singh Distt. Fazilka	53	Sutlej		1112		
206	Fazilka	Jalalabad	Jalalabad	Chak Khund Wala Distt. Fazilka	96	Sutlej		1253		
207	Fazilka	Jalalabad	Fazilka	Basti Chandigarh	85	Sutlej		1319		
208	Fazilka	Jalalabad	Jalalabad	Chak Arni Wala	222	Sutlej		2729		
209	Fazilka	Jalalabad	Fazilka	Mandi Ladhu Ka	355	Sutlej		4808		
210	Fazilka	Jalalabad	Jalalabad	Ladhu Wala Uttar	226	Sutlej		2763		
211	Fazilka	Jalalabad	Jalalabad	Kanla wale Jhuge	119	Sutlej		981		
212	Fazilka	Jalalabad	Jalalabad	Chak Mohamade Wala	118	Sutlej		1570		
213	Fazilka	Jalalabad	Jalalabad	Dhab Karyal	105	Sutlej		1366		
214	Fazilka	Jalalabad west	Jalalabad	Basti Balluaana	285	Sutlej		1987		
215	Hoshiarpur	Mahilpur		Parsowal	80	Sutlej				
216	Hoshiarpur	Mahilpur		Handhowal	40	Sutlej				
217	Hoshiarpur	Mahilpur		Taulin Distt. Hoshiarpur	60	Sutlej				
218	Hoshiarpur	Mahilpur		Jangliana	30	Sutlej				
219	Hoshiarpur	Mahilpur		Gopalian Distt. Hoshiarpur	20	Sutlej				
220	Hoshiarpur	Mahilpur		Dandian	17	Sutlej				
221	Hoshiarpur	Mahilpur		Mahal Baltoian	12	Sutlej				
222	Hoshiarpur	Hoshiarpur -1		Bassi Gulam Hussain	280	Sutlej				
223	Hoshiarpur	Hoshiarpur -1		Piala	429	Sutlej				
224	Hoshiarpur	Hoshiarpur -1		Hardokhan pur	352	Sutlej				
225	Hoshiarpur	Hoshiarpur -2		Chaunni Kalan Distt. Hoshiarpur	280	Sutlej				
226	Hoshiarpur	Hoshiarpur -2		Patti Distt. Hoshiarpur	370	Sutlej				
227	Hoshiarpur	Hoshiarpur -2		Badla Distt. Hoshiarpur	285	Sutlej				
228	Hoshiarpur	Hoshiarpur -2		Harta Distt. Hoshiarpur	295	Sutlej				
229	Hoshiarpur	Hoshiarpur -2		Shergarh Distt. Hoshiarpur	264	Sutlej				

230	Hoshiarpur	Hoshiarpur -2		Bassi kalan Distt. Hoshiarpur	236	Sutlej				
231	Hoshiarpur	Mahilpur		Bachhohi Distt. Hoshiarpur	255	Sutlej				
232	Hoshiarpur	Hoshiarpur -2		Saleran Distt. Hoshiarpur	120	Sutlej				
233	Hoshiarpur	Hoshiarpur -2		Meghowal Distt. Hoshiarpur	134	Sutlej				
234	Hoshiarpur	Hoshiarpur -2		Salempur Distt. Hoshiarpur	120	Sutlej				
235	Hoshiarpur	Hoshiarpur -2		Harmoian Distt. Hoshiarpur	145	Sutlej				
236	Hoshiarpur	Hoshiarpur -2		Mehna Distt. Hoshiarpur	136	Sutlej				
237	Hoshiarpur	Hoshiarpur -2		Changran Distt. Hoshiarpur	162	Sutlej				
238	Hoshiarpur	Mahilpur		Mukhmajar a Distt. Hoshiarpur	125	Sutlej				
239	Hoshiarpur	Hoshiarpur -2		Naugraian Distt. Hoshiarpur	30	Sutlej				
240	Hoshiarpur	Hoshiarpur -2		Bassi jamal Khan Distt. Hoshiarpur	23	Sutlej				
241	Hoshiarpur	Hoshiarpur -2		Kila Sher Khan Distt. Hoshiarpur	12	Sutlej				
242	Kapurthala	Phagwara	Phagwara	Panchat Distt Kapurthala	452	Sutlej	93.23	4477	3.5	3
243	Kapurthala	Phagwara	Phagwara	Nangal Majja Distt. Kapurthala	205	Sutlej	0	2053	0.25	1

Annexure 7 – Health Care Facilities (HCFs) operating in the catchment area of River Sutlej

Sr. No	Town Name	No. of HCFs covered	No. of bedded HCFs	No. of non-bedded HCFs	No. of HCFs made agreement with CBWTF
1	Nangal	58	16	42	All
2	Sri Anandpur Sahib	166	30	86	All
3	Ropar	161	31	130	All
4	Jalandhar	997	325	674	All
5	Ludhiana	1264	456	808	All
6	Moga	257	107	150	All
7	Phagwara	143	50	93	All
8	Phillaur	40	16	24	All
9	Kurali	49	11	38	All
10	Banga	70	38	32	All
11	Hoshiarpur	940	204	736	All
12	SBS Nagar	211	74	137	All
13	Sri Kiratpur Sahib	8	0	8	0
14	Ferozpur	64	16	48	All
15	Zira	47	18	29	All
16	Machiwara	29	15	14	All
17	Dharamkot	9	3	6	All
18	Makhu	18	6	12	All
19	Talwandi Bhai	21	10	11	All
20	Sri Muktsar Sahib	278	103	175	All
21	Fazilka	195	86	109	All

Annexure 8 - Status of Common Bio-Medical Waste Treatment Facilities (CBMWTFs)- Facility wise details of area catered by the CBMWTF's

Sr. No.	Name & Address of the CBMWTF with contact person name and telephone no.	Name of the cities/areas covered by CBMWTF	Concerned Regional Office	Total no. of beds covered	Total no. of HCFs covered	BMW Installed Treatment Capacity kg/day
1.	M/s Rainbow Environment Pvt. Ltd., Village Balyali, Mohali	Fatehgarh Sahib, Patiala, Ropar, SAS Nagar, districts	S.A.S Nagar Mohali Punjab	16200	2993	7655 kg/d
2.	Meridian Milleu Care Private Limited, Village Bir Pind, Tehsil Nakodar, District Jalandhar	District Jalandhar, District Barnala & District Moga	Regional Office, Kapurthala	13386	2172	10000 Kg/day
3.	M/s Medwaste Sollutions Pvt. Ltd., Village Bidowali, Tehsil Gidderbaha, Dist. Sri Muktsar Sahib	Bathinda, Faridkot, Ferozepur, Sri Muktsar Sahib & Fazilka	Regional Office, Sri Muktsar Sahib	14632	2322	3500 kg/d
4.	Amritsar Envirocare Systems Pvt.Ltd. Vill.Ibban Kalan,Chabhal Road, Amritsar.	Amritsar, Tarn-Taran	Amritsar	13522	1537	8200 kg/d
5.	M/s Bio Medical Waste Treatment Plant Pvt. Ltd	Vill. Pangoli, Distt. Pathankot	District Pathankot, Gurdaspur, Hoshiarpur, SBS Nagar & Kapurthala	13865	2559	3000 kg/day
6.	Medicare Environmental Management Pvt Ltd, Opp. Central Jail, Tajpur Road, Ludhiana	Ludhiana, Sangrur, Malerkotla	Regional Office-2, Ludhiana	17927	2482	5000 Kg/d
Total				89532	14065	37355

Annexure 9 - Status of Hazardous Waste Generated as on 31.3.2025

Sr. No.	Name of the District	No. of Industries	Authorized Quantity of Hazardous Waste (Metric Tonne)				Quantity of Hazardous Waste generated as per Annual Return within the State/ UT (Metric Tonne)			
		1	2	3	4	5	6	7	8	9
			Landfillable	Incinerable	Recyclable	Utilizable	Landfillable	Incinerable	Recyclable	Utilizable
1	Hoshiarpur	46	2799.18	1253.538	1394.55	0	2421.246	58.818	53.412	0
	Shaheed Shagat Singh Nagar	20	356.59	835.692	929.7	0	1614.164	39.212	35.608	0
2	Jalandhar	218	305.91	20.55	643	572.23	34	24.5	28.5	118
	RO Kapurthala	174	3950.18	112.13	7576.5	0	4090.411	19.398	2746.31	0
3	Faridkot	12	2.418	0	182.38	0	2.365	0	181.3	0
	Moga	32	9.217	2.227	546.053	0	8.74	1.9	391.44	0
	Ferozepur	15	0.23145	0	163.185	0	0.168	0	146.173	0
	Fazilka	9	543.81	0.4	10.8	0	212.42	0.2	4.03	0
	Sri Muktsar Sahib	12	7263.86	0.72	0.79	0	5532.18	0.24	0.48	0
4	Ludhiana-1	501	730	20.1	1103	5.5485	699	19.8	1050	3
5	Ludhiana-2	327	2895.3	167.32	1687.52	232.57	1986.79	149.52	967.524	185.829
6	Ludhiana-3	185	4592.86	99	228.66	0	4046.1	6.078	1126.35	0
7	Ludhiana-4	346	2470.95	26.98	73.69	0	2201.95	25.92	51.43	0
8	Rupnagar	28	816	31	15404	0	96	29.8	2345	0
	Total	**1923**	**26736.50**	**2569.65**	**29943.82**	**810.34**	**22945.53**	**375.38**	**9127.55**	**306.82**

Annexure 10– Status of E-wastes Facility wise details of area catered by the E-wastes

Sr. No.	Name & Address of the E-waste facility with contact person name and telephone no.	Capacity of E-Waste Handling
1.	M/S K.J. Recyclers,Plot No. C-38, Sanjay Gandhi Nagar, Industrial Area, Jalandhar Sh. Pardeep Nalwa 9810702359	600 TPA
2.	Cosmos Recycling Private Limited, Mullanpur Road, Opp. Dashmesh Dharam Kanda, VPO Hambran, Ludhiana	10500 TPA
3.	M/s Spreco Recycling, Tehsil Raikot, District Ludhiana	0.8 TPD

Annexure 11 – Details of STPs under constuction

Sr. No.	River	District	Deptt.	ULB	Location of STP	Cap. (MLD)	Sewage Generation (MLD)	Completion Timeline	Disposal
1	Sutlej	Ferozepur	DLG	Guru Har Sahai	Guru Har Sahai	1	0.5	31.03.26	Jalalabad Drain
2	Sutlej	Ferozepur	DLG	Guru Har Sahai	Guru Har Sahai	4	2	31.03.26	
3	Sutlej	Ferozepur	DLG	Mamdot	Mamdot	2	1.37	30.09.25	Mamdot Drain
4	Sutlej	Ferozepur	DLG	Mudki	Mudki	2	1.5	30.09.25	Mudki Drain
5	Sutlej	Hoshiarpur	DLG	Mahilpur	Mahilpur	3	1.7	31.07.25	Barsati Drain
6	Sutlej	Bathinda	DLG	Maluka	Maluka	1	.78	30.06.26	Chanchan Drain
7	Sutlej	Bathinda	DLG	Bhai Roopa	Bhai Roopa	2.5	1.87	31.07.26	Chand Bhan Drain
8	Sutlej	Bathinda	DLG	Kotha Guru	Kotha Guru	2	1.35	31.07.26	
9	Sutlej	Muktsar Sahib	DLG	Muktsar Sahib	Muktsar Sahib	5	3.5	30.06.26	
10	Sutlej	Bathinda	DLG	Bhagta Bhaike	Bhagta Bhaike	3	2.1	31.08.26	
11	Sutlej	Ludhiana	DLG	Raikot	Raikot	7	4.2	31.12.25	Local Drain

Annexure 12 - Sewage Treatment Facilities proposed to be set up

Sr. No.	River	District	ULB	Location	Deptt.	Cap. (MLD)	Sewage Generation (MLD)	Status of Project	Disposal
1.	Sutlej	Fazilka	Arniwala	Arniwala	PWSSB	2	1.33	Tender Stage	Baam Drain-Ditch Drain
2.	Sutlej	Muktsar	Barriwala	Barriwala	PWSSB	2	1.3	Tender Stage	SaraiNaya drain to chandbhan drain
3.	Sutlej	Ferozepur	Mallanwala	Mallanwala	PWSSB	4	2.4	Tender Stage	Jattanwali drain
4.	Sutlej	Moga	Nihal Singh Wala	Nihal Singh Wala	PWSSB	2	1.52	Tender Stage	Jwaharsingh wala drain
5.	Sutlej	Moga	Moga	Moga	PWSSB	30	6	Tender Stage	Fidda Drain

Anneuxre 13 – Status of Irrigation Schemes/Projects to utilize the Treated Wastewater of STPs for Irrigation Purposes

Sr. No.	District	Name of STP/ Town	Concerned Deptt.	Cap. (MLD)	Tech.	STP Status	Area (ha)	Fund Requirement (Rs in Lakh)	Remarks
Comissioned Irrigation Projects									
1	Jalandhar	Bambian Wali Cantt	MCJ	10.00	SBR	Functional	330	Tied up	
2	Jalandhar	Jaitewali	MCJ	25.00	SBR	Functional	300	Tied up	
3	Kapurthala	Phagwara-I	PWSSB	20.00	UASB	Functional	400	Tied up	
4	Kapurthala	Phagwara-III (Palahi Road)	PWSSB	8.00	MBBR	Functional		Tied up	
5	Jalandhar	Phillaur-II	PWSSB	3.00	WSP	Functional	80	Tied up	
6	Jalandhar	Nakodar	PWSSB	6.00	SBR	Functional	182	Tied up	
7	Rupnagar	Naya Nangal (Mojowal)	PWSSB	8.00	ASP	Functional	280	Tied up	
8	Ludhiana	Machhiwara	PWSSB	4.00	SBR	Functional	30	Tied up	
9	Rupnagar	Ropar-I (Badi Haveli)	PWSSB	10.00	SBR	Functional	101	Tied up	
10	Rupnagar	Ropar-II (Rasoolpur)	PWSSB	2.50	SBR	Functional	81	Tied up	
11	Rupnagar	Ropar-III (Sadabarat)	PWSSB	2.00	SBR	Functional	73	Tied up	
12	Muktsar	Malout-I	PWSSB	3.00	WSP	Functional	65	Tied up	
13	Moga	Dharamkot	PWSSB	4.00	SBR	Functional	162	Tied up	
14	Ferozepur	Makhu	PWSSB	4.00	SBR	Functional	121	Tied up	
15	Ferozepur	Talwandi Bhai	PWSSB	4.00	SBR	Functional	147	Tied up	
16	Ferozepur	Zira	PWSSB	8.00	MBBR	Functional	300	Tied up	
17	Fazilka	Jalalabad	MC	8.00	MBBR	Functional	202	Tied up	
18	Muktsar	Muktsar Sahib-I	DWSS	8.70	MBBR	Functional	162	Tied up	
19	Muktsar	Muktsar Sahib-II	DWSS	5.70	MBBR	Functional	75	Tied up	
20	Rupnagar	Anandpur Sahib	DWSS	8.00	MBBR	Functional	293	Tied up	
21	Mohali	Kurali	GMADA	5.00	SBR	Functional	132	Tied up	
22	Rupnagar	Nangal	BBMB	1.60	ASP	Functional	253	Tied up	
23	Bathinda	Goniana	PWSSB	3.00	WSP	Functional	120	Tied up	
24	Moga	Baghapurana	DWSS	4.00	-	Functional	155	Tied up	
				165.50			**4044.00**		
Irrigation Projects under progress									
1	Jalandhar	Basti Peer Dad	MCJ	50.00	SBR	Functional	550	Tied up	

Sr. No.	District	Name of STP/ Town	Concerned Deptt.	Cap. (MLD)	Tech.	STP Status	Area (ha)	Fund Requirement (Rs in Lakh)	Remarks
2	Hoshiarpur	Hoshiarpur	PWSSB	30.00	MBBR	Functional	1030	Tied up	
3	Ludhiana	Jagraon-II	PWSSB	16.00	SBR	Functional	426	Tied up	
4	Fazilka	Abohar	PWSSB	25.00	SBR	Functional	1225	Tied up	
5	Muktsar	Malout-II	PWSSB	10.00	MBBR	Functional	200	Tied up	
6	Faridkot	Kotakapura	PWSSB	8.00	-	Functional	260	Tied up	
7	Hoshiarpur	Garshankar	PWSSB	3.00		Functional	125	Tied up	
8	Ludhiana	Raikot	-	7.00	-	Functional	160	Tied up	
9	Moga	Moga	PWSSB	27.00	SBR	Functional	1019	Tied up	
				176.00			**4995.00**		
Irrigation projects not feasible									
1	Ludhiana	Bhattian-I	MCL	111.00	UASB	Functional		Not feasible	Farmers are reluctant to use the water for irrigation due to color and foul smell.
2	Ludhiana	Bhattian-II	MCL	50.00	SBR	Functional		Not feasible	Farmers are reluctant to use the water for irrigation due to color and foul smell.
3	Ludhiana	Balloke-I	MCL	152.00	UASB	Functional		Not feasible	Dense urbanisation in vacinity of STP, farmers are reluctant to use treated water due to its dark colour and foul smell, no land available for sumpwell in STP.
4	Ludhiana	Balloke-II	MCL	105.00	SBR	Functional		Not feasible	Dense urbanisation in vacinity of STP, farmers are reluctant to use treated water due to its dark colour and foul smell, no land available for sumpwell in STP.
5	Jalandhar	Pholriwal-I	MCJ	100.00	UASB	Functional		Not feasible	Due to urbanization and increase in price of land, farmers are not giving consent

Sr. No.	District	Name of STP/ Town	Concerned Deptt.	Cap. (MLD)	Tech.	STP Status	Area (ha)	Fund Requirement (Rs in Lakh)	Remarks
6	Jalandhar	Pholriwal-II (Girdhari Lal)	MCJ	25.00	SBR	Functional		Not feasible	Due to urbanization and increase in price of land, farmers are not giving consent
7	Jalandhar	Pholriwal-III (Eco Chem)	MCJ	25.00	SBR	Functional		Not feasible	Due to urbanization and increase in price of land, farmers are not giving consent
8	Kapurthala	Phagwara-II (Hadibad)	PWSSB	8.00	MBBR	Functional		Not feasible	Sewerage Board has already laid pipeline.
9	Jalandhar	Phillaur-I	PWSSB	2.60	MBBR	Functional		Not feasible	STP to be re-constructed
10	Jalandhar	East Jalndhar Cantt-I	MES	3.00	MBBR	Functional		Not feasible	Agriculture land not available due to urbanisation
11	Jalandhar	East Jalndhar Cantt-II	MES	3.00	MBBR	Functional		Not feasible	Agriculture land not available due to urbanisation
12	Jalandhar	East Jalndhar Cantt-III	MES	0.40	MBBR	Functional		Not feasible	Agriculture land not available due to urbanisation
13	Jalandhar	West Jalandhar Cantt-I	MES	1.50	MBBR	Functional		Not feasible	Agriculture land not available due to urbanisation
14	Jalandhar	West Jalandhar Cantt-II	MES	1.50	MBBR	Functional		Not feasible	Agriculture land not available due to urbanisation
15	Ludhiana	Jamalpur	PWSSB	225.00	-	Functional		Not feasible	• STP is situated in highly dense populated area surrounded by residential area & dying industries. • Blind Pipeline of 6 Kms required. • Cycle Valley, National Highways, Tata Steel etc upcoming around STP. • farmers agrees to use this treated water only once or twice per year in their fields

Sr. No.	District	Name of STP/ Town	Concerned Deptt.	Cap. (MLD)	Tech.	STP Status	Area (ha)	Fund Requirement (Rs in Lakh)	Remarks
16	Ludhiana	Balloke	Balloke	60.00	-	Functional		Not feasible	Water coming in STP is from Industrial zone of Gill Road where most of the industries have works. The quality of treated water is not suitable.
17	Jalandhar	Pholriwal	PWSSB	50.00	-	Functional		Not feasible	Due to urbanization and increase in the cost of land farmers are not giving consent
				923.00					
Funding required for irrigation projects *									
1	SBS Nagar	Nawashahar	PWSSB	6.00	SBR	Functional		270.00	
2	SBS Nagar	Banga	PWSSB	3.00	SBR	Functional		135.00	
3	Rupnagar	Burari Nangal	PWSSB	5.00	ASP	Functional		225.00	
4	Ludhiana	Sahnewal	PWSSB	7.00	SBR	Functional		315.00	
5	Ludhiana	Jagraon-I	PWSSB	12.00	SBR	Functional		540.00	
6	Muktsar	Muktsar Sahib-III	DWSS	3.50	MBBR	Functional		157.50	
7	Rupnagar	Morinda	SBR	5.50	SBR	Functional		247.50	
8	Muktsar	Gidderbaha	PWSSB	7.00	MBBR	Functional		315.00	
9	Ferozepur	Ferozepur	SBR	18.00		Functional		810.00	
10	Faridkot	Jaito	PWSSB	6.00	SBR	Functional		270.00	
11	Faridkot	Kotakapura	PSIEC	3.00	MBBR	Functional		135.00	
12	Faridkot	Faridkot	PWSSB	14.00	-	Functional		630.00	
13	Jalandhar	Basti Peer Dad	MCJ	15.00	SBR	Functional		675.00	
14	SBS Nagar	Balachaur	PWSSB	4.00	-	Functional		180.00	
15	Tarn Taran	Patti	PWSSB	8.00		Functional		360.00	
16	SBS Nagar	Rahon	PWSSB	3.00		Functional		135.00	
17	Rupnagar	Kiratpur Sahib	PWSSB	2.00		Functional		90.00	
18	Ferozepur	Guru Har Sahai		1.00		STP Under Construction		45.00	
19	Ferozepur	Guru Har Sahai		4.00		STP Under Construction		180.00	
20	Ferozepur	Mamdot		2.00		STP Under Construction		90.00	
21	Ferozepur	Mudki		2.00		STP Under Construction		90.00	
22	Hoshiarpur	Mahilpur		3.00		STP Under Construction		135.00	
23	Bathinda	Maluka		1.00		STP Under Construction		45.00	

Sr. No.	District	Name of STP/ Town	Concerned Deptt.	Cap. (MLD)	Tech.	STP Status	Area (ha)	Fund Requirement (Rs in Lakh)	Remarks
24	Bathinda	Bhai Roopa		2.50		STP Under Construction		112.50	
25	Bathinda	Kotha Guru		2.00		STP Under Construction		90.00	
26	Muktsar Sahib	Muktsar Sahib		5.00		STP Under Construction		225.00	
27	Bathinda	Bhagta Bhaike		3.00		STP Under Construction		135.00	
28	Fazilka	Arniwala	PWSSB	2.00		STP proposed to be constructed		90.00	
29	Muktsar	Barriwala	PWSSB	2.00		STP proposed to be constructed		90.00	
30	Ferozepur	Mallanwala	PWSSB	4.00		STP proposed to be constructed		180.00	
31	Moga	Nihal Singh Wala	PWSSB	2.00		STP proposed to be constructed		90.00	
32	Ludhiana	Moga	PWSSB	30.00		STP proposed to be constructed		1350	
		Total		**187.50**				**8437.50**	
* Completion of project is subject to timely completion of STP, timely availability of funds, availability of agricultural command area, consent/willingness of farmers and project being feasible									

Annexure 14 – Status of Online Monitoring System for Industries

Sr. No.	River	Name of Industry	District	Cap. (KLD)	Status of online continuous monitoring system
1.	Sutlej	Adhi Enterprises, B-XXIII- 2120/1, Textile Colony, Industrial Area-A, Ludhiana	Ludhiana	100	Installed & commissioned
2.	Sutlej	Awon Printers, St. No. 3, Baba Gajja Jain Colony, Near Moti Nagar, Ludhiana	Ludhiana	150	Installed & commissioned
3.	Sutlej	Azeez Fabrics Pvt. Ltd (Previously Gulab Industries Pvt. Ltd.), 251, Industrial Area- A, Ludhiana	Ludhiana	450	Installed & commissioned
4.	Sutlej	B.K Wools, 236/5, Industrial Area-A, Ludhiana	Ludhiana	50	Installed & commissioned
5.	Sutlej	Bharat Jiwan Dyeing Factory, 42, Industrial Area-A, Ludhiana	Ludhiana	100	Installed & commissioned
6.	Sutlej	Capital Dyeing Company, 176, Industrial Area-A, Ludhiana	Ludhiana	100	Installed & commissioned
7.	Sutlej	Christian Medical College and Hospital, Brown Road, Ludhiana	Ludhiana	400	Installed & commissioned
8.	Sutlej	Golu International14-A, Industrial Area-A, Ludhiana	Ludhiana	120	Installed & commissioned
9.	Sutlej	H.C Dyeing Works, B-30, Plot No. 3595-96, Baba Deep Singh Nagar, Opp Truck Union, Bye Pass Road, Moti Nagar, Ludhiana	Ludhiana	400	Installed & commissioned
10.	Sutlej	Ishan Enterprises887, Industrial Area-A, Ludhiana	Ludhiana	55	Installed & commissioned
11.	Sutlej	J.S Jain Dyeing Factory, Plot no. 26/6/2, Baba Gajja Jain Colony, Near Moti Nagar, Bye Pass Ludhiana	Ludhiana	140	Installed & commissioned
12.	Sutlej	Kansal Hosiery Exports, 279- 280-281, Industrial Area-A, Ludhiana	Ludhiana	100	Installed & commissioned
13.	Sutlej	Madan Dyeing & Finishing FactoryJ-1, Textile Colony, Industrial Area-A, Ludhiana	Ludhiana	250	Installed & commissioned
14.	Sutlej	Malhotra Dyeing Kuldeep Nagar, Jalandhar Road, Ludhiana	Ludhiana	550	Installed & commissioned
15.	Sutlej	National Scientific Dyers, 37, Industrial Area-A, Ludhiana	Ludhiana	300	Installed & commissioned
16.	Sutlej	Natraj Scientific Dyers Opp. Aman Dharam Kanda, Link Road, Industrial Area-A, Ludhiana	Ludhiana	200	Installed & commissioned
17.	Sutlej	Om Processors Pvt. Ltd.K-3, Textile Colony, Industrial Area- A Ludhiana	Ludhiana	700	Installed & commissioned
18.	Sutlej	Oriental Knitfab Pvt. Ltd.278, Industrial Area-A, Ludhiana	Ludhiana	225	Installed & commissioned
19.	Sutlej	Oriental Textile Processing Company Private Limited Samrala Chowk, Industrial Area-A, Ludhiana	Ludhiana	900	Installed & commissioned

Sr. No.	River	Name of Industry	District	Cap. (KLD)	Status of online continuous monitoring system
20.	Sutlej	Pawan Lakshmi Processors 35-36 B, Textile Colony, Industrial Area-A Ludhiana	Ludhiana	90	Installed & commissioned
21.	Sutlej	Perfect Dyeing & Finishing Industries97-C, Industrial Area- A Ludhiana	Ludhiana	240	Installed & commissioned
22.	Sutlej	Pritam Sci. Dyers16-A, Industrial Area-A, Ludhiana	Ludhiana	285	Installed & commissioned
23.	Sutlej	Punjabi Dyeing, 367, Industrial Area-A, Ludhiana	Ludhiana	250	Installed & commissioned
24.	Sutlej	R.P Processors848/11, Industrial Area-A, Ludhiana	Ludhiana	250	Installed & commissioned
25.	Sutlej	Ramal Dyeing, Jalandhar Bye Pass, Opp. Shakti Nagar, Ludhiana	Ludhiana	350	Installed & commissioned
26.	Sutlej	Rampal Sci.Dyers216, Industrial Area-A, Ludhiana	Ludhiana	100	Installed & commissioned
27.	Sutlej	Sagar ApparelsB-XXX-2586/87, Baba Gajja Jain Colony, Moti Nagar Ludhiana	Ludhiana	270	Installed & commissioned
28.	Sutlej	Sanjeev Dyeing Works, 1004/9, Circular Road, Ludhiana	Ludhiana	500	Installed & commissioned
29.	Sutlej	Swaastik Scientific Dyers (Previously Mahadev Dyeing & M/s Satyam Sci Dyers) D-4, Textile Colony, Industrial Area-A, Ludhiana	Ludhiana	130	Installed & commissioned
30.	Sutlej	Sun Shine Dyeing Pvt. Ltd.261, Industrial Area-A, Ludhiana	Ludhiana	432	Installed & commissioned
31.	Sutlej	United Breveries Ltd., C-60, Phase-3, Focal Point, Ludhiana	Ludhiana	196	Installed & commissioned
32.	Sutlej	Nahar Spinning Mills Ltd, Dhandari Kalan, Focal Point, Ludhiana	Ludhiana	2650	Installed & commissioned
33.	Sutlej	Eveline International, G.T Road, Dhandari Kalan, Ludhiana	Ludhiana	750	Installed & commissioned
34.	Sutlej	Garg Acrylics Ltd, Kanganwal Road, G.T Road, Ludhiana	Ludhiana	900	Installed & commissioned
35.	Sutlej	Ludhiana Beverage Pvt Ltd, 185 G.T. Road, Ludhiana	Ludhiana	500	Installed & commissioned
36.	Sutlej	Monte Carlo Fashion Ltd of M/s Oswal Woolen Mill Unit-5, b- XXIX-106, G.T. Road, Sherpur, Ludhiana	Ludhiana	180	Installed & commissioned
37.	Sutlej	Oswal Woollen Mills Ltd Unit-3, 105-BXXIX, G.T Road Sherpur, Ludhiana	Ludhiana	3800	Installed & commissioned
38.	Sutlej	Sharman Woollen Mills Ltd, VPO Jugiana, Ludhiana	Ludhiana	175	Installed & Commissioned
39.	Sutlej	Aadi Knit Fab, 559/4, Kali Sarak, Near Jalandhar Bye Pass, Ludhiana.	Ludhiana	110	Installed & commissioned

Sr. No.	River	Name of Industry	District	Cap. (KLD)	Status of online continuous monitoring system
40.	Sutlej	Friends Printers, E-10/4091, Banda Bahadur Nagar, Bahadur Ke Road, Ludhiana	Ludhiana	135	Installed & commissioned
41.	Sutlej	Grace Tubler, Gali No. 7, Banda Bahadur Nagar, Bahadurke Road, Ludhiana	Ludhiana	80	Installed & commissioned
42.	Sutlej	Krishna Print & Processors, E/10/3925, St. No. 6, Banda Bahadur Nagar, Bahadur Ke Road, Ludhiana	Ludhiana	0	Installed & commissioned
43.	Sutlej	The Ludhiana Distt. Co-op., Milk Producers Union Ltd., Verka Milk Plant Ferozepur Road, Ludhiana.	Ludhiana	400	Installed & commissioned
44.	Sutlej	Vardhman Spinning & General Mills., Chandigarh Road, Ludhiana	Ludhiana	2000	Installed & commissioned
ppp 45.	Sutlej	Sahib Synthetics, G.T Road, Vill. Bhora (West), Ludhiana.	Ludhiana	220	Installed & commissioned
46.	Sutlej	Nageshwar Printers, New Bhagwan dass Road, Mohalla Anandpura, Basti Jodhewal, Ludhiana.	Ludhiana	100	Installed & commissioned
47.	Sutlej	Venus Cotsyn India Ltd, G.T. Road, Near Jalandhar Bye Pass, Ludhiana.	Ludhiana	1845	Installed & commissioned
48.	Sutlej	MahaLuxmi Processing House Pvt. Ltd. C-231, Phase-VIII, Focal Point, Ludhiana	Ludhiana	2000	Installed & commissioned
49.	Sutlej	Supreme Agro Foods Pvt. Ltd. (Unit-II) C-181, Phase-VI, Focal Point, Ludhiana	Ludhiana	200	Installed & commissioned
50.	Sutlej	Vardhman Yarn & Thread Ltd., (Previously Known an Mahavir Spinning Mills Ltd., (S.Tread U D-295/2, Phase-8, Focal Point, Ludhiana	Ludhiana	550	Installed & commissioned
51.	Sutlej	WAHID SANDHAR SUGARS LTD., G.T. ROAD, PHAGWARA, DISTT. KAPURTHALA	Kapurthala	1240 (TE) 40 (DE)	Installed & commissioned
52.	Sutlej	Common Effluent Treatment Plant Leather Complex, Jalandhar	Jalandhar	5000	Installed & commissioned
53.	Sutlej	JCT LTD, G.T ROAD PHAGWARA	Kapurthala	5146 (TE) 1909 (DE)	Installed & commissioned
54.	Sutlej	SHITAL FIBRES LTD,A-17, FOCAL POINT EXTN., JALANDHAR	Jalandhar	360 (TE) 4 (DE)	Installed & commissioned
55.	Sutlej	SUKHJIT STARCH LTD., PHAGWARA, DISTT. KA[URTHALA.	Kapurthala	1500 (TE) 21 (DE)	Installed & commissioned
56.	Sutlej	THE DOABA CO-OPERAIVE MILK PRODUCERS UNION LTD, G.T Road, Bye Pass Jalandhar	Jalandhar	490 (TE) 15 (DE)	Installed & commissioned
57.	Sutlej	Cremica Food Industries Ltd, (Previously Known as BECTOR'S FOOD SPECIALITIES LTD. UNIT II, THEING ROAD, PHILLAUR. DISTT. JALANDHAR.	Jalandhar	200 (TE) 50 (DE)	Installed & commissioned

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Sr. No.	River	Name of Industry	District	Cap. (KLD)	Status of online continuous monitoring system
58.	Sutlej	M/s Metro milk products pvt.ltd. C-44, sports and surgical complex Jalandhar	Jalandhar	200 (TE) 1.5 (DE)	Installed & commissioned
59.	Sutlej	Nestle India Private Ltd., Ferozepur Road, Duneke, Moga	Moga	3360	Installed & commissioned
60.	Sutlej	THE NAWANSHAHAR CO- OPERATIVE SUGAR MILLS LTD, BANGA ROAD, NAWANSHAHR	Nawanshahr	1100	Installed & commissioned
61.	Sutlej	Shreyans Industries Ltd., Balachaur Ropar Road, Vill. Banah, Nawanshahr.	Nawanshahr	5700	Installed & commissioned
62.	Sutlej	Sun Pharmaceuticals Industries Pvt Ltd., Village Toansa,Tehsil balachour, Distt. S.B.S. Nagar.	Nawanshahr	300	Installed & commissioned
63.	Sutlej	Centrient Pharmaceuticals India Private Limited, Village Toansa , Tehsil Balachaur, SBS Nagar.	Nawanshahr	425	Installed & commissioned
64.	Sutlej	S.E.L Manufacturing Co. Ltd Unit I, Vill Hussainpur, Rahon Machiwara Road, Nawanshahr.	Nawanshahr	1655	Installed & commissioned
65.	Sutlej	S.E.L Manufacturing Co. Ltd Unit II, Vill Hussainpur, Rahon Machiwara Road, Nawanshahr.	Nawanshahr	4125	Installed & commissioned
66.	Sutlej	SML ISUZU, Vill. Asron, Balachaur, Distt. Shaheed Bhagat Singh Nagar.	Nawanshahr	90	Installed & commissioned

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Annexure 15 - Performa for Operational Record of the STPs

Location of TP	Capacity of STP (MLD)	Reading of Water/ Energy meter at 8 am	Quantity of waste water treated (in MLD)	Sludge wasted (kg/day)	Qty. of Chlorine used (Kg/day)	Name of the component remained out of order during the day and reasons thereof.	Qty of treated w/w reused for irrigation of agricultural land/ irrigation of green area/ construction purpose (MLD)	Ultimate disposal of treated waste water (MLD) in river/drain	Name of drain/ river

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Annexure 16 - Performa for Operational Record of the CETPs

Location of CETP	Capacity of CETP (MLD)	Reading of Water/ Energy meter at 8 am	Quantity of waste water treated (in MLD)	Sludge wasted (kg/day)	Details of chemical used for dosing purpose and the component at which the same was imparted.	Name of the component remained out of order during the day and reasons thereof.	Qty of treated w/w reused for irrigation of agricultural land/ irrigation of green area/construction purpose (MLD)	Ultimate disposal of treated waste water (MLD) in river/drain	Name of drain/ river

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Annexure 17 - Performa for keeping record of STPs

r. No.	Name of Town & Location	Department responsible for O&M	Capacity (MLD)	Date of Commissioning	Design Parameters		Discharge Standards to be achieved (PPCB)	Compliance of Discharge Standards (Yes/No)	Reasons for Non-Compliance										Operator Payment Cleared upto Month/ Yr	Outstanding Payment
					Inlet	Outlet			Lack of O&M Funds	Technology Related	Inadequate STP Capacity	Mixing with Industrial effluents	Mixing with Dairy Waste	Component breakdown	Non availability of Power	Non availability of Chlorine	Lack of skilled manpower	Any other reason		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

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Annexure 18 - Performa for keeping reocord of Analysis Result of CETPs

Date of Sampling	Point of sampling	Values of the parameters in mg/l except pH						Sample Status (Pass/Fail) as per Norms
		pH	TSS	BOD	COD	T.Coli (MPN/100 ml)	Metals	

Annexure 19 - Proforma regarding monitoring of Industries located in Catchment Area

ame of industry	Date of visit	Capacity	Discharge (KLD)	Compliant/ non-compliant (parameters not complying)	% variation in case of non-compliance	Observations noticed during visit	Action Taken in case of Non-compliant

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Annexure 20 - Proforma for monitoring of Water Quality of River Sutlej

r. No.	Sampling points at river Sutlej	Date of Sampling	DO (mg/l)	pH	BOD (mg/l)	T.Coliform (MPN/100 ml)	D.B.U. classification

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Annexure 21 - Proforma for submission of report regarding Health Check Camps

Sr. No.	Location of the camp	Date on which camp was organized	Name of the Doctor(s) & name of their organization	No. of people examined	No. of people found affected with water borne disease

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Annexure 22- Proforma for submission of report regarding Awareness Programmes

Sr. No.	City / Town / Location where the awareness programme is organized	Name of the Officer(s) who hold this programme	Date	No. of participants	Brief detail about awareness detail

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