

OFFICE OF THE EXECUTIVE COMMITTEE

Constituted by the Hon'ble National Green Tribunal in Original Application no.138 and 139 of 2016, OA No.916/2018 (earlier OA No.101 of 2014) OA No.606 of 2018 and OA No.1040 of 2018

(Official Address: Tower No.5, 4th Floor, Forest Complex,
Sector 68, SAS Nagar) Tel. No. 0172-2298091
Email: cecghaggar@gmail.com

To

The Registrar General,
National Green Tribunal,
Faridkot House, Copernicus Marg,
Near India Gate,
New Delhi-110001

No CEC/ 2020/Spl.4
Dated: 16.4.2020

Subject: 5th report of the Executive Committee constituted by Hon'ble National Green Tribunal in O.A No. 138 of 2016 and O.A No. 139 of 2016 in the matter of Stench Grips Mansa's Sacred Ghaggar River (Suo-Moto Case) and Yogendera Kumar.

It is submitted that the Hon'ble Tribunal vide its order dated 22.11.2019 in OA No. 138 of 2016 and OA No. 139 of 2016 has given clarification about future functioning of the Executive Committee as per para No.21 of the said order, which is reproduced as under:

"21. We consider it necessary to clarify the procedure for functioning of the Committee henceforth. The Committees may consider all relevant issues and give its reports preferably once in two months to this Tribunal with a copy to all the concerned Chief Secretaries and SPCBs/PCC. The concerned Chief Secretaries/ SPCBs/PCC may look into the said report and give their response to this Tribunal within two weeks thereafter. The response may include the action taken by the statutory bodies or other authorities. Since the Committee constituted by this Tribunal is a Fact Finding/Executing/ Monitoring Committee and has to give status report to this Tribunal, its functioning may not be viewed as giving final directions to the regulatory bodies. However, the State regulatory body may take into account the observations of the Committee in their functioning and act their own after considering the response of the alleged polluter. The Committee will be at liberty to point out to this Tribunal that action taken by the regulatory authority was not adequate. These observations are consistent with the Orders of this Tribunal dated 21.10.2019 in O.A. No. 670 of 2018 with regard to the procedure and functioning of a similar Committee in the State of UP."

Further, the Hon'ble Tribunal vide its order dated 22.11.2019 in para no.23 has given directions as under

"23 Accordingly, following directions are issued:-

- "(i) All the concerned States/UT relevant for River Ghaggar must ensure installation of STPs within the planned timelines subject to the rider that where the timelines goes beyond 31.12.2020, the timeline will be treated to be 31.12.2020. Wherever timeline already laid down by the State/UT is exceeded, compensation will be payable @ Rs 10lakh/month per STP till commissioning of STPs. This scale of compensation will also apply, in respect of STPs for which timeline for construction of STP is beyond 31.12.2020, from 01.01.2021. The STPs must conform to the laid down standards and connected to the sewerage network with a view to achieve the object of setting up of such STPs.*
- (ii) Let the concerned SPCBs/PCC take steps in terms of observations of the Committee after considering the response of the alleged polluters. If the*

Committee observes that SPCBs/PCC has not taken necessary and adequate action, report be given to this Tribunal.

- (iii) Local bodies in the catchment area may ensure that solid waste is not dumped into the river or its tributaries which aspect may be monitored by the Committee also.*
- (iv) Future functioning of the Committee will be in terms of clarification as per para 21 above. Incidental issues stands disposed of in terms of para 22 above.*
- (v) Let steps be taken by concerned States/UTs in terms of the recommendations and for compliance of direction for connecting the 40 drains to the STPs wherever feasible and till then in-situ remediation in terms of para 20 above.*
- (vi) The Chairmen, Member Secretaries of SPCBs/PCC, Secretaries Urban Development and Secretaries Irrigation and Public Health of the four States/ UT and nodal officer of CPCB may remain present in person for the assistance of the Tribunal so that comprehensive review of progress can be undertaken.*

A copy of this order be sent to the Chairmen, Member Secretaries, Secretaries Urban Development and Secretaries Irrigation and Public Health of all the four States/ UT in question."

In compliance to order dated 22.11.2019 of the Hon'ble Tribunal, the Executive Committee submitted its 4th report to the Hon'ble Tribunal on 08.01.2020. Further, in compliance to the said order, the Executive Committee has prepared its 5th report updating the current status. The Members of the Executive Committee have given their concurrence on the report but it could not be signed by the members due to lockdown and curfew in Chandigarh and Punjab area and due to declaration of Mohali area as Hot Spot in view of Covid-19 pandemic.

Therefore, 5th report of the Executive Committee updating the current status is submitted for consideration of the Hon'ble Tribunal. The above side report is being sent through email at ***filing.ngt@gmail.com*** and ***ngt.filing@gmail.com***

DA/As above

(Justice Pritam Pal)
Former Judge,
Punjab & Haryana High court
Chairman
Executive Committee

Endst. No. CEC/2020/ Spl.5-8

Dated:16.04.2020

A copy of the above is forwarded to the following for information and necessary action please. This is in compliance to the order dated 22.11.2019 of the Hon'ble National Green Tribunal in O.A No. 138 of 2016 and 139 of 2016 in the matter of Stench Grips Mansa's Sacred Ghaggar river (Suo-Moto Case) and Yogendera Kumar:

- 1) The Chief Secretary to Govt of Punjab, Punjab Civil Secretariat, Chandigarh.
- 2) The Chief Secreatry to Govt of Haryana, Haryana Civil Secretariat, Chandigarh.
- 3) The Chief Secretary to Govt of Himachal Pradesh, Himachal Pradesh Secretariat, Shimla.
- 4) The Advisor to the administrator of U.T Chandigarh, U.T Secretariat, Sector-9 Chandigarh.

DA/As above

(Justice Pritam Pal)
Former Judge,
Punjab & Haryana High court
Chairman
Executive Committee

Endst. No. CEC/2020/ Spl.9-12

Dated: 16.04.2020

A copy of the above is forwarded to the following for information and necessary action please. This is in compliance to the order dated 22.11.2019 of the Hon'ble National Green Tribunal in O.A No. 138 of 2016 and 139 of 2016 in the matter of Stench Grips Mansa's Sacred Ghaggar river (Suo-Moto Case) and Yogendera Kumar.

- 1) The Member Secretary, Punjab Pollution Control Board, Vatavaran Bhawan, Nabha Road, Patiala.
- 2) The Member Secretary, Haryana State Pollution Control Board, # C-11, Sector 6, Panchkula, 134109.
- 3) The Member Secretary, Himachal Pradesh State Pollution Control Board, Him Parivesh, Phase-3, New Shimla, Shimla-171009.
- 4) The Member Secretary, Chandigarh Pollution Control Committee, Paryavaran Bhawan, Sector-19-B, Madhya Marg, Chandigarh.

DA/As above

(Justice Pritam Pal)
Former Judge,
Punjab & Haryana High court
Chairman
Executive Committee

**5th Report of the
Executive Committee constituted
by**

**Hon'ble National Green Tribunal
in OA No. 138 of 2016
&
OA No. 139 of 2016**

in the matter of

**“Stench Grips Mansa’s Sacred
Ghaggar River (Suo-Moto Case)”
and Yogender Kumar
vide order dated 7.8.2018**

Submitted on :

16th April, 2020

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5th report of Executive Committee constituted by the Hon'ble National Green Tribunal in OA No. 138 of 2016 & OA No. 139 of 2016 in the matter of "Stench Grips Mansa's Sacred Ghaggar River (Suo-Moto Case) and Yogender Kumar"

1.0 Constitution of the Executive Committee

The Hon'ble National Green Tribunal in order dated 7.8.2018 had constituted an Executive Committee under the Chairmanship of Justice Pritam Pal Former Judge, Punjab and Haryana High Court for executing the orders of the Hon'ble NGT in OA No. 138 of 2016 & OA No. 139 of 2016 in the matter of "Stench Grips Mansa's Sacred Ghaggar River (Suo-Moto Case)" and Yogender Kumar and subsequently in the order dated 21.05.2019 and 01.10.2019 of Hon'ble Tribunal, the name of Dr. Babu Ram, former Member Secretary, Punjab Pollution Control Board and Ms. Urvashi Gulati, IAS, former Chief Secretary, Haryana, respectively, were included as a Members of the Executive Committee.

2.0 About future functioning of the Committee and further directions of Hon'ble National Green Tribunal vide its order dated 22.11.2019

The Hon'ble Tribunal after considering the 3rd report of the Executive Committee Submitted on 01.10.2019 has given clarification about future functioning of the Committee as per para no.21 of order dated 22.11.2019, which is re-produced as under:

"21. We consider it necessary to clarify the procedure for functioning of the Committee henceforth. The Committees may consider all relevant issues and give its reports preferably once in two months to this Tribunal with a copy to all the concerned Chief Secretaries and SPCBs/PCC. The concerned Chief Secretaries/ SPCBs/PCC may look into the said report and give their response to this Tribunal within two weeks thereafter. The response may include the action taken by the statutory bodies or other authorities. Since the Committee constituted by this Tribunal is a Fact Finding/Executing/ Monitoring Committee and has to give status report to this Tribunal, its functioning may not be viewed as giving final directions to the regulatory bodies. However, the State regulatory body may take into account the observations of the Committee in their functioning and act their own after considering the response of the alleged polluter. The Committee will be at liberty to point out to this Tribunal that action taken by the regulatory authority was not adequate. These observations are consistent with the Orders of this Tribunal dated 21.10.2019 in O.A. No. 670 of 2018 with regard to the procedure and functioning of a similar Committee in the State of UP."

Further, the Hon'ble Tribunal vide its order dated 22.11.2019 in para no.23 has given directions as under

"23 Accordingly, following directions are issued: -

"(i) All the concerned States/UT relevant for River Ghaggar must ensure installation of STPs within the planned timelines subject to the rider that where the timelines goes beyond 31.12.2020, the timeline will be treated to be 31.12.2020. Wherever timeline already laid down by the State/UT is exceeded, compensation will be payable @ Rs 10lakh/month per STP till commissioning of STPs. This scale of compensation will also apply, in respect of STPs for which timeline for construction of STP is beyond 31.12.2020, from 01.01.2021. The STPs must conform to the laid down standards and connected to the

sewerage network with a view to achieve the object of setting up of such STPs.

- (ii) Let the concerned SPCBs/PCC take steps in terms of observations of the Committee after considering the response of the alleged polluters. If the Committee observes that SPCBs/PCC has not taken necessary and adequate action, report be given to this Tribunal.*
- (iii) Local bodies in the catchment area may ensure that solid waste is not dumped into the river or its tributaries which aspect may be monitored by the Committee also.*
- (iv) Future functioning of the Committee will be in terms of clarification as per para 21 above. Incidental issues stands disposed of in terms of para 22 above.*
- (v) Let steps be taken by concerned States/UTs in terms of the recommendations and for compliance of direction for connecting the 40 drains to the STPs wherever feasible and till then in-situ remediation in terms of para 20 above.*
- (vi) The Chairmen, Member Secretaries of SPCBs/PCC, Secretaries Urban Development and Secretaries Irrigation and Public Health of the four States/ UT and nodal officer of CPCB may remain present in person for the assistance of the Tribunal so that comprehensive review of progress can be undertaken.*

A copy of this order be sent to the Chairmen, Member Secretaries, Secretaries Urban Development and Secretaries Irrigation and Public Health of all the four States/ UT in question.

List for further consideration on 17.01.2020."

3.0 Submission of 4th report of the Executive Committee constituted by Hon'ble National Green Tribunal.

In compliance to the directions given in para no. 21 of the order dated 22.11.2019 in OA No. 138 and 139 of 2016, of the Hon'ble Tribunal, the Executive Committee submitted its 4th report on 08.01.2020, vide cover dated 8.01.2020. The report was based on detailed deliberations made in the meetings held with State Level Committees of State of Punjab, Haryana, Himachal Pradesh and U.T Chandigarh, District Level Special Task Force of various Districts of these States, visits of pollution sources including industries located in the catchment area of river Ghaggar & its tributaries, information about performance of existing STPs, Installation of new STPs, upgradation of existing STPs, water quality in river Ghaggar, groundwater quality of the water sources located in the vicinity of river Ghaggar etc. Based on the above data, the conclusions and recommendations were made by the Executive Committee in its 4th report as mentioned at pages 85 to 101 of the said report.

4.0 Preparation of 5th report of the Executive Committee constituted by Hon'ble Tribunal in OA No 138 of 2016 and 139 of 2016

The Executive Committee has held its 16th meeting with State Level Committees of State of Punjab, Haryana, Himachal Pradesh and U.T Chandigarh, meetings with District Level Special Task Force of various Districts of these States, visited the pollution sources including industries located in the catchment area of river Ghaggar & its tributaries,

collected information about performance of existing STPs, installation of new STPs, upgradation of existing STPs, irrigation schemes to utilize the treated sewage for irrigation, installation of STPs in rural areas, status of health check up camps organized in the catchment area of River Ghaggar, water quality in river Ghaggar, water quality of the groundwater sources located in the vicinity of river Ghaggar, IEC activities and environmental flow etc. Based on above data/ details, the Executive committee has prepared its 5th report, the details of which are submitted as under:

4.1 Recommendations made/directions given in the meetings with District Level Officers and District Level Special Task Force of various districts of the States and visit to the pollution sources by the Executive Committee.

4.1.1 Recommendations made/ directions given in the meeting of the District Level Special Task Force of District Mohali on 11.12.2019 at Mohali (Punjab)

Recommenadiions/ directions

- 1) PPCB shall constitute a team under the headship of senior Environmental Engineer, Zonal Office, Patiala to carry out composite sampling of influent and effluent of STP, Zirakpur for 24 hours for 3 days and identify the reasons for high value of oil & grease at the inlet of the STP. Further, the detailed study w.r.t operation of STP may also be carried out. The above composite sampling and study w.r.t STP shall be carried out within 15 days.
- 2) PWSSB shall ensure that tenders for small STPs (Ghollumajara and Dappar, Issapur) shall be called within one week and work order shall be issued thereafter.
- 3) With regard to pending court case in case of STP Lalru, Deputy Commissioner, Mohali shall resolve the issue by interacting with the residents of Lalru.
- 4) PWSSB shall file special application before the Hon'ble court for vacation of stay order w.r.t STP, Lalru.
- 5) GMADA, Mohali shall upgrade STP, Mohali of capacity 45 MGD, which is presently based on UASB technology, by 31.3.2021 to meet the stringent parameters along with BOD as 10 mg/l.
- 6) Department of Soil and Water Conservation shall lay irrigation schemes for utilization of treated sewage of all the STPs of District Mohali by 31.3.2020.
- 7) PPCB shall make surprise visits of the industries from time to time and action against the defaulting industries may be taken as per law and under the provision of the Water Act, 1974.
- 8) As per the information given to the Executive committee, DLSTF has not visited any industry located in the catchment area of river Ghaggar. The Chairman of the Monitoring Committee took a serious view in this regard that District Level Special

Task Force (DLSTF) has not visited any industry and no action has been initiated against any violating industries.

Therefore, DLSTF should visit water polluting industries located in the catchment area of river Ghaggar from time to time and action against the violating industries should be recommended to PPCB.

- 9) STPs located in the catchment area of river Ghaggar shall be upgraded so that the values of F.coli and BOD may be reduced to 1000 MPN/100 ml and 10 mg/l, respectively.
- 10) PPCB shall monitor the groundwater quality of 14 hotspots located in the catchment area of river Ghaggar and analysis reports of the groundwater samples may be placed before the Executive Committee in its next meeting.
- 11) PPCB shall get install OCEMS and CCTV cameras from the remaining 1 industry by 31.1.2020, failing which action may be initiated against it under the provisions of the Water Act, 1974.
- 12) PWSSB shall install OCEMS on all the STPs of District Mohali, falling in the catchment area of river Ghaggar, by 31.3.2020.
- 13) Department of health shall continue to organize more health checkup camps in the residential areas located in the catchment area of river Ghaggar.

4.1.2 Report on visit to sewage outlets of Chandigarh area falling into Sukhna Choe and N Choe further leading to River Ghaggar by the Executive Committee on 26.12.2019.

Visit to the outlets

1. Sukhna Choe

Sr. No.	Name of the outlet	Present status
1.	Kishangarh outlet	Plugged
2.	Outlet at village Kishangarh inside forest Nursery	Plugged
3.	Shastri Nagar outlet	Plugged
4.	First outlet of Bapu Dham near bridge on the road connecting IT park with Sector 26, Chandigarh	Outlet was found carrying substantial quantity of sewage/sullage.
5.	Second outlet of Bapu Dham Colony (Known as Madrasi Colony)	Outlet was found carrying substantial quantity of sewage/sullage.

6.	Outlet from back of Gaushala, Industrial area Phase-1, Chandigarh	Outlet was found carrying substantial quantity of sewage/sullage.
7.	Outlet near CTU Workshop Industrial Area Phase-1 Chandigarh	Outlet has been Plugged
8.	Industrial area Phase-1, Colony No 4	Diversion of sewage has been made by constructing pucca Pond.
9.	From pump house operated by Municipal Corporation, Chandigarh in Industrial area Phase-1, Chandigarh	Though at the time of visit no sewage was found discharged through pump house into Katcha Drain but the soil conditions of the drain indicated that some industries may be discharging their untreated effluent into the drain in odd hours.
10.	Outlets of village HalloMajra	No sewage was found discharged through this outlet.

2. N Choe

Sr. No.	Name of the outlet	Present status
1.	Outlet near bridge point near Beant Singh Memorial	Outlet has been plugged
2.	Outlet in Gardens Spring, Sector-53, Chandigarh	Outlet is in operation

Recommendations/ directions

1. The outlets as mentioned at serial no. 4, 5, & 6 falling into Sukhna Choe should be plugged by the Municipal Corporation Chandigarh by 31.01.2020.
2. CPCC shall inspect the industries existing in Industrial Area Phase-1, within 7 days to identify the source of generation of effluent into Katcha drain near pump house

operated by Municipal Corporation Industrial Area Phase-1 Chandigarh as mentioned at serial no. 9. Action against the defaulting industries may be taken as per the provisions of water Act, 1974.

- All the remaining outlets falling into N-Choe should be closed by 31.01.2020

4.1.3 Compliance of the recommendations/directions given by the Executive Committee in 16th meeting held with the State Level officers of the State of Punjab, Haryana, State of Himachal Pradesh and U.T. Chandigarh on 24.01.2020.

4.1.3.1 State of Punjab

Sr. No.	Directions given/recommendations made in the 16th meeting held on 24.01.2020	Action taken report
1	The Construction work of 6 STPs for the town Boha (2MLD), Dhuri (5 MLD), Sangrur (4MLD), Bassi Pathana (3 MLD), Sirhind (4 MLD) and Sirhind (5 MLD) shall be completed by Punjab Water Supply and Sewage Board by 31.07.2020.	The PWSSB is to adhere with the timeline for installation of STPs of these towns.
2.	6 MLD STP to be installed by MES Patiala, which is presently at tendering stage, shall be completed by 31.12.2020.	The Garrison Engineer, MES Patiala informed that lowest bid accepted and work order is likely to be issued in the first week of April, 2020.
3.	1 MLD STP to be installed by MES Nabha, which is at DPR scrutiny stage, shall be completed by 31.12.2020.	The Garrison Engineer, MES Patiala informed that structural drawings are under preparation and tender is likely to be concluded by 31.5.2020.
4.	04 STPs for the towns (Cheema: 2 MLD, Langowal :3 MLD, Dera Bassi : 2 MLD, Ghanour: 2 MLD), which are at tendering stage, shall be completed by 31.12.2020,	The PWSSB is to adhere with the timeline for installation of STPs of these towns.
5.	02 STPs for the towns (Bhadson: 3 MLD, Nabha: 12 MLD) where funds are yet to tied up shall be completed by 31.12.2020.	The PWSSB is to adhere with the timeline for installation of STPs of these towns.
6.	6 STPs for the towns (Dhuri: 6 MLD, Sangrur: 11 MLD, Bassi Pathana: 0.2 MLD, Amluh: 3 MLD, Dera Bassi: 2 MLD, Lalru: 1.5 MLD), the concerned Deputy Commissioner of the District	The PWSSB is to adhere with the timeline for installation of STPs of these towns. The matter regarding the land allotment issue of proposed STP of capacity 1.5 MLD at Lalru was

	shall resolve the issue of land for STPs by 28.02.2020.	discussed in the 2 nd meeting of District Environment Committee held on 25/02/2020. A complaint against the site is pending in the Hon'ble court and the Chairperson directed PWSSB & Municipal Council, Lalru to consider alternate site for setting of the said STP.
7.	03 STPs for the towns [Lalru: 1 MLD, Lalru (Gholu Majra): 0.35 MLD, Lalru (Chandheri Samalheri) :0.35 MLD] are at DNIT approval stage and these shall be completed by 31.12.2020.	The PWSSB is to adhere with the timeline for installation of STPs of these towns.
8	STP of Capacity 4 MLD for Sanour town to be installed under Badi Chotti Nadi project shall be completed by 31.12.2020.	The PWSSB is to adhere with the timeline for installation of STPs of these towns.
9	For Sirhind town, where the pond water diversion process is in progress for installation of 2 MLD STP, the same shall be completed by 31.07.2020.	The PWSSB is to adhere with the timeline for installation of STPs of these towns.
10	For installation of 0.5 MLD STP at Banur for which tender has been received and is under progress, the same shall be commissioned by 31.12.2020.	The PWSSB is to adhere with the timeline for installation of STPs of these towns.
11	The Up-Gradation Work Of 3 STPs (Bareta 3 MLD, Bhikki 3 MLD And Sardularh: 4 MLD) shall be completed by 31.12.2020.	The PWSSB is to adhere with the timeline for installation of STPs of these towns.
12.	The construction work of enhanchment of 45 MLD to 61 MLd shall be completed by 31.12.2020.	The PWSSB is to adhere with the timeline for installation of STPs of these towns.
13.	In order to improve the performance of 4 STPs (Zirakpur, Bareta, Bhikki & Sardulgarh), upgradation work of STPs Bareta, Bhikki and Sardulgarh may be taken on priority and shall be completed by 31.12.2020. In case of STP Zirakpur, detailed study w.r.t. operation of various components of STPs may be carried	As regards to upgradation of 3 STPs namely Bareta, Bhikki & Sardulgarh is concerned, PWSSB is to adhere with the timeline for upgradation of these STPs. Further regarding improvement in the performance of STP Zirakpur, PWSSB has already started the study by way of collecting samples from manholes at

	out and reasons for its non performance may be identified and shall be rectified by 31.03.2020.	different locations to find the source of oil & grease in the untreated wastewater. The STP Zirakpur is under maintenance for the past few months due to the leakage in the air blower pipeline through which the air is supplied to the SBR reactors. The STP was visited by the officer of PPCB on 06/03/2020 and observed that the said pipeline has yet not been laid down and as such the whole effluent was being discharged without imparting treatment.
14.	The treatment facilities which are under construction in 7 villages, shall be completed by 30.06.2020.	The Department of Rural Development and Panchayat is to adhere with the timeline for installation of treatment facilities in these 7 villages.
15.	The treatment facilities for the remaining 59 villages, out of 87 villages covered in phase 1, shall be installed by 30.09.2020.	The Department of Rural Development and Panchayat is to adhere with the timeline for installation of treatment facilities in remaining 59 villages.
16.	Irrigations schemes for utilization of treated sewage of 2 towns (Khanouri: 3 MLD, Rajpura: 7 MLD) shall be completed by 31.03.2020.	As per information given by the Department of Soil and Water Conservation, the irrigation schemes for utilization of treated sewage of Khanouri and Rajpura towns shall be completed by 31.7.2020.
17	Irrigations schemes for utilization of treated sewage of remaining 10 towns, out of total 21 towns, shall be installed by 31.12.2020.	The Department of Soil and Water Conservation is to adhere with the timeline for providing irrigation schemes to utilize the treated sewage of these 10 towns.
18	PPCB shall continue to inspect the industries through surprise inspections and through Environment protection squad and action against the defaulting industries may be taken under the provisions of Water Act, 1974.	PPCB is practicing to visit the industries located in the catchment area of river Ghaggar on regular basis and action against the defaulting units is being initiated as per the provisions of the Water Act, 1974.
19.	In order to improve the water Quality to river Ghaggar, all the STPs should be completed within the time schedule and no untreated sewage may be allowed to discharge into the	The PWSSB, Municipal Corporation, Patiala and MES are to adhere with the timeline for installation of STPs of the towns.

	river. Also, all the existing STPs should achieve the prescribed standards.	
20.	Punjab Pollution Control Board shall continue to monitor the ground water quality of ground water sources located along the catchment area of river Ghaggar as per the time schedule already decided in the earlier meetings. In case ground water of any tubewell/ hand pump is found containing contaminants, the said water source shall be capped and display boards be erected at sites mentioning that "water is not fit for drinking purpose."	PPCB has already asked the Chief Engineer, Department of Water Supply and Sanitation; Chief Engineer, PWSSB and Regional Offices of PPCB vide letter dated 31.12.2019 to cap the water supply sources, whose water is not fit for drinking purposes and to display a board on such source mentioning that the water is not fit for drinking purposes. In order to check the ground water quality along river Ghaggar, samples of groundwater have been collected at 14 locations.
21.	CCTV cameras and OCEMS at inflow, outflow of any bypass system shall be installed on all the STPs by 31.03.2020.	CCTV cameras have been installed at 18 STPs out of 21 STPs. However, CCTV cameras at STP of Mohali, Dera Bassi and PDA, Patiala are yet to be installed.
22.	Punjab Pollution Control Board shall get install OCEMS from the remaining 02 industries (M/s Rainbow Denim & M/s Rana Polycot) by 31.03.2020.	M/s Rana Polycot has installed OCEMS. However, M/s Rainbow Denim is lying temporarily closed and has submitted an undertaking to the Board that it shall install OCEMS before re-commissioning its unit.
23.	For management of Septage and faecal sludge, Punjab Pollution Control Board shall take up the matter with the State Govt. regarding finalization of the report of the committee constituted by the State Govt. and take immediate steps to suggest remedial measures to be taken to manage septage and faecal sludge by the concerned department of State of Punjab.	A Technical Committee has been constituted by the Government of Punjab to frame guidelines for management of Septage and Faecal sludge and the Committee is in the process of framing the said guidelines.
24.	The Department Of Soil And Water Conservation And Department Of Resources Shall Explore The Possibility Of Providing Water Shed Management in catchment area of River Ghaggar within 1 months.	Report to be submitted by Department of Soil and Water Conservation.

25.	<p>In order to maintain Environmental Flow (E-Flow) in the river Ghaggar, the department of Water Resources shall explore the possibility of providing check dams/barrier in the catchment area of river Ghaggar to store the surface run off during rainy season and to release the water in river Ghaggar in regulated way so that Environmental Flow may be maintained in the river. Besides, the department of Water Resources shall take up the matter with the State of Himachal Pradesh and BBMB to explore the possibility of getting fresh surface water to maintain E-flow in River Ghaggar.</p>	<p>A meeting was held by the member Secretary, PPCB with Chief Engineer (Canal) and Chief Engineer (Drainage) on 15.1.2020 regarding maintaining e-flow in river Ghaggar. During discussions, Chief Engineer (Canal) is found that river Ghaggar is non perennial water body as the State of Haryana has constructed Kaushalya Dam in river Sarawati due to which no fresh water is coming from Himachal Pradesh. In this meeting, it was decided that the department of water sources shall take up matter with State of Haryana, HP and BBMB to explore the possibility of getting fresh water (snow/rain fed) to maintain E-flow in river Ghaggar.</p>
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4.1.3.2 State of Haryana

Sr. No.	Recommendations made/directions given in 16th meeting of State level Committee held on 24.02.2020	Action taken report																														
1	11 STPs of 49 MLD capacity shall be commissioned by 31.12.2020.	<p>Work in all the 11 new STPs is under progress. The progress report is as under:</p> <table border="1"> <thead> <tr> <th>Sr. No.</th> <th>Name of the Town</th> <th>Capacity (in MLD)</th> <th>Timelines proposed as per Action Plan</th> <th>Progress report</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>12 Cross Road, Ambala</td> <td>12</td> <td>31.06.2020</td> <td>5%</td> </tr> <tr> <td>2</td> <td>Khagesara & Toka</td> <td>0.5</td> <td>31.03.2020</td> <td>85%</td> </tr> <tr> <td>3</td> <td>Nangal & Allipur</td> <td>0.5</td> <td>31.03.2020</td> <td>90%</td> </tr> <tr> <td>4</td> <td>Khatoli</td> <td>0.75</td> <td>31.03.2020</td> <td>45%</td> </tr> <tr> <td>5</td> <td>Kot</td> <td>0.75</td> <td>31.01.2020</td> <td>95%</td> </tr> </tbody> </table>	Sr. No.	Name of the Town	Capacity (in MLD)	Timelines proposed as per Action Plan	Progress report	1	12 Cross Road, Ambala	12	31.06.2020	5%	2	Khagesara & Toka	0.5	31.03.2020	85%	3	Nangal & Allipur	0.5	31.03.2020	90%	4	Khatoli	0.75	31.03.2020	45%	5	Kot	0.75	31.01.2020	95%
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5	Kot	0.75	31.01.2020	95%																												

		6	Sukhdarshana pur	0.75	31.03.2020	75%
		7	Billa	0.75	31.12.2020	7%
		8	Village Dabra	8	31.03.2020	80%
		9	Ambala	5	31.05.2020	85%
		10	Khuda Khurd, Ambala	12	31.06.2020	2%
		11	Bhuna	8	30.06.2020	74%
			Total	49		
2	32 existing STPs of capacity 179.5 MLD, which are under upgradation, shall be upgraded by 31.12.2020.	PHED has to construct 6 STPs of 67 MLD, out of which 5 STPs have been completed and remaining one of 8 MLD of Bhuna town will be completed by due date i.e. 30.06.2020.				
3	HSPCB shall issue directions under the provisions of the Water Act,1974 to all the operating agencies of STPs to make adequate arrangements for disinfection at all STPs to bring F.coli parameter within the norms by 31.03.2020.	Meeting was held with all the Stakeholder departments by Chairman, HSPCB on 05.02.2020 to finalize the parameters for the treated effluent from all STPs operated and maintained by various agencies in the State. It was directed that effluent from all the STPs be got checked for F.Coli, till then, the matter is pending with the Board. Further, meeting was held on 19.03.2020 with the committee constituted by Chairman HSPCB and draft is being prepared for fixing of standards for F.Coli parameter in the treated effluent of STPs.				
4	In 45 villages, treatment facilities shall be provided by Department of Rural Development and Panchayat by 30.06.2020.	The Action Plan of Panchayats Department is upto 31.12.2020 and will be completed within timeline as per Hon'ble NGT orders.				
5	The Department of Urban Local Bodies and Department of Rural Development and Panchayat shall ensure that no septage and faecal sludge is disposed off indiscriminately and the same shall be disposed off in nearby	Directions given to ULBD & Panchayats Department for compliance. Directions in this regard have already been issued to all MCs. Further, vide this office letter memo No. SDE-I/NGT/DULB/2020/				

	STPs having adequate capacity to treat the septage and faecal sludge.	722dt. 06.03.2020, the following directions have also been issued: <ul style="list-style-type: none"> i. To set up a proper monitoring mechanism for checking of the activities of illegal disposal of sewage through tankers and by the independent houses. The departments may also constitute the special task forces for this purpose ii. To take strict action against the violators and also impose the penalties/Environment compensation as per the provisions of Water Act, 1974. iii. To register all the private tankers working under thier jurisdiction and to ensure that all the tankers are equipped with the GPS. iv. To start a campaign to identify the independent houses and tankers disposing off the untreated sewage in the drains.
6	The Department of Water sources and Department of Soil and Water Conservation shall identify the stretches in the catchment area of River Ghaggar to provide check dams/barriers/ ponds to store the surface run off during rainy season and the same may be released in a regulated way so as to maintain Environment Flow (E- Flow) in River Ghaggar.	Prefeasibility Report submitted by WAPCOS for three dams namely Bhud Dam, Khetpurali Dam and Dudhgarh Dam on tributaries of river Tangri has been examined by the field authorities and now after examination in Head Office, the same stands submitted to Govt. for approval. These projects are for providing drinking and irrigation facilities to Barwala block of Panchkula District. As Tangri river is a tributary of river Ghaggar and some other dams namely Dangrana Dam, Diwanwala Dam and Chhamla Dam to provide drinking and irrigation facilities for Momi Block, Pinjore Block of Panchkula District etc. have already been planned on Ghaggar river. It may noy not be possible to complete these projects by 31.12.2020 as lot of interstate issues are involved and till date no decision

		has been taken by competent authority i.e. GSC of CWC even to undertake construction of these dams.
7	For the Water Shed Management, the Department of Soil and Water Conservation shall make adequate arrangements in the catchment area of River Ghaggar.	Map has been prepared for Watershed Management in Catchment area of river Ghaggar by Agriculture deptt.
8	The Department of Irrigation shall provide irrigation network to utilize the treated sewage of all the existing STPs by 31.12.2020.	The Department of Irrigation has submitted that it may not be possible to complete the projects for utilization of treated sewage of STPs in the catchment area of River Ghaggar by 31.12.2020 as directed vide order dated 17.01.2020 passed by the Hon'ble NGT in the matter of OA No. 138 of 2016 (TNHRC) as the consolidated project (For river Yamuna and Ghaggar) has been planned for execution in 5 years and likely to be completed by 2025.
9	The surveillance on effluent treatment plants of the industries and sewage treatment plants shall be increased by HSPCB for the effective operation of ETP/STPs. The action against the defaulting ETP/STPs may be taken under the provisions of Water Act, 1974.	Noted for compliance.
10	In order to maintain water quality in river Ghaggar, the operating agencies of STP shall ensure that no untreated sewage is discharged into drains/ Nalahs /Rivers. All the STPs, where the construction work is under progress or at planning stage, shall be completed by 31.12.2020.	Tapping of sewage and construction of STPs, where work is under progress, will be completed by 31.12.2020. However, STPs which are at planning stage for further expansion, based on population growth upto 2040, are proposed to be completed by 2025.
11	All the STPs, which require up-gradation, shall be upgraded by 31.12.2020.	All existing STPs except STP at Sector-20 Panchkula (57 MLD) installed by HSVP are operating at designed parameters, therefore, these do not

		require upgradation. However, work of upgradation of 57 MLD STP at Sector-20, Panchkula will be completed by 30.06.2021.																									
12	HSPCB shall monitor the ground water quality of ground water sources along river Ghaggar and ensure that no contaminated ground water is allowed to be consumed by the nearby inhabitants. Wherever, the groundwater quality is found affected, display boards on such sources may be erected mentioning that "water is not for drinking".	Regular monitoring of ground water quality is being done in the catchment area of river Ghaggar and the contaminated/affected sites are closed and display boards are erected mentioning that "water is not for drinking".																									
13	All the STPs of Department of Urban development, HSVP or any other operating agency shall be installed with OCEMS and CCTV cameras by 31.01.2020.	<p>Latest status of installation of OCEMS on STPs in the catchment of River Ghaggar is as under:-</p> <table border="1"> <thead> <tr> <th>Sr. No</th> <th>Department Name</th> <th>Required to install</th> <th>Installed as per online status</th> <th>Connected with HSPCB Server</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>PHED</td> <td>49</td> <td>46</td> <td>45</td> </tr> <tr> <td>2</td> <td>HSVP</td> <td>9</td> <td>7</td> <td>5</td> </tr> <tr> <td>3</td> <td>Garrison</td> <td>1</td> <td>0</td> <td>0</td> </tr> <tr> <td colspan="2">TOTAL</td> <td>59</td> <td>53</td> <td>50</td> </tr> </tbody> </table> <p>Note: The recently commissioned STPs are not installed/ connected with the server and will be done by 30.04.2020 after obtaining CTO from HSPCB.</p>	Sr. No	Department Name	Required to install	Installed as per online status	Connected with HSPCB Server	1	PHED	49	46	45	2	HSVP	9	7	5	3	Garrison	1	0	0	TOTAL		59	53	50
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1	PHED	49	46	45																							
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3	Garrison	1	0	0																							
TOTAL		59	53	50																							
14	All the minutes of the monthly meeting of DLSTF and quarterly meetings of SLSTF may be uploaded on the website of HSPCB.	The directions have been complied.																									
15	More Health checkup camps may be organized on quarterly basis in the areas located on river Ghaggar. If any patient found affected due to water borne diseases, the same may be reported to the concerned Chief Medical Officer of the concerned district.	Health camps are being organized on monthly basis in the catchment areas of river Ghaggar by Health Department.																									

4.1.3.3 State of Himachal Pradesh

Sr. No.	Directions given/recommendations made in the 16 th meeting with State Level Officers	Action Taken Report
1.	2 STPs, each of capacity 1 MLD, have been proposed to be installed in Parwanoo area. These may be completed by 31.12.2020.	Technical bids finalized and financial bid assessment in progress. The contract will be awarded before 31 st , March 2020. The work will be completed before 31 st , December 2020
2.	One CETP-cum-STP of capacity 5 MLD has been proposed for Kala Amb area and the same may be completed by 31.12.2020.	<p>Tendering work for CETP is in progress. Tenders have been floated on 15.03.2020.</p> <p>The contract for installation of primary treatment system for 1.7 MLD sewage treatments and laying of sewerage network awarded on 7-03-2020. The pipe lines for sewer lines purchased. The work will be completed before 31st, December 2020.</p> <p>The industrial contribution slab has been prepared based upon their project cost. As reported by the GM industries cum Nodal Officer for CETP, the industries have been asked to deposit their contribution amount before 15-03-2020. The effluent shall be transported from the individual units to the CETP through properly designed and GPS enabled tankers instead of pipe/ sewer line as the units are scattered and quantity of effluent is not sufficient to create self-cleansing velocity in the sewer network.</p> <p>As per project report of CETP cum STP, the designed capacity of CETP cum STP is 1.50 MLD industrial effluent and 1.0 MLD domestic sewage (Total 2.50 MLD)</p>

		<p>for first phase project and 2.50 MLD of industrial effluent for second phase. At initial stage, 833.28 KLD of industrial and domestic effluent (572.24 KLD of industrial effluent and 261.04 KLD of domestic effluent) will be treated in CETP cum STP, for which they have proposed tanker system for carrying the effluent to CETP.</p> <p>The adjoining villages near Kala Amb shall be connected to CETP cum STP by 31.12.2020. The unit has also applied for consent to establish for CETP cum STP to HPSPCB.</p>
<p>3.</p>	<p>HPPCB shall continue to check the industries located in the catchment areas of Sukhna Nallah and Markanda River and action against the defaulting industries may be taken under the provisions of the Water Act, 1974.</p>	<p>HPPCB in Parwanoo area has inspected 91 industries during the period December, 2019 to February, 2020, out of which effluent samples of 38 industries have been collected and show cause notices have been issued to 4 violating industries. The parameters in the 2nd sample of one of the violating unit taken in the month of February, 2020 is now within permissible limits.</p> <p>HPSPCB is regularly monitoring the water polluting industries in Kala Amb area. HPSPCB has conducted 45 nos of inspection of water polluting industries in Jan & Feb, 2020. 35 nos of samples from final outlet of ETP/STP were collected from water polluting industries in Jan & Feb, 2020. Regular sampling of River Markanda and Jattanwala Nallah is being conducted by HPSPCB.</p>

<p>4.</p>	<p>Water quality of Sukhna Nallah and Markanda River at various locations may be checked on monthly basis.</p>	<p>Sukhna is a small Nallah carrying the wastewater from the Parwanoo town. The river passing through the town Parwanoo is Kaushalya. Regular water sampling of Kaushalya river is being done by HPSPCB.</p> <p>Water quality of Sukhna Nallah monitored during April, 2019 to November, 2019 indicated that there is improvement w.r.t. parameters DO, BOD & F.Coli. The water quality monitoring results of December,2019 and January, 2020 of Sukhna Nallah are complying with Class- B criteria.</p> <p>Water quality of river Markanda was monitored during August, 2019 to November, 2019 and its analysis results indicate that the water quality of River Markanda has been degraded in the month of November, 2019 w.r.t parameters namely F.Coli and T.Coli due to discharge of untreated sewage of Kala Amb area. Now there is improvement in the water quality of river Markanda.</p>
<p>5.</p>	<p>HPPCB shall ensure that septage and faecal sludge is disposed off in an environmentally sound manner. Action against the defaulting agencies/ individuals may be taken under the provision of the Water Act, 1974.</p>	<p>For the management of septage and faecal sludge, following steps have been taken:</p> <p>Necessary directions have been issued to MC Parwanoo & BDO Dharampur to ensure that septage and faecal sludge is managed in a scientific manner. Show cause notice to the local authorities i.e.Member Secretary, SADA and Project Officer DRDA are being issued for higher values of BOD, T. Coli and F. Coli in Jattanwala drain</p>

		<p>leading to Markanda River and further loading to river Ghaggar.</p> <p>The BDO Nahan, Kala Amb has taken 2 septic tanks under observation. 200 gms of specific enzymes have been put into each of septic tank for improving the treatment efficiency. HPSPCB has collected the sample of these septic tanks for analysis. The results are awaited. On the basis of results, the same practice shall be carried out in Jattanwala nallah for improving the water quality.</p> <p>The BDO Nahan in coordination with HPSPCB has identified 2 stretches in Jattanwala nallah for phytoremediation. HPSPCB has also contacted Dr. Dinesh Poswal and requested to visit the Jattanwala Nallah for suggesting the method for providing phytoremediation structure in the nallah. Dr. Dinesh Poswal helped in constructing STP Dharamshala which is based on root zone technology.</p> <p>The survey has been done, contour plan has been prepared of Jattan wala Nallah for providing phytoremediation structure</p>
<p>6.</p>	<p>Effective steps may be taken by the Department of Water Resources to maintain Environment Flow (E-Flow) in Markanda River and Sukhna Nallah.</p>	<p>To maintain Environmental flow in river/Nallah, following steps have been taken byHPPCB:</p> <p>The Real Time Water Quality Monitoring Station in River Markanda is installed and is connected to HPSPCB server. The real time data is being</p>

		<p>transmitted to State Board Server regularly.</p> <p>The RTWQMS along with Radar system for water quality monitoring and flow measurement, respectively, have been installed in river Kaushalya near village Kamli. The parameters DO, BOD, TSS, pH, Temp and flow rate are being monitored and results of the same are being displayed at State Board server on real time basis.</p> <p>The installed equipments are functioning properly.</p>
7.	HPPCB shall carryout the ground water sampling of the ground water sources located in the catchment area of Sukhna Nallah and River Markanda.	<p>Two ground water samples have been collected from the area located along Sukhna Nallah. No contamination of ground water has been observed as per the lab analysis results available till date.</p> <p>Regular ground water samples are collected by I&PH department and HPSPCB in the catchment area of River Ghaggar. Five samples have been collected in the month of February 2020. No contamination in ground water has been observed as per the lab analysis results available till date</p>
8.	For Water Shed Management, the Department of Forest shall commission 22 check dams and check walls in the catchment area of Sukhna Nallah by 30.09.2020. In the catchment area of River Markanda, 3 low height dams and 3 rain water harvesting structures shall be completed by 31.12.2020.	<p>For Watershed Management, following steps have been taken by the various departments/agencies:</p> <p>Workshop regarding Jal Shakti Abhiyan and Roof Top Harvesting at Common Facility Centre in Kala Amb Industrial Area was held on 01.10.2019.</p>

		<p>The compliance to the order of Hon'ble NGT is in process. Three industries namely M/s Akhil Enterprises, M/s Himsagar Labs Pvt Ltd, M/s Ruchira Printing and Packaging have provided their own roof top rain water harvesting collection system. The connectivity of their rain water harvesting systems to the IPH's dried borewells is in progress and will be connected before 25-03-2020.</p> <p>The catchment treatment work by rural department and forest department has been carried out in Dharampur Block in Solan District and Nahan Block in Sirmaur District to enhance the water recharge in the area as these rivers are having flow in non-monsoon season from the ground water.</p>
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4.1.3.4 U.T., Chandigarh

S.No.	Directions given/ recommendations made in the 16th meeting with State Level officers	Action taken report
1.	A new STP of capacity 2 MLD shall be completed by 31.12.2020.	Under tendering process
2.	6 STPs of capacity 53.85 MGD shall be upgraded to meet with the stringent norms by 31.12.2020	Tenders for upgradation of 5 STPs and their operation and maintenance to achieve the prescribed norms, have been invited by Chandigarh Smart City Ltd.
3.	MC Chandigarh and UT administration shall operate and maintain STPs in such	Tenders for upgradation of 5 STPs and their operation and

	a way that these may meet with the prescribed norms.	maintenance to achieve the prescribed norms, have been invited by Chandigarh Smart City Ltd.
4.	Necessary and effective arrangements may be made in the existing STPs to disinfect the coliforms so that these may be brought within the norms	The work for providing Chlorine Contact Tank has been allotted to the agency for STP Raipur Khurd and STP Dhanas. In addition to this, provisions have been made to use old Tanks of STP as additional chlorine Contact Tanks at 3BRD STP. Chlorine dosing shall be started by 30.5.2020 to achieve F.Coli parameter within the prescribed norms. The remaining STPs shall also be modified as per the prescribed norms w.r.t F- coli parameter by 31.3.2021
5.	Water quality of Sukhna choe, N- choe and river ghaggar may be monitored on monthly basis.	CPCC is regularly monitoring the water quality of Sukhna choe, N-choe and river Ghaggar on the monthly basis.
6.	CPCC and MC Chandigarh shall identify the areas if any, where online sanitation systems have been provided and prepare the comprehensive plan for management of septage and faecal sludge.	It is clarified that there is no septic tank or dry latrine pits in Chandigarh
7.	CPCC and MC Chandigarh shall identify stretches of Sukhna Choe and N-Choe, where the environmental flow can be maintained.	Sukhna Choe and N-Choe are seasonal Nallahs/ choes, therefore, environment flow cannot be maintained in these choes.
8.	CPCC and DLSTF shall inspect more industries of Chandigarh area and action against the violating industries	CPCC is conducting surprise inspections of the industries of Chandigarh area and strict action is taken against the violating

	may be taken under the provisions of water act, 1974.	industries. DLSTF is also doing inspections and action is taken against the non-complying industries.
9.	All the outlets, falling into Sukhna Choe and N- Choe, shall be closed by 15.2.2020.	All the outlets will be closed by 31.03.2020
10.	Health check up camps may be organized in the catchment area of Sukhna choe and N- choe.	Health check up camps are regularly being organized on quarterly basis.
11.	The minutes of the monthly meetings of DLSTF and quarterly meetings of State Level Committee may be uploaded on the website of CPCC.	Website of CPCC is under development and will be launched very soon. Thereafter, the minutes of the meetings will be uploaded. Presently, the minutes/reports of the meetings are being uploaded on ENVIS website for information.

4.1.4 Report on visit to assess the sources of pollution in river Ghaggar by the joint team comprising of officers of CPCB, PPCB and HSPCB on 28.12.2019 and 29.12.2019

The Executive Committee in its 15th meeting held with State Level Committee of State of Punjab on 18.11.2019, while considering the data w.r.t BOD parameter in the river Ghaggar water for the month of Jan to Oct, 2019, it was observed that the value of BOD at Rattanheri has been found to be reduced from 55.5 mg/l to 26.10mg/l, whereas the said value has been increased to 33.6 mg/l at the downstream of Sagarpura drain and other points.

The Chairman of the Executive Committee took a serious view of the matter and constituted a team consisting of Member Secretary, PPCB, Sh. J.C. Babu, Additional Director, CPCB, Sh. S.S. Matharu, Environmental Engineer, PPCB, Sh. J.P. Singh, Environmental Engineer, HSPCB to carry out the detailed study of the pollution sources situated in the jurisdiction of State of Haryana and State of Punjab which are responsible for contributing high value of BOD in River Ghaggar at downstream of Sagar Para drain and other points.

The observations, made by the joint team, are briefly mentioned as under:

Observations

- 1)** During the visit of the sub Committee, Sukhna Choe was found carrying sewage of UT Chandigarh, Panchkula area and untapped points of Zirakpur area. The analysis results of Sukhna choe effluent was found containing high level of BOD as 124 mg/l. The Chairman of the Executive Committee observed that there is need to conduct detailed survey of Sukhna Choe to check as to whether various outlets of UT Chandigarh have been closed. Similarly, detailed investigation of the area under Panchkula and Zirakpur is also needed to be carried out. Therefore, the Chairman of the Executive Committee desired that CPCC, HSPCB and PPCB shall get detailed survey of Sukhna Choe, point sources of Panchkula area and untapped points of Zirakpur area. Accordingly, the issues be taken up with the concerned departments responsible for release of untreated sewage/ effluent into Sukhna Choe and river Ghaggar.
- 2)** It was reported that 32 washing cum screening plants in the revenue estate of Village Mubarikpur exists. These bajri/ sand washing plants of Mubarikpur near PWD Rest House (Punjab area) were found discharging their entire wastewater into river Ghaggar without any settling and no arrangements to recirculate the wastewater has been made. The Chairman of the Executive Committee took the matter seriously and desired that the Chairman, PPCB shall take immediate action against these defaulting washing cum screening plants and shall ensure that no untreated/ unsettled wastewater from these plants is discharged.
- 3)** The report indicates that in river Ghaggar at bridge on Chandigarh Ambala Highway, the people perform religious rites and throw Pooja material into river Ghaggar and thus contaminating its water quality. The solid waste was also found dumped along the bank of river Ghaggar. The Chairman of the Executive Committee desired that the Department of Water Resources shall take up the matter regarding removal of solid waste dumped along the bank of river Ghaggar and prohibition on throwing of pooja material into river Ghaggar. The said solid waste material shall be removed by the Department of Water Resources within 15 days.
- 4)** The analysis results of effluent sample of STP at Focal Point, Dera Bassi indicating high values of BOD as 58 mg/l was taken seriously by the Chairman of the Committee and directed that the Chairman, Punjab Pollution Control Board shall take up the matter with Managing Director, PSIEC for ineffective operation of STP and utter failure of PSIEC for disposal of treated wastewater.
- 5)** Lot of solid waste/ ETP sludge probably from electroplating industries was found dumped on the back side of the focal point, Dera Bassi, for which the Chairman of

the Committee observed that the departments are not serious to have check on the industries and disposal of the sludge in Focal Point. It was desired by the Chairman of the committee that the Chairman, PPCB shall take up the matter with Managing Director, PSIEC for removal of sludge from Focal Point and action against the recalcitrant industries be taken under the provisions of the Hazardous Waste Management Rules, 2016 and Solid Waste Management Rules, 2016.

- 6) In Jharmal Choe odour causing scum was observed which may be from the industries located along the said Choe. The Chairman, PPCB shall get inspect the industries of Dera Bassi existing along the Jharmal Choe and its adjoining areas and take legal action against the defaulting industries if found discharging such kind of contaminated effluent.
- 7) The analysis results of wastewater samples collected from Patiala Nadi were found quite alarming mentioning BOD: 3575 mg/l, COD: 20,000 mg/l and TSS: 922 mg/l. The Chairman of the Executive Committee took the matter seriously and is of the view that the industries of Patiala area are responsible for generating such type of effluent flowing into Patiala Nadi. The Executive Committee during its visit to Patiala area on 28.05.2019 had already made its observations about the non performance of effluent treatment plant of the industries and accordingly action against the defaulting industries was recommended. It has been desired by the Chairman of the Executive Committee that Chairman, PPCB shall look into the matter personally and action against the defaulting industries be taken as per the provisions of the Water Act, 1974.
- 8) The effluent sample collected from the channel carrying treated sewage of STP Ratia town indicating BOD as 28 mg/l was observed to be taken into consideration especially to bring down the BOD to 10 mg/l so that it may be brought down to nearly 3 mg/l after dilution of the river Ghaggar water. Haryana State Pollution Control Board shall look into the matter and take appropriate action in this regard.
- 9) Similarly, there is need to check the quality of river Ghaggar water at upstream and downstream of Sardulgarh STP especially in view of the coloured effluent flowing in the drain. PPCB shall re assess the quality of water of river Ghaggar at Sardulgarh.

Accordingly, copy of report of joint team has been sent to Chairman PPCB, HSPCB and UT Chandigarh to take necessary action on the observations of joint team.

4.2 Current Status w.r.t. performance of existing STPs, installation of new STPs, upgradation of existing STPs, status of STPs where no funds have been tied up, gap in treatment of Sewage, utilization of treated sewage for irrigation and installation of STPs for treatment of sewage of villages, inspection of industries by the regulatory bodies, water quality of river Ghaggar, water quality of ground water sources on catchment area of river Ghaggar etc.

4.2.1 State of Punjab

4.2.1.1 Performance of existing Sewage treatment plants

30 towns have been identified, which are directly/ indirectly discharging their sewage into river Ghaggar. In these 30 towns, 43 STPs are required to be installed. Presently, 21 STPs in 18 towns have been installed and are in operation. The performance status of these 21 STPs, as per analysis results of treated sewage for the month of December 2019 to February 2020, is as under:

Sr. No.	Name of the Town	Capacity of STP	Performance w.r.t. parameters BOD, TSS, and F. Coil		
			Dec, 2019	Jan, 2020	Feb, 2020
1.	Zirakpur	17	Non-Compliant (w.r.t BOD, TSS & F.Coli)	Sample not collected	Non-Compliant (w.r.t BOD, TSS & F.Coli)
2.	Mohali	45.4	Compliant	Compliant	Compliant
3.	Banur	4	Non-Compliant (w.r.t BOD & F.Coli)	Compliant	Compliant
4.	Lalru	1.5	Sample not collected	Sample not collected	Compliant
5.	Derabassi	4	Non-compliant (w.r.t BOD & F.Coli)	Compliant	Compliant
6.	Samana	10	Compliant	Compliant	Compliant
7.	Patran	4	Compliant	Compliant	Compliant
8.	Rajpura	7	Compliant	Compliant	Compliant
9.		10	Compliant	Compliant	Compliant
10.	Patiala	46	Compliant	Compliant	Compliant
11.		10	Compliant	Compliant	Compliant
12.		13	Compliant	Compliant	Compliant
13.	Sunam	8 MLD	Compliant	Compliant	Compliant
14.	Khanauri	3 KLD	Compliant	Compliant	Compliant
15.	Lehra	4 KLD	Compliant	Compliant	Compliant
16.	Moonak	3 MLD	Compliant	Compliant	Compliant
17.	Sardulgarh	3.0	Non-Compliant (w.r.t. BOD)	Non-Compliant (w.r.t. BOD & F.Coli.)	Non-Compliant (w.r.t. BOD & F.Coli.)
18.	Mansa	14.5	Compliant	Compliant	Compliant
19.	Bhikhi	3.0	Compliant	Compliant	Non-Compliant (w.r.t. BOD & F.Coli.)
20.	Budhlada	6.5	Compliant	Compliant	Compliant
21.	Bareta	3.0	Non-Compliant (w.r.t. BOD)	Non-Compliant (w.r.t. BOD.)	Non-Compliant (w.r.t. BOD & F.Coli.)

The above data indicate that out of these 21 STPs installed for 18 towns, 03 STPs for 3 towns (Zirakpur, Bareta, and Sardulgarh) are not complying with

BOD, TSS and F.Coli parameters for all the 3 months (Dec, 2019 to Feb, 2020). Other 18 STPs of 15 towns have been found complying with prescribed norms w.r.t. BOD, TSS and F.Coli parameters.

4.2.1.2 Status of STPs under construction

Sr. no.	Name of the town	STP Capacity (MLD)	Target date of completion/commissioning	% work done	
				Earlier status as on 15/12/ 2019 (% work done)	Current status as on 29/02/2020 (% work done)
1.	Boha	2	31.03.2021	15%	41%
2.	Dhuri	5	30.04.2021	20%	20%
3.	Sangrur	4	30.04.2021	20%	25%
4.	Bassi Pathana	3	30.04.2021	8%	10%
5.	Sirhind	5	30.04.2021	Pond water Diversion in progress	Pond water Diversion in progress
6.		4	30.06.2021	8%	10%
7.		2	30.06.2021	10%	14%
8.	Patiala	15	30.04.2021	Work started	35%

The above data indicate that construction work of 8 STPs (40 MLD) for 6 towns as mentioned above has been increased from 8-20% to 10-41% during the last two months. PWSSB has claimed that these STPs shall be completed by 30.06.2021. However, the Executive Committee recommends that these 8 STPs should be completely by 31.03.2021.

4.2.1.3 Status of STPs under planning and funds tied up

Sr. no.	Name of the town	STP Capacity (MLD)	Target date of completion/commissioning	Earlier status as on 15.12.2019	Current status as on 29.2.2020
1.	Cheema	2	31.12.2020	• Tender called. To be opened on 24.12.2019	• Single Tender received & under process.
2.	Nabha	12	30.6.2021	• Tender called. To be opened on 20.12.2019	• Single Tender received & under process.
3.	Longowal	5	31.10.2020	• Tender called. To be opened on 24.12.2019	• Single Tender received & under process.
4.	Amlloh	3	31.12.2020	• Case for final approval for land is in process in DLG Office.	• Approval received & payment of same is under process.
5.	Dera bassi (Mirpur)	2	31.10.2020	• Tenders were called but rejected as rates were on higher side now DNIT revised and is under approval.	• Tender received & under process..
6.	Dera Bassi (Issapur)	2	31.10.2020	• Tenders were called but rejected as rates were on higher side now DNIT revised and is under approval.	• Tender received & under process.
7.	Lalru (Dappar)	1	31.10.2020	• DNIT being revised due to eligibility criteria.	• Tender called & will be opened on 26.03.2020.
8.	Lalru (Mandi)	1.5	Land Issue	• Court case by residents.	• Court case by residents.

				<ul style="list-style-type: none"> Next date is 20.01.2020 for defence evidence. 	<ul style="list-style-type: none"> Next date is 20.04.2020 for defence evidence.
9.	Ghanaur	2	31.10.2020	<ul style="list-style-type: none"> Tenders were called but rejected as rates were on higher side now DNIT revised and is under approval. 	<ul style="list-style-type: none"> Tender received & under process.
10.	Dhuri	6	30.11.2020	<ul style="list-style-type: none"> Land arrangement under process by MC, Dhuri. Panchayat land identified. The case is being sent by DC, Sangrur to Govt. for approval. 	<ul style="list-style-type: none"> Rates received are on higher side. DC Sangrur had convened meeting & in the meeting it was decided that process of compulsory acquisition of land be initiated.
11.	Sangrur	11	30.11.2020	<ul style="list-style-type: none"> Land feasibility report submitted to EO, MC Sangrur. Now the case to be sent to DC Office by EO for price fixation. 	<ul style="list-style-type: none"> Rates received are on higher side. DC Sangrur had convened meeting & in the meeting it was decided that process of compulsory acquisition of land be initiated.
12.	Bassi Pathna	0.2	30.06.2022	<ul style="list-style-type: none"> As decided in the meeting held with SDM on 24.10.19, process started to transfer Govt. land. 	<ul style="list-style-type: none"> As decided in the meeting held with SDM on 24.10.19, process started to transfer Govt. land. DC has written to Khadi Board for transfer of land. Resolution for acquisition of land also passed in the house meeting, Bassi Pathana on 23.12.2019
13.	Gholu Majra	0.30	31.12.2020	<ul style="list-style-type: none"> Details of new technology explored by Punjab Pollution Control Board received vide letter no. 16891-92, dated 25.07.19. Proposal under preparation. 	<ul style="list-style-type: none"> Tenders expected to be called by 30.04.2020.
14.	Lalru(Chaun dheri & Samalheri)	0.30	31.12.2020	<ul style="list-style-type: none"> Details of new technology explored by Punjab Pollution Control Board received vide letter no. 16891-92, dated 25.07.19. Proposal under preparation. 	<ul style="list-style-type: none"> Tenders expected to be called by 30.04.2020.
15.	Lalru	0.15	30.06.2022		<ul style="list-style-type: none"> DNIT under preparation.
16.	Bhadson	3	31.12.2021	<ul style="list-style-type: none"> Sewerage system does not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds. 	<ul style="list-style-type: none"> Tenders expected to be called by 30.04.2020.

17.	Sanaur	4	31.12.2021	Sewerage system does not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.	Tenders expected to be called by 30.04.2020.
18.	Banur (Bassi Issay Khan)	0.5	30.06.2021		Tenders opened and are under process
19.	Banur (fauji Colony)	0.15	30.06.2021		Tenders expected to be called by 30.04.2020.
	Total	56.1			

The Executive Committee recommends that 19 STPs (56.1 MLD) for 14 towns for which funds have been tied up, should be completed and commissioned by 31.03.2021.

4.2.1.4 STPs which require technologically upgradation and funds yet to be tied up

Sr. no.	Name of the town	Present capacity of STP (MLD)	Capacity to be upgraded technologically	Target date for completion / commissioning	Current status as on 15.12.2019	Current status as on 15.03.2020
1.	Baretta	3	3	31.12.2021	Funds not tied up. Case sent to Govt. of Punjab for arrangement of funds. In meeting held on 17.07.2019 of District Level Task Force, it has been desired to prepare DPR on SBR technology, therefore, DPR being again prepared.	No further progress
2.	Bhikhi	3	3	31.12.2021	Funds not tied up. Case sent to Govt. of Punjab for arrangement of funds. In meeting held on 17.07.2019 of District Level Task Force, it has been desired to prepare DPR on SBR technology, therefore, DPR being again prepared.	No further progress
3.	Sardulgarh	4	4	31.12.2021	Funds not tied up. Case sent to Govt. of Punjab for arrangement of funds. In meeting held on 17.07.2019 of District Level Task Force, it has been desired to prepare DPR on SBR technology, therefore, DPR being again prepared.	No further progress

4.	Mohali	45.5	45.5	--	GMADA is yet to submit the scheme for upgradation of existing UASBbased technology STP.	No further progress
5	MES Patiala	6	6	31.1.2021	Tendering process started	No further progress
6	MES Nabha	1.0	1.0	31.3.2021	Tendering process started	No further progress
	Total	62.5	62.5			

The Executive Committee recommends that Department of Local Government shall take up the matter with Department of Finance, Punjab for arrangement of funds. These funds be transferred to PWSSB by 31.05.2020 and PWSSB shall ensure that STPs for 6 towns of capacity 62.5 MLD are upgraded by 31.03.2021.

4.2.1.5 Gaps in treatment of sewage of the towns located on river Ghaggar

Sr. No	Name of Town	Sewage generation (Present) (MLD)	Present Capacity of STP (MLD)	Gap in sewage quantity to be treated (MLD)
1.	Banur	4.65	4	0.65
2.	Baretta	2.13	3	0
3.	Bhikhi	2.52	3	0
4.	Budhlada	5.5	6.5	0
5.	Khanauri	1.82	3	0
6.	Lehragaga	2.92	4	0
7.	Mandi Gobindgarh	10.02	25	0
8.	Moonak	2.34	3	0
9.	Mohali	24.35	45.4	0
10.	Patiala	70	46	14
			10	
			13	
11.	Patran	3.7	4	0
12.	Rajpura	14.32	10	0
			7	
13.	Samana	6.95	10	0
14.	Sardugarh	2.69	4	0
15.	Sunam	7	8	0
16.	Zirakpur	34.3	17.3	17
17.	Bassi Pathana	2.53	0	2.53
18.	Boha	1.63	0	1.63
19.	Lalru	4.75	1.5	3.25
20.	Dera bassi	5.77	4	1.77
21.	Sirhind	7.54	0	7.54
			0	
			0	
22.	Amlloh	2.28	0	2.28
23.	Cheema	1.5	0	1.5
24.	Dhuri	7.19	0	7.19
25.	Sangrur	11.32	0	11.32

26.	Nabha	7.81	0	7.81
27.	Longowal	3.26	0	3.26
28.	Sanaur	2.8	0	2.8
29.	Bhadson	0.93	0	0.93
30.	Ghanour	0.8	0	0.8
	Total	261.32	231.7	86.26

The Executive Committee recommends that the Department of Local Govt., Punjab and other concerned agencies of the State shall make necessary arrangements for planning, designing and installation of 17 new STPs to treat the gap (86.26 MLD) in sewage quantity by 31.03.2021.

4.2.1.6 Comparison of water quality of River Ghaggar in terms of average values of BOD, D.O and T.Coli, (September to November, 2019 and December to February, 2020).

Sr. No.	Sampling location	Average values of the parameters as monitored in the month of September to November, 2019			Average values of the parameters as monitored in month of December to February, 2020			Improvement in the water quality of river Ghaggar w.r.t. to parameters
		BOD	DO	T. Coli	BOD	DO	T. Coli	
1.	Mubarikpur Rest House	5.67	5.96	18000	8	6.43	17333	Improvement w.r.t DO and T.coli
2.	Bhankarpur	17.33	3.9	24666	32.33	4.57	24333	Improvement w.r.t DO parameter
3.	Chattbir	16.67	4.13	24000	20	4	25666	No improvement
4.	U/s Jharmal Nadi	11.33	4.2	18666	8.67	4.47	19333	Improvement w.r.t BOD and DO parameter
5.	D/s Jharmal Nadi	17.33	3.26	20000	20	2.67	24666	No improvement
6.	U/s Dhakanshu Nallah	6.7	4.1	17333	14.7	3.4	16000	Improvement w.r.t T.coli parameter
7.	D/s Dhakanshu Nallah	15	3.3	22333	19.3	3	26666	No improvement
8.	Rattanheri	12	4.1	24666	22.7	2.6	32666	No improvement
9.	U/s sagar para Drain	12.3	4.1	24666	21.7	2.7	29000	No improvement
10.	D/s Sagar Para Drain	16.3	3.5	30333	27	2.2	35333	No improvement
11.	Khanauri2.8	18	3.46	24666	25.33	2.83	26666	No improvement
12.	Moonak	16.33	3.3	30333	25	2.96	32666	No improvement
13.	U/s Sardulgarh	11.6	5.73	13000	13.33	3.8	20000	No improvement
14.	D/s Sardulgarh	16.3	5.16	20000	14	3.06	24333	Improvement w.r.t BOD parameter

The above data indicate that there is no significant improvement in the water quality of river Ghaggar during the period December to February, 2019 w.r.t BOD and DO parameters and no improvement w.r.t Total coliform parameter has been found at 12 locations out of total 14 locations of river Ghaggar.

PPCB shall monitor all the STPs of the towns located in the catchment area of river Ghaggar w.r.t parameters namely BOD, TSS and F.Coli by 31.05.2020 and legal action be taken along with Environment Compensation of suitable amount be imposed on the operator of the STPs.

4.2.1.7 Ground Water Quality in the catchment area of river Ghaggar

PPCB has carried out groundwater sampling at 11 locations located in the vicinity of river Ghaggar after monsoon season. The results indicate that the water quality of 01 tubewell is not potable and as such this tubewell is required to be capped. Also, the concentration of iron in 01 handpump sample has been much beyond the prescribed limits, which is also required to be capped.

The Executive Committee recommends that these 02 ground water sources should be sealed by the PPCB by 07.04.2020 and a display board with caption "Water is not fit for drinking purposes" should be erected at the site.

4.2.1.8 Status of Irrigation schemes for STPs

A) Towns/STPs where Irrigation Projects Commissioned

S. no.	Town	Name of STP	Capacity (MLD)	Command Area (ha)
1	Banur	Banur	4	120
2	Baretta	Baretta	3	150
3	Bhikhi	Bhikhi	3	165
4	Samana	Samana	10	324
5	Sardulgarh	Sardulgarh	4	128
6	Sunam	Sunam	8	240
7	Lehragaga	Lehragaga	4	110
8	Moonak	Moonak	3	70
9	Patran	Patran	4	120

To utilize the treated sewage of 43 MLD of 9 towns, irrigation schemes, with command area 1427 hectares of land, have been commissioned.

B) Towns/STPs where Irrigation Projects Under Progress

S. No.	Town	Name of STP	Capacity (MLD)	Completion date	Command Area (ha)	Earlier status as on 15.12.2020	Current Status as on 29.02.2020
1	Khanauri	Khanauri	3	30.6.2020	115	70% work completed	80% work completed
2	Rajpura	Rajpura -II	7	31.5.2020	185	75% work completed	80% work completed

To utilize the treated sewage (10 MLD) of 2 towns, irrigations schemes are under progress and the work has been completed upto 80%. The Executive Committee recommends that these irrigations schemes should be completed by 31.05.2020.

C. Towns/STPs where Irrigation Projects have been sanctioned

S. no.	Name of the Town	Name of STP	Capacity (MLD)	Command Area (ha)	Earlier Status as on 15.12.2019	Current status as on 29.02.2020
1	Mandi Gobindgarh	Mandi Gobindgarh	25	925	Sanctioned under RIDF-25, funds not released yet	Mobilization advance released by NABARD. Proposal has been sent to Finance
2	Patiala	Patiala- II	10	444		

3	Dhuri	Dhuri - I	5	185	Department through A.C.S. (D) for release of funds to this department
4	Sangrur	Sangrur -II	11	407	

The Executive Committee recommends that the Department of Soil and Water Conservation shall take up the matter with the Department of Finance, Punjab for early release of funds so that work of laying of irrigation network to utilize the treated sewage of 4 towns (51 MLD) may be started by 01.05.2020 and completed by 30.09.2020.

D. Towns/STPs where funds not tied up for Irrigation Projects

Sr. no.	Name of the Town	Name of STP	Capacity (MLD)	Current status as on 29.02.2020
Commissioned STPs				
1	Rajpura	Rajpura -II	10	Funds Not Tied up yet
2	Lalru	Lalru	1.5	
3	Patiala	Patiala -I	46	
4		Patiala - III	13	
Under Progress STPs				
1	Boha	Boha	2	Funds Not Tied up
2	Cheema	Cheema	2	
3	Bhadson	Bhadson	3	
4	Nabha	Nabha	12	
5	Dhuri	Dhuri -II	6	
6	Sangrur	Sangrur - I	4	
7	Bassi Pathana	Bassi Pathana	3	
8	Longowal	Longowal	3	
9	Amloh	Amloh	3	
10	Dera Bassi	Dera Bassi -I	2	
11	Dera Bassi	Dera Bassi -II	2	
12	Lalru	Lalru (Mandi)	1.5	
13		Lalru (Dappar)	1	
14		Lalru (Gholu Majra)	0.35	
15		Lalru (chaundheri Samalheri)	0.35	
16	Sanour	Sanour	4	
17	Ghanaur	Ghanaur	2	
18	Sirhind	Sirhind - I	2	
19		Sirhind -II	4	
20		Sirhind -III	5	

The Executive Committee recommends that funds for laying of irrigation network to utilize the treated sewage of 24 STPs in 20 towns (132.7 MLD) for irrigation may be tied up by the State of Punjab by 31.05.2020 and funds for irrigation network for these towns may be released by 31.08.2020 so that irrigation schemes may be completed by 31.03.2021 i.e. simultaneously alongwith commissioning of STPs.

E. Towns/STPs where Irrigation Projects not feasible

S. no.	Name of the Town	Name of STP	Capacity (MLD)	Earlier status as on 15.12.2019	Current Status as on 29.02.2020
1	Budhlada	Budhlada	6.5	Farmers not willing to use water	Not feasible
2	Zirakpur	Zirakpur	17	Urbanized land, no irrigation command available. New STP being set up at other location, irrigation scheme proposed from that STP	Not feasible
3	SAS Nagar	SAS Nagar	45.4	Urbanized land, no irrigation command available.	Not feasible
4	MC Dera Bassi	MC Dera Bassi	4	Urbanized land, no irrigation command available.	Not feasible

The Executive Committee recommends that the treated sewage (72.9 MLD) of these 04 towns may be utilized by the concerned Municipal Councils for construction activities, gardenings, vehicle cleaning, road cleaning and toilet flushing etc. The Department of Local Govt. shall issue necessary directions in this regard to the concerned Municipal Councils.

4.2.1.9 Action taken against the operating agencies w.r.t non compliance of STPs during the period December to February, 2020

Town	Technology	Reason for non compliance	Action Taken
Banur (4MLD)	MBBR	Not achieving the parameters namely BOD and F.coli.	The Board has issued advisory notice under the Water Act, 1974 to the PWSSB.
Zirakpur (17 MLD)	SBR	Not achieving the parameters namely BOD and F.coli.	Action is under process against the operator of the STP and PWSSB.
Derabassi (4 MLD)	SBR	Not achieving the parameters namely BOD and F.coli.	The PWSSB, MC Derabassi and GMADA was issued notice under the Water Act, 1974 along with joint opportunity of personal hearing on 25.2.2020 by the Board. In this hearing GMADA was advised to maintain and operate the STP properly and effectively to achieve the prescribed standards.
Derabassi (2MLD PSIEC)	MBBR	Not achieving the parameters namely BOD and F.coli	The PSIEC was given personal hearing by the competent authority of the Board on 21/01/2020 wherein it was decided to levy the environmental compensation to the PSIEC for the period of 05/12/2019 to 21/01/2020.
Sardulgarh (3MLD)	WSP	Not achieving the parameters namely BOD and F.coli	Action under the Water Act, 1974 is under process.
Bhikihi (3MLD)	WSP	Not achieving the parameters namely BOD and F.coli	A complaint under the Water Act, 1974 has been filed in the Hon'ble court of law against the responsible person.

Bareta (3MLD)	WSP	Not achieving the parameters namely BOD and F.coli	Action under the Water Act, 1974 is under process.
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The Executive Committee recommends that following departments shall take immediate action to improve the functioning of STPs.

- i) PWSSB shall improve the performance of STPs Banur (4MLD), Dera Bassi (4 MLD) and Zirakpur (17 MLD) by 30.04.2020.
- ii) PSIEC shall improve the functioning of 2 MLD STP for Dera Bassi by 30.04.2020 and utilize the treated sewage for irrigation by 31.05.2020.
- iii) STPs for the towns Sardulgarh (3MLD), Bhikhi (3 MLD) and Bareta (3MLD), which are based on WSP technology, should be upgraded by 31.03.2021.

4.2.1.10 Inspection of industries by District Level Special Task Force during the period December, 2019 to February, 2020 and the action taken against defaulting industries.

By PPCB

Month	No. of industries inspected	No. of non-complying industries	Action taken against the industry
December, 2019	12	0	NR
January, 2020	4	0	NR
February, 2020	7	0	NR

By District Level Special Task Force

No industrial unit was visited by the District Level Special Task Force of District SAS Nagar, Patiala, Sangrur and Mansa during the period December, 2019 to February, 2020.

4.2.1.11 Status of installation of STPs for the villages.

389 villages have been identified which are discharging their wastewater directly/ indirectly into River Ghaggar. The Action Plan for installation of treatment system in these villages is as under:

Total no. of villages	Phase-I			Phase-II			Phase-III		
	No. of village covered	Funds required in Rs Crores	Timelines for completions	No. of village covered	Funds required in Rs Crores	Timelines for completions	No. of village covered	Funds required in Rs Crores	Timelines for completions
389	87	26.10	1/3/19 to 30/6/20	152	45.6	1/3/20 to 30/6/21	150	45	1/3/21 to 30/6/22

As per above details, out of 87 villages taken in first phase, the treatment system for 23 villages has been completed and in other 5 villages, the work of construction of treatment system is under progress.

Details of 28 villges, where STPs have been completed/ under progress

S.No.	District	Block	Village	Discharge in KLD	Directly/ Indirectly Discharge	STATUS
1	Sangrur	Bhawanigarh	Kalajhar	141	Ghaggar	COMPLETED
2	Sangrur	Bhawanigarh	Rasoolpur Chana	44	Ghaggar	COMPLETED
3	Sangrur	Bhawanigarh	Santokh Pura	31	Ghaggar	COMPLETED
4	Sangrur	Bhawanigarh	Jalan	85	Ghaggar	COMPLETED
5	Sangrur	Bhawanigarh	Jollian	74	Ghaggar	COMPLETED
6	Sangrur	Bhawanigarh	Fatehgarh bhadson	96	Ghaggar	COMPLETED
7	Sangrur	Bhawanigarh	Panwan	101	Ghaggar	COMPLETED
8	Sangrur	Bhawanigarh	Sakroudi	142	Ghaggar	COMPLETED
9	Sangrur	Bhawanigarh	Sajuma	60	Ghaggar	COMPLETED
10	Sangrur	Sunam	Sheron	319	Ghaggar	COMPLETED
11	Sangrur	Dirba	Sefipur Kalan	302	Ghaggar	COMPLETED
12	Sangrur	Bhawanigarh	Mehsampur	76	Ghaggar	COMPLETED
13	Sangrur	Bhawanigarh	Dittupur	18	Ghaggar	COMPLETED
14	Sangrur	Bhawanigarh	Nandgarh	52	Ghaggar	COMPLETED
15	Sangrur	Dirba	kamalpur	226	Ghaggar	COMPLETED
16	Sangrur	Bhawanigarh	Kheri Chandwan	52	Ghaggar	COMPLETED
17	Sangrur	Bhawanigarh	Munshiwala	53	Ghaggar	COMPLETED
18	Sangrur	Bhawanigarh	Bharaj	66	Ghaggar	COMPLETED
19	Sangrur	Bhawanigarh	Lakhewal	43	Ghaggar	COMPLETED
20	Patiala	Patran	Baras	933	Ghaggar	COMPLETED
21	Patiala	Patran	Hariau Khurd	446	Ghaggar	COMPLETED
22	Patiala	Patran	Hamjheri	831	Ghaggar	COMPLETED
23	Patiala	Patran	Chunagran	690	Ghaggar	COMPLETED
24	Sangrur	Bhawanigarh	Channo	126	Ghaggar	IN PROGRESS
25	Sangrur	Bhawanigarh	Gharachon	674	Ghaggar	IN PROGRESS
26	Sangrur	Sunam	Satoj	229	Ghaggar	IN PROGRESS
27	Sangrur	Sunam	Dharamgarh	118	Ghaggar	IN PROGRESS
28	Sangrur	Sangrur	Changal	156	Ghaggar	IN PROGRESS

- a) Out of 87 villages taken in phase I, treatment system in 23 villages has been completed and work of installation of treatment system in 5 villages is under progress. The Executive Committee recommends that STPs in the remaining 5 villages should be completed by 30.06.2020.
- b) For installation of STPs for the remaining 59 villages covered under phase-I, Rs. 50 Crores have been sanctioned but the said amount has not been released so far.

The Executive Committee recommends that Principal Secretary, Govt. of Punjab, Department of Rural Development and Panchayat shall take up the matter with the Department of Finance, Punjab for early release of funds for installation of STPs for the remaining 59 villages covered in Phase-1.

4.2.1.12 Status of Health check up camps organized during the month December, 2019 to February, 2020.

Name of the District	No. of Health camps organized	No. of patient checked	No. of patient found suffered from water borne diseases
Patiala	12	2287	29 patients were diagnosed with mild water borne diseases.
SAS Nagar	6	335	56 patients were diagnosed with mild water borne diseases.
Sangrur	8	280	9 patients were diagnosed with mild water borne diseases.
Mansa	7	224	NIL
Total	33	3126	94

The above data indicate that out of 3126 patients checked during health check up camps, 94 patients were found suffered with water borne diseases.

The Executive Committee recommends that safe drinking water may be supplied to the villages, where the patients have been found suffered with water borne diseases, by the Department of Water Supply and Sanitation by 30.06.2020.

4.2.1.13 Information, Education & Communication (IEC) activities

The IEC activities performed by Regional Offices of the Punjab Pollution Control Board in the catchment area of river Ghaggar are as under.

S. No.	Name of the Regional Office of PPCB	Date on which camp was organized for IEC activities	Activities performed
1.	SAS Nagar	16/12/2019,18/12/2019,10/01/2020 15/01/2020,12/02/2020 and 22/02/2020	Created awareness to the residents of the area and to the villagers about the quality of river Ghaggar in the health camps itself and also by holding meetings with the industrial associations.
2.	Patiala	10.12.2019,20.12.2019,07.01.2020 15.01.2020,24.01.2020,28.01.2020 11.02.2020 and 22.02.2020	Created awareness to the residents of the area and to the villagers about the quality of river Ghaggar in the health camps itself.
4.	Bathinda	10.12.2019,14.12.2019,31.12.2019, 08.01.2020,31.01.2020,22.02.2020 and 25.02.2020	Created awareness to the residents of the area and to the villagers about the water born diseases, Hepatitis A, Hepatitis B, Hepatitis C, TB.

The Executive Committee recommends that the PPCB and Department of Local Govt shall organise more IEC activities to create public awareness about water quality of River Ghaggar, Ground water quality along River Ghaggar, water borne diseases, utilization of treated sewage for irrigation and less consumption of water for domestic usage to reduce hydraulic load on STP and energy saving.

4.2.1.14 Environmental Flow

It has been reported that a meeting was held by the member Secretary, PPCB with Chief Engineer (Canal) and Chief Engineer (Drainage) on 15.1.2020 regarding maintaining e-flow in river Ghaggar. During discussions, Chief Engineer (Canal) informed that river Ghaggar is non perennial water body as the State of Haryana has constructed Kaushalya Dam in river Sarawati due to which no fresh water is coming from Himachal Pradesh. In this meeting, it was decided that the department of Water Resources shall take up matter with State of Haryana, HP and BBMB to explore the possibility of getting fresh water (snow/rain fed) to maintain E-flow in river Ghaggar.

However, the Executive Committee recommends that check dams/ storage ponds be constructed in the catchment area of River Ghaggar by the Department of soil and water conservation by 31.03.2020 so as to maintain e-flow in River Ghaggar.

4.2.1.15 Septage and Faecal Sludge management

Most of the villagers / undeveloped colonies of cities or towns have started using septic tanks (online sanitation system) and soakage pit in their houses. The septic tanks contain 3 type of waste i.e. faecal sludge, septage and supernatant. The septage and faecal sludge are non-stabilized matter having obnoxious smell and are a big source of faecal coliform, which contaminate the underground water or water body, when these are discharged indiscriminately. Thus, there is a need to identify online sanitation system provided in the rural areas and other under developed colonies of the cities.

The Executive Committee recommends that PPCB shall take following action:

- a) To identify the source of generation of Septage and Faecal sludge from rural and urban area and quantify the quantity of septage /faecal sludge extracted per month by 31.05.2020.
- b) To prepare comprehensive plan to dispose off these materials in an environmently sound manner by 30.06.2020.
- c) To identify the nearby STPs where the regulated quantity of septage/ faecal sludge can be taken for treatment by 30.06.2020.

4.2.1.16 Removal of solid waste from river Ghaggar and drains/Nallah falling into it.

The Executive Committee recommends that PPCB, Department of Rural Development and Panchayat and Department of Water Resources (drainage) shall jointly survey river Ghaggar and its tributaries and identify the stretches, where the solid waste is found dumped. The survey may be completed by 31.03.2020 and action to lift these solid wastes from river Ghaggar and its tributaries be taken by the Departments Water Resources by 31.05.2020.

4.2.2 U.T Chandigarh

4.2.2.1 Performance of existing STPs (w.r.t. parameters: BOD, TSS and F.Coli).

a) RAIPUR KHURD STP OUTLET (5.63 MLD)

BOD (mg/l)			TSS (mg/l)			Faecal Coliform (MPN/100ml)		
Dec, 2019	Jan, 2020	Feb, 2020	Dec, 2019	Jan, 2020	Feb, 2020	Dec, 2019	Jan, 2020	Feb, 2020
82	123	119	82	83	160	4×10^6	1.7×10^6	1.7×10^6

b) 3 BRD STP (49.5 MLD)

BOD (mg/l)			TSS (mg/l)			Faecal Coliform (MPN/100ml)		
Dec, 2019	Jan, 2020	Feb, 2020	Dec, 2019	Jan, 2020	Feb, 2020	Dec, 2019	Jan, 2020	Feb, 2020
29	80	27	42	51	69	7.0×10^5	7.9×10^5	1.09×10^6

c) RAIPUR KALAN STP OUTLET (22.5 MLD)

BOD (mg/l)			TSS (mg/l)			Faecal Coliform (MPN/100ml)		
Dec, 2019	Jan, 2020	Feb, 2020	Dec, 2019	Jan, 2020	Feb, 2020	Dec, 2019	Jan, 2020	Feb, 2020
84	104	60	17	25	40	3.9×10^6	1.1×10^6	1.7×10^4

d) DHANAS STP OUTLET (7.5 MLD)

BOD (mg/l)			TSS (mg/l)			Faecal Coliform (MPN/100ml)		
Dec, 2019	Jan, 2020	Feb, 2020	Dec, 2019	Jan, 2020	Feb, 2020	Dec, 2019	Jan, 2020	Feb, 2020
29	82	87	31	47	183	2.1×10^5	1.7×10^6	≥ 1

e) MALOYA STP (22.5 MLD)

BOD (mg/l)			TSS (mg/l)			Faecal Coliform (MPN/100ml)		
Dec, 2019	Jan, 2020	Feb, 2020	Dec, 2019	Jan, 2020	Feb, 2020	Dec, 2019	Jan, 2020	Feb, 2020
9	6.9	7.4	11	17	12	1.4×10^4	3.3×10^5	≥ 1

f) STP DIGGIAN OUTLET (135 MLD)

BOD (mg/l)			TSS (mg/l)			Faecal Coliform (MPN/100ml)		
Dec, 2019	Jan, 2020	Feb, 2020	Dec, 2019	Jan, 2020	Feb, 2020	Dec, 2019	Jan, 2020	Feb, 2020
34	29	62	32	28	48	2.21×10^6	7.0×10^5	2.21×10^6

The data indicate that STPs: Raipur Kalan (22.5 MLD), Dhanas (7.5 MLD) and Diggian (135 MLD) are not meeting with the prescribed limits for BOD parameter. However, none of the STP's is meeting with F-coli parameter.

4.2.2.2 Status of STPs under construction

Sr. No.	Name of STP	STP Capacity (MLD)	Target date of completion/commissioning	% work done	
				Earlier status as on 15.12.2019	Current status as on 29.2.2020
1.	Indl.Area Ph.III S.T.P Raipur Kalan	5 MLD	30.09.2020	90%completed	90% completion

4.2.2.3 Status of STPs under under planning and funds tied up

Sr. No	Name of STP	STP Capacity (MLD)	Target date of completion/commissioning	Earlier status as on 15/12/2019	Current status as on 29.2.2020
1.	2 MLD STP Kishangarh	2MLD	31.12.2020	Was under tendering process	Tender called due on 30.03.2020

The Executive Committee recommends that STPs of Raipur Kalan (5MLD) should be completed by 30.06.2020. STP to treat gap in sewage quantity (2MLD) at kishan garh should be completed by 31.12.2020.

4.2.2.4 STPs which require technologically upgradation and funds tied up

Name of STP	Sr. No.	Present capacity of STP (MLD)	Capacity to be upgraded technologically	Target date of completion/ commissioning	Earlier status as on 15.12.2019	Current status as on 29.2.2020
STP Diggian	1.	135 MLD	135 MLD	31.10.2022	Work was to be completed by 30.04.2022	Separate tenders in 3 packages has been invited on 26.2.2022. 1) Diggian (package-I) 2) Raipur khurd and Raipur Kalan (package-II) 3) 3BRD and Dhanas (package-III)
STP 3BRD	2.	49.5 MLD	49.5 MLD	31.10.2021		
STP Raipur kalan	3.	22.5 MLD	22.5 MLD	30.04.2022		
STP Dhanas	4.	7.5 MLD	7.5 MLD	31.10.2021		
STP Raipur Khurd	5.	5.63 MLD	9 MLD	30.04.2022		

The Executive Committee recommends that STPs: Diggian (135 MLD), 3 BRD (49.5 MLD), Raipur Kalan (22.5 MLD), Dhanas (7.5 MLD), Maloya (22.5 MLD) and Raipur Khurd (5.63 MLD) should be technologically upgraded by 31.03.2021 to meet with the prescribed Standards for BOD and F-coli parameter.

4.2.2.5 Gaps in treatment of sewage of the towns located on river Ghaggar

As per CPCC data, total discharge of sewage of Chandigarh is 243 MLD and 6 STPs of capacity 242.3 MLD are in operation. Therefore, there is a gap of only 0.7 MLD, which is to be treated by the Municipal Corporation, Chandigarh. Thus, to treat the balance quantity of wastewater, STP of

capacity 2 MLD has been proposed to be set up in Kishangarh area to meet with the latest stringent norms. The STP is likely to be completed by November, 2021.

However, the Executive Committee recommends that STP of 2 MLD capacity should be completed by 31.03.2021.

4.2.2.6 Status of irrigation schemes for STPs:

In Chandigarh area, there is no adjoining agriculture field, where the treated sewage may be utilized for irrigation purposes. However, the treated Sewage is being used for watering of various gardens/parks and golf course and even treated wastewater is also supplied to houses for gardening purposes.

4.2.2.7 Inspection of industries (December, 2019 to February, 2020)

Month	No. of industries inspected	No. of non-complying industries	Action taken against the industry
December, 2019	19	2	1unit – Closure direction is under process 1unit – Closed
January, 2020	18	3	3 no. units- closed
February, 2020	10	No inspection carried out	--

4.2.2.8 Comparison of water quality of River Ghaggar in terms of average values of BOD, D.O and T.Coli, (September to November 2019 and December, 2019 to February 2020).

Month	Average values of the parameters as monitored in the month of September, 2019 to November, 2019			Month	Average values of the parameters as monitored in month of December 2019 to February, 2020			Improvement in the water quality of river Ghaggar w.r.t. to parameters
	BOD	DO	T.Coli		BOD	DO	T.Coli	
September, 2019	9	5.3	3.48×10^4	December, 2019	7	7.7	9.4×10^5	There is no improvement.
October, 2019	9	6.6	1.75×10^4	January, 2020	23	7.1	1.09×10^6	
November, 2019	12	6.8	5.42×10^4	February, 2020	15	5.1	Result Awaited	

The above data indicate that there is no improvement in River Ghaggar Water w.r.t. BOD and F-coli parameter.

4.2.2.9 Ground Water Quality in the catchment area of river Ghaggar

S.N	Parameters	Stds.	Units	Dadu Majra	SEC-15/Near Dumping ground	SEC-22/Sec 24	Village Palsora	Dhanas	Sec -35	Sec -20
				Jan, 2020	Jan, 2020	Jan, 2020	Jan, 2020	Jan, 2020	Jan, 2020	Jan, 2020
1	Temp	--	°C	20.3	18.5	22	20	21.2	18	18
2	pH	5.5 to 9.0	-	6.9	6.8	7	6.9	7.2	6.7	7.0

3	Conductivity	--	µs/cm	864	723	733	1113	634	1530	742
4	BOD	--	mg/l	1.7	2.9	2	1.7	1.5	1.5	2.3
5	Turbidity	--	NTU	2.9	5.2	4.3	5.9	3.8	2.1	4.9
6	P-Alkalinity	--	mg/l	Nil	Nil	Nil	Nil	NIL	NIL	NIL
7	Total alkalinity	200	mg/l	328	274	288	406	244	406	292
8	Chloride	250	mg/l	51	23	27	77	35	103	27
9	COD	30	mg/l	16	18	14	17	8	12	16
10	NH ₃ -N	--	mg/l	0.2	0.2	BDL	0.17	BDL	BDL	0.2
11	TH as CaCO ₃	300	mg/l	282	224	268	300	242	354	246
12	Ca as CaCO ₃	75	mg/l	156	126	246	184	136	320	134
13	Mg as CaCO ₃	30	mg/l	126	98	22	116.00	106	34.00	112.00
14	Sulphate	200	mg/l	54	43	51	57	14	51	49
15	TDS	500	mg/l	484	1244	376	568	388	876	348
16	TFS	--	mg/l	384	304	322	500	304	806	316
17	TSS	--	mg/l	9	3.0	2.0	5.0	2.0	3.0	3.0
18	Phosphate	--	mg/l	.0.1	0.04	0.1	0.1	0.1	0.1	0.1
19	Boron(B)	--	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20	Fluoride	--	mg/l	0.9	0.45	BDL	0.5	0.52	0.35	0.88
21	Colour	--	Hazen	<5	<5	<5	5	<5	<5	<5

4.2.2.10 Action taken against the operating agencies w.r.t non compliance of STPs during the period December 2019 to February, 2020

Town	STP Technology	Reason for non compliance	Action Taken
Chandigarh	SBR (STP Dhanas)	New agency	Letter issued to the agencies for penalties.
Chandigarh	SBR (STP 3 BRD)	Sludge being disposed off from Chlorine contact tank	Letter issued to the agencies for penalties.

The Executive Committee recommends that other 4 STP's (Raipur Khurd: 5.63 MLD, Raipur Kalan: 22.5 MLD, Maloya: 22.5 MLD, Diggian: 135 MLD) should also be monitored by CPCC by 07.04.2020 and action against the operating agencies w.r.t non compliance of STP's be taken under the provisions of Water Act 1974.

4.2.2.11 Inspection of industries by District Level Special Task Force during the period December 2019 to February, 2020 and the action taken against defaulting industries.

S.no.	Month	Number of industrial units inspected by DLSTF	Action Taken, if any.
1.	December, 2019	9	3 no. units- closed
2.	January, 2020	6	1 unit- closed
3.	February, 2020	No Industry inspected	--

4.2.2.12 Septage and faecal sludge management

It has been reported that Chandigarh is fully covered with sewerage network and there are no septic tanks allowed in Chandigarh, resulting in no generation for septage and fecal sludge.

4.2.3 State of Himachal Pradesh

4.2.3.1 Performance of existing Sewage treatment plants

Sr. No.	Name of the Town	Capacity of STP	Performance w.r.t parameters BOD,TSS and F. coli		
			Dec, 2019	Jan, 2020	Feb, 2020
1.	Parwanoo	70 KLD	---	BOD- 3.2 TSS- 7.0	---

In parwanoo town, 70 KLD STP is in operation and is meeting with the prescribed limits.

4.3.2.2 Status of STPs under planning and funds tied up

Sr. No.	Name of the Town	STP Capacity (MLD)	Target date of completion/ commissioning	Earlier Status as on 15/12/2019	Current Status as on 29.02.2020
1.	Parwanoo	2 STP's (1 MLD each)	31.12.2020	Tender was floated	Technical bids opened and finalized. Financial bid is under finalization, contract will be awarded by 31-03-2020.
2.	Kala Amb (STP Trilokpur)	1.15 MLD	31.12.2020	Tender Called	Tender awarded. Survey of sewer network done. The pipes of sewage connectivity reached on site.
3.	Kala Amb (CETP cum STP)	5 MLD	31.12.2020	Funds are being arranged; Tender floated and will be opened in 1 st week of April.	Funds are being arranged; Tender floated and will be opened in 1 st week of April.

The Executive Committee recommends that 2 STPs each of capacity 1 MLD to be installed in Parwanoo area, 01 STP of capacity 1.15 MLD at village Tirlokpur (Kala Amb) and 5 MLD CETP cum STP in Kala Amb area should be completed by 31.12.2020.

4.2.2.3 Gaps in treatment of sewage of the towns located on river Ghaggar

Sr. No.	Name of the Town	Total Discharge (MLD)	Present capacity of STP (MLD)	Gap in sewage quantity to be treated (MLD)
1.	Parwanoo	2 MLD	0	2 MLD
2.	Kala Amb	1.15 MLD	0	1.15 MLD

There is gap of 2 MLD sewage quantity of parwanoo area and 1.15 MLD sewage quantity of Kala Amb area to be treated. The Executive Committee recommends that treatment to gap in sewage quantity (3.15MLD) should be provided by concerned departments of State of Himachal Pradesh by 31.03.2021.

5 MLD CETP cum STP in Kala Amb area should also be completed by 31.12.2020.

4.2.2.4 Status of installation of STPs for the villages.

Total No. of Villages	Description		
	No. of village covered	Funds required in RsCrores	Timelines for completions
4 (in Kala Amb, Sirmaur)	4	11.80 Cr	31.12.2020

The Executive Committee recommends that STPs for 4 villages (In Kala Amb, Sirmaur) should be completed by 31.12.2020. HPPCB shall also identify more villages along catchment area Sukhna Nallah, which have their mode of disposal into Sukhna Nallah further leading to Ghaggar river by 15.04.2020 and prepare comprehensive plan for treatment of sewage of these villages by 31.05.2020.

4.2.3.5 Inspection of industries (December, 2019 to February, 2020)

a) Parwanoo (Sukhna Catchment)

Month	No. of industries Inspected	No. of Non-Complying industries	Action taken against the industry
December, 2019	45	1	Show Cause Notice issued to the unit. In second sampling, the analysis results of the industries are within permissible limits.
January, 2020	21	2	Show Cause Notice issued to the unit. Both the units are either reusing their treated wastewater or using treated water for irrigation and flushing purposes.
February, 2020	25	1	Show Cause Notice issued to the unit.

b) Kala Amb (Markanda Catchment)

Month	No. of industries Inspected	No. of Non-Complying industries	Action taken against the industry
December, 2019	16	1	Power supply disconnected. Imposed environmental Compensation of Rs.143750/-.
January, 2020	39	0	Nil
February, 2020	25	0	Nil

4.2.3.6 Comparison of water quality of Sukhna Nallah in terms of average values of BOD, D.O and T.Coli, (September to November 2019 and December, 2019 to February 2020).

Sr. No.	Sampling Location	Average values of the parameters as monitored in the month of September 2019 to November, 2019			Average values of the parameters as monitored in the month of December 2019 to February, 2019			Improvement in the water quality of river Ghaggar w.r.t. to parameters.
		BOD	DO	T.Coli	BOD	DO	T.Coli	
1.	Sukhna Nallah at Parwanoo (Near Kalka Barrier, Exit Point of H.P.)	2.1	6	128	1.8	5.7	120	Yes

The data indicate that there is improvement w.r.t BOD, DO & T-coli parameters in Sukhna Nallah water.

4.2.3.7 Comparison of water quality of River Markanda in terms of average values of BOD, D.O and T.Coli, (September to November 2019 and December, 2019 to February 2020).

Sr. No.	Sampling Location	Average values of the parameters as monitored in the month of September 2019 to November, 2019			Average values of the parameters as monitored in the month of December 2019 to February, 2019			Improvement in the water quality of river Ghaggar w.r.t. to parameters.
		BOD	DO	T.Coli	BOD	DO	T.Coli	
1.	River Markanda u/s Jattanwala drain	0.7	8.733	103	0.7	8.8	44	There is improvement in water quality of River Markanda in Feb, 2020 as per analysis report.
2.	River Markanda d/s Jattanwala drain	3.266	5.266	9566.66	6.8	5.2	29466	
3.	JattanWala Drain	37.3	0.53	58333	54.6	0.76	74400	

The above data indicate that water quality of River Markanda downstream of Jattanwala Nallah has been degraded in terms of BOD and F-coli parameter because in Jattanwala Nallah, the values of BOD and F-coli have been found vary between 37.3-54.6 mg/l and 58333-74400 MPN/100mg. The Executive Committee recommends that HPPSB shall identify the polluting sources contributing high value of BOD and F-coli by 7.04.2020 and shall take action against the defaulting industries/ agencies by 15.05.2020.

4.2.3.8 Ground Water Quality in the catchment area of river Ghaggar

There is no contamination in the ground water quality as per analysis reports.

4.2.3.9 Inspection of industries by District Level Special Task Force during the period December, 2019 to February, 2020 and the action taken against defaulting industries.

Sukhna Catchment

Sr. No.	Number of industrial units inspected by DLSTF	Action Taken, If any
1.	5	No Non-Compliance was observed

Markanda Catchment

Sr. No.	Number of industrial units inspected by DLSTF	Action Taken, If any
1.	3	No Non-Compliance was observed

4.2.3.10 Status of Health check up Camps organized during the month December, 2019 to February, 2020.

Name of the District	No. of Health Camps Organized	No. of Patient checked	No. of Patient found suffered from water borne diseases
Solan	4	410	47
Sirmaur	3	432	9

The Executive Committee recommends that in catchment area of River Markanda and Sukhna Nallah, where the patients have been found suffered with water borne diseases, should be provided with potable and safe drinking water supply to the residents by the Department of Public health.

4.2.3.11 Information, Education & Communication (IEC) activities

The following activities have been carried to bring awareness among the public.

S.No.	Name of the Regional Office of HPSPCB	Date on which camp/ activity was organized for IEC activities	Activities performed
1.	HPSPCB (R.O. Parwanoo)	31.01.2020	Cleanliness drive and Public Awareness
		25.02.2020	<p>HPSPCB Parwanoo organized 02 no of cleanliness drives in the area with the help of MC Parwanoo, ESIC and Parwanoo Industrial Association in Sukhna Nallah Catchment.</p> <ul style="list-style-type: none"> • 1st cleanliness drive was organized on 31th January 2020 with the help of Industrial Association, MC Parwanoo, and other industrial units. • 2nd was organized on 25th February 2020 with the help of MC Parwanoo, R.S. Polymers, Federal Mogul, Gabbriel India Ltd. Microtek etc. <p>✓ About 2.0 Ton of solid waste was collected on cleanliness drive made on dated 31.01.2020 and about 4 Ton of waste was collected on the cleanliness drive of dated 25.02.2020</p>
2.	HPSPCB (R.O. Paonta Sahib)	17.01.2020	<p>HPSPCB Paonta Sahib/ District Administration Sirmaur has organized the River Markanda and Jattanwala nallah cleanliness drives. The cleanliness drive on dated 05.02.2020 was flagged off by Justice Pritam Pal, Chairman Executive Committee and Formal Justice, Punjab and Haryana High Court.</p> <p>About 2.5 Ton of solid waste was collected on cleanliness drive on dated 17.01.2020 and about 50 Ton of waste was collected on the cleanliness drive made on 05.02.2020</p> <p>The waste was disposed of in MC Nahan Solid Waste Dumping site.</p>
		05.02.2020	



Photographs showing cleanliness drive carried out in Parwanoo and Paonta Sahib Area

4.2.3.12 Environmental Flow

The Real Time Water Quality Monitoring Station (RTWQMS) on River Markanda has been installed and also connected to HPSPCB server. The real time data is being transmitted to State Board Server regularly.

4.2.3.13 Septage and Faecal Sludge management

The BDO Nahan has taken 2 septic tanks under observation. 200 gms of specific enzymes has been put into each of septic tank for improving the treatment efficiency. HPSPCB has collected the sample of these septic tanks for analysis. The results are awaited. On the basis of results, the same practice shall be carried out in Jattanwala Nallah for improving the water quality. The BDO Nahan in coordination with HPSPCB has identified 2 stretches in Jattanwala Nallah for Phytoremediation.

4.2.4 State of Haryana

4.2.4.1 Performance of existing Sewage Treatment Plants

Sr. No	Name of the Town	Capacity of STP	Performance w.r.t. Parameters BOD, TSS, and F.Coli											
			Dec, 2019				Jan, 2020				Feb, 2020			
			BOD	TSS	F.Coli	Status	BOD	TSS	F.Coli	Status	BOD	TSS	F.Coli	Status
1	Naya Gaon , Unit.I , Ambala City by PHED in January, 2011	3.25 MLD	14	9	175000	Complying	14	9	175000		16	20	24000	Complying w.r.t. BOD & TSS
2	Naya Gaon , Unit.II Ambala City by PHED in 1.4.2016	3.25 MLD	13	8	109000	Complying	13	8	109000		17.3	30	21000	Complying w.r.t. BOD & TSS
3	Sec.7 , Urban Estate , Ambala City Ambala by HUDA in 10.9.2015	2 MLD	10	8	270000	Complying								
4	Baldev Nagar , Unit.I , Ambala City by PHED 1.12.2012	5 MLD	11	12	130000	Complying	11	12	130000	Complying	19.3	50	46000	Complying w.r.t. BOD & TSS
5	Baldev Nagar , Unit.II , Ambala City by PHED in 1.4.2016	3.25 MLD	13.5	10	142000	Complying	13.5	10	142000	Complying	18	40	46000	Complying w.r.t. BOD & TSS
6	Moti Nagar, Unit.I , Ambala City by PHED in June 2010	5 MLD	10.5	14	175000	Complying	10.5	14	175000	Complying	15.3	20	46000	Complying w.r.t. BOD & TSS
7	Moti Nagar , Unit.II , Ambala City by PHED Ambala in 1.8.2016	5 MLD	9	8	141000	Complying	9	8	141000	Complying	14.7	10	24000	Complying w.r.t. BOD & TSS
8	Modal Town, Ambala City by PHED in 1.7.2012	6 MLD	13.5	10	130000	Complying	13.5	10	130000	Complying	14	20	46000	Complying w.r.t. BOD & TSS
9	Nasirpur Ambala City by PHED in 31.9.2016	3.25 MLD	10	11	172000	Complying	10	11	172000	Complying	16.7	40	46000	Complying w.r.t. BOD & TSS
10	Sadipur , Ambala PHED in 31.12.2016	0.25 MLD	10	9	148000	Complying	10	9	148000	Complying	9.3	10	46000	Complying w.r.t. BOD & TSS
11	Devi Nagar , Ambala City by PHED on 31.5.2013	3.25 MLD	14	13	109000	Complying	14	13	109000	Complying	18.7	40	24000	Complying w.r.t. BOD & TSS
12	Nariangarh , Ambala by PHED in 1.7.2014	3 MLD	13	10	630000	Complying	22	7.5	-	Complying	23	48	920	Complying w.r.t. BOD, TSS, F-coli
13	Thanesar, Kurukshetra by PHED in 31.05.2019	25 MLD	8.5	9	-	Complying	8	8.5	91	Complying	8.2	5.8	97	Complying w.r.t. BOD, TSS, F-coli
14	Sector-6, Urban Estate, Thanesar, Kurukshetra by PHED in	15 MLD	Under Trial Run											
15	Model Town , Pehowa Kurukshetra by PHED in May dt. 2015	8 MLD	12	11	-	Complying	16.4	30	-	Complying	18	32	250	Complying w.r.t. BOD, TSS, F-coli
16	Ladwa Road , Shahbad Kurukshetra by PHED in May dt. 2016	11.5 MLD	9	10	-	Complying	8	7.5	-	Complying	9	6.4	900	Complying w.r.t. BOD, TSS, F-coli
17	Panchkula by HUDA in 31.12.2002	18 MLD									13	18	700000	Complying w.r.t. BOD & TSS
18	Panchkula by HUDA in Nov. 2011	39 MLD									14	13	790000	Complying w.r.t. BOD & TSS

Sr. No	Name of the Town	Capacity of STP	Performance w.r.t. Parameters BOD, TSS, and F.Coli												
			Dec, 2019				Jan, 2020				Feb, 2020				
			BOD	TSS	F.Coli	Status	BOD	TSS	F.Coli	Status	BOD	TSS	F.Coli	Status	
19	Sector- 28, Panchkula by HUDA in 2012	15 MLD					14	26	940000	Complying	9.5	8	490000	Complying w.r.t. BOD & TSS	
20	Kalka Panchkula by PHED in 30.3.2015	4.5 MLD	10	18	50000	Complying	14	48	140000	Complying	14	52	330000	Complying w.r.t. BOD & TSS	
21	Kalka Panchkula by PHED in 28.5. 2017	0.25 MLD	14	24	-	Complying	12	49	150000	Complying	26	79	270000	Complying w.r.t. BOD & TSS	
22	Nalagarh Road, Manakpur, Pinjore Panchkula by PHED 31.1.2015	5 MLD	36	53	480000	Non-Complying	4.95	20	141000	Complying	8.5	9	210000	Complying w.r.t. BOD & TSS	
23	Garrison Engineer , Chandimandir Panchkula in April 2012	9 MLD	15	12	70000	Complying					9	10	230000	Complying w.r.t. BOD & TSS	
24	PHED Jind in Jan, 2009	15 MLD	24	82	-		20	26	120000	Complying	27.6	44	9000	Complying w.r.t. BOD & TSS	
25	HUDA Jind in 27.12.2014	10 MLD	14	16	26000	Complying									
26	Patiala Road , Narwana by PHED in Jan , 2011	3.5 MLD	22	36	32000	Complying	23	32	-	Complying	28	44	8400	Complying w.r.t. BOD & TSS	
27	STP Narwana Jind by PHED in Jan , 2011	3.75 MLD	22	32	74000	Complying	30	46	-	Complying	22	28	1700	Complying w.r.t. BOD & TSS	
28	PHED , Dablain Road, Narwana, Jind (24.5.2017)	02 MLD	26	36	36000	Complying	26	38	-	Complying	26	20	1400	Complying w.r.t. BOD & TSS	
29	Uchana Jind by PHED in 22.2.2012	2 MLD	18	40	64000	Complying	23	30	-	Complying	26	36	-	Complying w.r.t. BOD & TSS	
30	Uchana by PHED in 31.5.2013	1.5 MLD	16	28	76000	Complying	20	22	-	Complying	20	24	-	Complying w.r.t. BOD & TSS	
31	Jind by PHED in 1.4.2016	5 MLD	22	32	74000	Complying	22.4	38	-	Complying	25.4	32	7000	Complying w.r.t. BOD & TSS	
32	Jind by PHED in	7 MLD	Under Trial Run												
33	Safidon , Jind by PHED in 31.05.2018	9 MLD	8	10	64000	Complying	9.2	16	800	Complying	8.7	10	3300	Complying w.r.t. BOD & TSS	
34	Cheeka , Kaithal by PHED in 1.4.2013	10 MLD	80	260	140000	Complying	18.5	22	450	Complying	19.14	25	245	Complying w.r.t. BOD, TSS, F-coli	
35	Jind Road Kaithal by PHED in September , 2012	10 MLD	12	18	120000	Complying									
36	Manas Road, Kaithal by PHED in June , 2006 (MBBR)	10 MLD	7	20	480		9.8	16	495	Complying	8.6	14	910	Complying w.r.t. BOD & TSS	
37	Manas Road,Kaithal bby PHED in Sep , 2012 (SBR)	10 MLD	8	10	260000	Complying	9.1	15	870	Complying	9.4	11	950	Complying w.r.t. BOD & TSS	

Sr. No	Name of the Town	Capacity of STP	Performance w.r.t. Parameters BOD, TSS, and F.Coli												
			Dec, 2019				Jan, 2020				Feb, 2020				
			BOD	TSS	F.Coli	Status	BOD	TSS	F.Coli	Status	BOD	TSS	F.Coli	Status	
38	Kaithal by HUDA in 31.8.2016	7.5 MLD	6	12	96000	Complying									
39	Kalayath , Kaithal by PHED in 1.4.2014	5 MLD	16	26	32000	Complying	5.25	14	1170	Complying	6.25	18	1120	Complying w.r.t. BOD & TSS	
40	Pundri Kaithal by PHED in 4.7.2014	3.5 MLD	20	36	22000	Complying	18.2	41	-	Complying	19.93	36	560	Complying w.r.t. BOD, TSS, F-coli	
41	Dhani Kushal , Bhiwani Road, Hansi , Hisar by PHED in 15.4.2014	5 MLD	27	65	-	Complying									
42	Lalpura. Jind Road, Hansi , Hisar by PHED in 15.4.2014	7.5 MLD	26	54	-	Complying									
43	Azad Nagar, Rajgarh Road Hisar by PHED in 31.12.2014	15 MLD	9	22	-	Complying									
44	Rishi Nagar , Hisar by PHED in 02.12.2017	40 MLD	6	10	-	Complying	6.8	65	95	Complying	6.2	60	88	Complying w.r.t. BOD, TSS, F-coli	
45	Narnaund, Hisar by PHED	4 MLD	6	13	-	Complying	7	12	-	Complying	8	13	-	Complying w.r.t. BOD & TSS	
46	Dabara Tosham Road , Hisar by HUDA in 31.7.2014	15 MLD	10	17	-	Complying	8.2	78	82	Complying	8.5	85	89	Complying w.r.t. BOD, TSS, F-coli	
47	Kaimri Road, Hisar by PHED in 2018	4 MLD	8	13	-	Complying	7.2	62	81	Complying	7.1	65	89	Complying w.r.t. BOD, TSS, F-coli	
48	Shamsabad patti , Kalania Road, Sirsa by PHED in 1.7.2012	15 MLD	22	34	110000	Complying	17	34	-	Complying	15	33	-	Complying w.r.t. BOD & TSS	
49	Vill. Nattar 1 , Sirsa by PHED in 1.5.2013	5 MLD	24	36	96000	Complying	17	28	-	Complying	14	22	-	Complying w.r.t. BOD & TSS	
50	Vill. Nattar 2 , Sirsa by PHED in 14.09.17	5 MLD	24	42	76000	Complying	17	28	-	Complying	14	22	-	Complying w.r.t. BOD & TSS	
51	Ellenabad Sirsa by PHED in 11.5.2015	7.5 MLD	26	50	54000	Complying	16	32	-	Complying	16	34	-	Complying w.r.t. BOD & TSS	
52	Daddu Road,Kalanwali, Sirsa by PHED in 17.02.2018	9.5 MLD	10	12	76000	Complying	9.5	13	-	Complying	10	13.5	-	Complying w.r.t. BOD & TSS	
53	Rania Sirsa by PHED in 30.6.2017	6 MLD	9	10	180000	Complying	10	8.50	82	Complying	10	8.30	85	Complying w.r.t. BOD, TSS, F-coli	
54	Dabwali, Sirsa by PHED in 04.12.2017	16.5 MLD	8	16	54000	Complying	8.5	15.5	-	Complying	8	14	-	Complying w.r.t. BOD & TSS	
55	Kelnia, Distt. Sirsa by PHED in	20 MLD	Under Trial Run												
56	Vill. Bhodia Khera dt. Bhattu Road dt. Fatehabad by PHED in 1.4.2013	10 MLD	20	30	96000	Complying	15	31	-	Complying	22	34	54000	Complying w.r.t. BOD & TSS	
57	Vill.Amani, Tohana, Distt. Fatehabad by PHED in 1.4.2013	10 MLD	12	210	900	Complying	26.5	45	-	Complying	16	32	21000	Complying w.r.t. BOD & TSS	

Sr. No.	Name of the Town	Capacity of STP	Performance w.r.t. Parameters BOD, TSS, and F.Coli											
			Dec, 2019				Jan, 2020				Feb, 2020			
			BOD	TSS	F.Coli	Status	BOD	TSS	F.Coli	Status	BOD	TSS	F.Coli	Status
58	Ratia , Fatehabad by PHED in 1.9.2014	6.5 MLD	12	43	64000	Complying	20.6	62	-	Complying	22	28	120000	Complying w.r.t. BOD & TSS
59	Majra, Fatehabad by HUDA in 16.12.17	10 MLD	8	12	76000	Complying					8	12	24000	Complying w.r.t. BOD & TSS
60	Kharati Khera Road, Fatehabad by PHED in 31.10.2018	5 MLD	8	10	110000	Complying	7.9	3	-	Complying	6	10	21000	Complying w.r.t. BOD & TSS
61	Jhakkhal Mandi, Fatehabad by PHED in 30.9.2019	3 MLD	-	-	-	-	-	-	-	-	6	12	21000	Complying w.r.t. BOD & TSS

The above data indicate that out of total 61 STPs, 51 STPs were monitored w.r.t BOD, TSS & F-coli parameter. All these STPs were found complying with the parameters namely BOD and TSS parameters. 40 STPs were not found meeting with the F.coli parameter.

4.2.4.2 Status of STPs under construction

Sr. No.	Name of the Town	Capacity (in MLD)	Timelines proposed as per Action Plan	Earlier status as on 15.12.2019	Current status as on 29.02.2020
1	12 Cross Road, Ambala	12	31.06.2020	5%	8%
2	Khagesara & Toka	0.5	31.03.2020	82%	90%
3	Nangal & Allipur	0.5	31.03.2020	87%	95%
4	Khatoli	0.75	31.03.2020	42%	60%
5	Kot	0.75	31.01.2020	92%	98%
6	Sukhdarshanapur	0.75	31.03.2020	72%	75%
7	Billa	0.75	31.12.2020	5%	7%
8	Village Dabra (Dabra)	8	31.03.2020	46%	80%
9	Ambala	5	31.03.2020	30%	30%
10	Khuda Khurd, Ambala	12	31.06.2020	2%	5%
11	Bhuna	8	30.06.2020	70%	74%
12	Babyal	10 MLD	31.03.2021	0%	3%
13	Shahpur Machhonda	7.5 MLD	31.03.2021	0%	2%
	Total	66.5			
14	Barara	4	30.11.2019	100%	Commissioned, but under stabilization.
15	Jind	7	30.11.2019	100%	Complying with prescribed norms.
16	Sec-6, Urban Estate, Thanesar	15	31.03.2020	100%	Complying with prescribed norms.
17	Kurukshetra	25	31.05.2019	100%	Commissioned
18	Sirsa (Kelinia)	20	30.10.2019	100%	Complying with prescribed norms.
19	Fatehabad(Jakkhal Mandi)	3	31.12.2019	100%	Complying with prescribed norms.

The details of STPs which are under construction indicate that 6 STPs have been commissioned but are under stabilization. The Executive Committee recommends that these STPs should be put into operation by 15.04.2020. The progress of

installation of STPs: Ambala (12 MLD), Billa (0.75 MLD), Khuda Khurd, Ambala (12 MLD), Babyal (10MLD) & Shahpur Machhonda(7.5MLD) is 8%,7%, 5 %, 3% and 2%, respectively, which is very poor. The concerned departments like Urban Local Bodies, HSVP and Public Health Engineering Department of State of Haryana shall take proactive steps to ensure that these STPs should be completed by 30.09.2020. The remaining STPs should be completed by 30.06.2020.

4.2.4.3 Status of STPs under planning and funds tied up

It has been reported that no STP is under planning

4.2.4.4 STPs which require technologically upgradation and funds tied up

Sr. No.	Name of the Town	Present Capacity of STP (MLD)	Capacity to be upgraded technologically	Target date of completion/ commissioning	Earlier status as on 15.12.2019	Current status as on 29.02.2020
1.	Panchkula (STP Sector-20)	57 MLD	57 MLD	30.06.2021	-----	EOI for engaging consultant for up-gradation as per NGT requirement under process.

4.2.4.5 Gaps in treatment of sewage of the towns located on river Ghaggar

Sr. No.	Name of Town	Total Discharge (MLD)	Present Capacity of STP (MLD)	Gap in sewage quantity to be treated (MLD)
1	Naraingarh	3	3	0
2	Ambala	59.3	43.5	15.8
3	Ratia	4.5	6.5	0
4	Tohana	7.7	10	0
5	Jhokal Mandi	0.9	3	0
6	Fatehabad	10.8	25	0
7	Hisar	37.1	74	0
8	Narnaund	2.1	4	0
9	Narwana	7.5	9.25	0
10	Uchana	2	3.5	0
11	Jind	20.3	30	0
12	Safidon	4.2	9	0
13	Cheeka	5.1	10	0
14	Kaithal	18.8	37.5	0
15	Kalayath	2.3	5	0
16	Pundri	2.5	3.5	0
17	Shahbad	5.5	11.5	0
18	Pehowa	5.1	8	0
19	Thanesar	18.8	40	0
20	Kalka	3.9	4.75	0
21	Pinjore	3.5	5	0
22	Panchkula	25.6	81	0
23	Mandi Dabwali	6.4	16.5	0
24	Kalanwali	2.7	9.5	0
25	Sirsa	27.9	45	0
26	Rania	3.8	6	0
27	Ellenabad	5.6	7.5	0
Total		296.9	511.5	15.8

The State of Haryana through HSPCB has claimed that there is only gap of sewage quantity to be treated is 15 MLD, whereas, the water quality of river Ghaggar in Haryana area indicates that untreated sewage might be discharging into river Ghaggar through

drains, which are to be captured. Therefore, the Department of Irrigation and HSPCB shall jointly identify the drains carrying untreated sewage into river Ghaggar and quantity of the untreated sewage discharge should be measured and necessary directions be issued to the concerned departments of State of Haryana to prepare DPR for installation of STP's and ensure that STP's for gap in sewage quantity to be treated should be installed by 31.03.2021.

4.2.4.6 Status of Irrigation schemes for STPs

Towns/ STPs where Irrigation Projects Commissioned

Sr. no.	Town	Name of STP	Capacity (MLD)	Command Area (ha)
1	Pehowa	STP Pehowa, Kurukshetra	1.47	76
2	Ladwa	STP Ladwa, Kurukshetra	1.22	63
3	Shahbad	STP Shahbad, Kurukshetra	3.00	151

A consolidated project with estimate cost of Rs. 1098.25 Cr. has been prepared for utilization of 1828 MLD (747 Cs) treated wastewater out of total 2795.20 MLD from 207 STPs(Ghaggar and Yamuna) of various departments for irrigation of 4 Lakh (1.62 lac hectares). The project estimate stands discussed in the Standing Technical Committee of the departments on 26.08.2019 and approved. The approval was accorded by Govt on 04.01.2020. The project is likely to be completed in 5 years' time which also depends upon the availability of funds. Further action in the matter to prepare DPR of individual projects, its approval, preparation of Estimates, tenders etc. will be taken afterwards. As far as quantity of treated sewage is concerned which can be spared for irrigation with the quality parameters as finalized by Agriculture deptt., the same will be provided by the department which owns the STP, so as to enable Irrigation and Water Resources Department to formulate specific scheme for such quantity.

Out of above 207 STPs, 35 STPs in 21 Districts have been chosen for 500 Cr MI project under NABARD assisted Micro Irrigation Projects, which is under approval of Govt of India.

Regarding funds, it is brought out that out of 207 STPs, 35 STPs in 21 Districts (140 MLD) have been chosen for 500 Cr MI project under NABARD assisted Micro Irrigation Project, which is under approval of Govt. of India. For remaining, the funds will be available under Annual Budget as Project already stands approved by Govt.

The Executive Committee recommends that the details along with capacity of the STPs of the towns located in the catchment area of river Ghaggar be prepared by HSPCB and the same be supplied to Department of Irrigation, which will prepare irrigation schemes for utilization of treated sewage of these towns for irrigation by 30.04.2020 and irrigation schemes be completed by 31.12.2020.

4.2.4.7 Status of installation of STPs for the villages

Sr. No.	No. of Village covered	Funds required in Rs. Crores	Timelines for completions
1	Talwara		31.12.2020
2	Talwari		31.12.2020
3	Talwari Dhani		31.12.2020
4	Kanwalgarh		31.12.2020
5	Khairpur		31.12.2020
6	Malwala		31.12.2020
7	Sadanwas		31.12.2020
8	Daluwal		31.12.2020
9	Burj Kotia		31.12.2020
10	Khetpurali		31.12.2020
11	Bharouli		31.12.2020
12	Rehore		31.12.2020
13	Toda		31.12.2020
14	Mouli		31.12.2020
15	Mallawala		31.12.2020
16	Amritsar Kalan		30.06.2020
17	Shihali		31.12.2020
18	Paprala		31.12.2020
19	Kasoli		31.12.2020
20	Mangra		31.12.2020
21	Lalpur		31.12.2020
22	Bubakpur		31.12.2020
23	Nandgarh		31.12.2020
24	Chhanna Jatan		31.12.2020
25	Kutabpur		30.06.2020
26	Sirta		30.06.2020
27	Manas		30.06.2020
28	Jagdishpura		31.08.2019
29	Geong		30.06.2020
30	Titram		30.06.2020
31	Sakra		31.12.2020
32	Khanpur		31.12.2020
33	Kangthali		30.06.2020
34	Harnola		30.06.2020
35	Sair		30.06.2020
36	Kakheri		30.06.2020
37	Ratta Khera Lukman		31.08.2019
38	Ghuna		
39	Keorak	718.72	20.06.2020
40	Patti Afgan		
41	Kakaut		
42	Sega		
43	Teontha		
44	Kaul		
45	Ujhana		

As per data given above, there is proposal to install STPs for 45 villages, the estimated cost of these STPs is Rs, 718.50 crore. These STPs are likely to be completed by 31.12.2020. For arrangements of funds, Deptment of Panchyat shall take up the matter with the department of finance of State of Haryana by 31.05.2020.

4.2.4.8 Inspection of industries (December, 2019 to February, 2020)

Sr. No.	Month	No. of industries inspected	No. of non-complying industries	Action taken against the industries
1	Dec, 2019	12	12	SCN issued and recommended for closure order
2	Jan, 2020	79	69	SCN issued and recommended for closure order
3	Feb, 2020	5	1	SCN issued and recommended for closure order

4.2.4.9 Comparison of water quality of River Ghaggar in terms of average values of BOD, DO and T.Coli, (September to November, 2019 and December, 2019 to February, 2020)

Sr. No	A/R No. & date	BOD mg/l	DO mg/l	Total Coliform
1	Ghaggar River after mixing Markanda River at village Dhandota. (Longitude 76°22.571' and Latitude 30°05.410')			
	Sep-Nov-2019	103.3	1.13333	520000
	Dec-2019-Feb-2020	75.3	1.8	500000
2	Ghaggar River after mixing of Patiala Nadi at Village Ratanheri. (Longitude 76°14.542' and Latitude 30°04.645')			
	Sep-Nov-2019	96	1.36667	756667
	Dec-2019-Feb-2020	65.3	2	543333
	Dec-2019-Feb-2020	65.3	2.0	643333
3	Ghaggar River after mixing of Sagar Para Drain at Village Rasoli. (Longitude 76°10.135' and Latitude 29°53.548')			
	Sep-Nov-2019	78	2.16667	1193333
	Dec-2019-Feb-2020	62.3	2.7	486666
4	River Ghaggar after mixing Kaithal Darin into River Ghaggar. (Longitude 76°06.663' and Latitude 29°50.723')			
	Sep-Nov-2019	90.7	1.53333	433333
	Dec-2019-Feb-2020	56	2.5	563333
5	River Ghaggar after meeting discharge of Moonak Town with River Ghaggar. (Longitude 75°53.702' and Latitude 29°48.515')			
	Sep-Nov-2019	92	1	920000
	Dec-2019-Feb-2020	78	1.5	880000
6	River Ghaggar after meeting Jhambuwali Choe at Village Chandu. (Longitude 75°59.989' and Latitude 29°49.717')			
	Sep-Nov-2019	96.7	1.4	496667
	Dec-2019-Feb-2020	61.3	1.10	586667

Sr. No	A/R No. & date	BOD mg/l	DO mg/l	Total Coliform
7	River Ghaggar after meeting of discharge of Ratia.			
	Sep-Nov-2019	30.7	3.46667	333333
	Dec-2019-Feb-2020	61	1.55	365000
8	River Ghaggar after meeting discharge of Sardulgarh town			
	Sep-Nov-2019	46.7	3.03333	390000
	Dec-2019-Feb-2020	62	3.25	300000
9	Ghaggar GH-1 at road bridge, Sirsa- Dabwali Road			
	Sep-Nov-2019	30	3.33333	316667
	Dec-2019-Feb-2020	38	2.2	320000
10	Ghaggar Ottu Weir			
	Sep-Nov-2019	24	3.65	820000
	Dec-2019-Feb-2020	28	2.3	180000

The Monitoring of river Ghaggar carried out by HSPCB during December-2019 to February-2020 indicates that the values of BOD and F.Coli have been found varied between 56-78 mg/l and 300000-486667 MPN/100 ml, respectively. It indicates that either all the drains carrying untreated sewage have not been tapped or STP's installed for the towns are not adequate to treat the sewage to meet with the prescribed standards. The value of F.Coli in the effluent flowing into river Ghaggar is very high (300000-486667 MPN/100 ml). It means that no disinfectants are added to reduce the values of F.Coli Parameter. Therefore, the Executive Committee again recommends that the Department of Irrigation and HSPCB shall jointly identify the drains carrying untreated sewage into river Ghaggar and quantity of the discharge into these drains should be measured and necessary directions be issued to the concerned departments of State of Haryana to prepare DPR for installation of STP's and ensure that STP's for gap in sewage quantity should be installed by 31.03.2021.

4.2.4.10 Ground Water Quality in the catchment area of river Ghaggar

Sr. No.	District	total Ground Water Samples	No. of Complying	No. of non-complying samples
1	Panchkula	8	8	0
2	Ambala	7	7	0
3	Jind	2	1	1
4	Kaithal	14	2	12
5	Hisar	5	1	4
6	Sirsa	22	19	3
7	Fatehabad	18	3	17
	Total	76	41	37

The Executive Committee recommends that HSPCB shall monitor ground water quality atleast one time more of those ground water samples which have been found non compliant before making any conclusions on the water quality monitoring report. In case these ground water samples are again found non compliant, HSPCB shall cap these ground water sources and potable and safe drinking water be supplied to the persons / inhabitants which depend upon these ground water sources.

4.2.4.11 Action taken against the operating agencies w.r.t. non-compliance of STPs during the period December, 2019 to February, 2020

Town	STP Technology	Reason for non-compliance	Action Taken non complying in December, 2019
Pinjore	MBBR+TT	Operational deficiency	SCN issued and now the STP is complying.

4.2.4.12 Inspection of industries by District Level Special Task Force during the period December, 2019 to February, 2020 and the action taken against defaulting industries.

Sr. No.	Number of industrial units inspected by DLSTF	Action Taken, if any
1	14	The industries were found complying hence no action is required is to be taken.

4.2.4.13 Status of Health check up camps organised during the month December, 2019 to February, 2020.

Sr. No.	Name of the District	No. of Health camps organized	No. of patient checked	No. of patient found suffered from water bourne diseases
1	Ambala	6	463	0
2	Panchkula	3	405	39

3	Kaithal	8	263	0
4	Fatehabad	4	176	23
5	Sirsa	31	2480	270
Total		52	3787	332

The above data indicate that in 52 health checkup camps, 3787 patients were checked out of which 332 patients have been found suffered from water borne diseases. These affected inhabitants should be supplied with safe drinking water.

4.2.4.14 Information, Education & Communication (IEC) activities

The following IEC activities have been performed by Regional Officers of the Haryana State Pollution Control Board in the catchment area of River Ghaggar.

Sr No	Name of Regional office of HSPCB	Date on Which camp /activity was organised for IEC Activities	Activity Performed
1	Panchkula	18.12.2018	Awareness about reduction in problem of flies in poultry farms.
2	Jind	02.02.2019	World Wetland Day 02 February, 2019 was celebrated
3	Jind	03.06.2019	Tree plantation program organized alongwith SMO Sh. Sanjeev Goyal, CHC Guhla, Kaithal
4	Jind	03.06.2019	Tree Plantation program organized alongwith forest department
5	Hisar	27.12.2019	An environment Awareness program organized in Govt.senior secondary School,Vill.-Nezadela Kalan,Sirsa.

4.2.4.15 Environmental Flow

HSPCB has claimed that Ghaggar River is not a perennial river and discharge varies from zero to maximum. Around 15-20% of the lowest possible discharge in the lean season is required for maintaining E-flow. In the State of Haryana, the discharge varies from zero to maximum so maintaining E-flow is not possible.

4.2.4.16 Septage and Faecal Sludge Management

MCG is doing the disposal of sewage through tankers in Gurugram and the monitoring through QR codes is started manually. Municipal Corporation, Gurugram has made septage management policy and ULBD has given directions to other Municipalities vide their letter dated 23.07.2019 to frame their policy for septage management as per their local conditions adopting the policy of MC, Gurugram. Report not provided for other MCs and no report regarding the Monitoring mechanism of the vehicles is provided by ULBD.

The sludge samples are being collected from the STPs and it has been found that the sludge generated from STPs at Jind, Kaithal, Hisar, Fatehabad, Sirsa, Ambala, Kurukshetra and Panchkula

do not meet with the prescribed standards for manure. The concerned departments were asked to get the samples analyzed from reputed institutes to establish whether the sludge is hazardous or non hazardous and further dispose off the sludge after consultation with HSPCB. Directions were also given to the Regional Officers to identify industries alongside the STPs possibly discharging into STPs.

Sr. No	Name of MC	Septage Management Notified or not	No. of Tankers deployed	Month wise quantum of sewage disposed to STP through tankers.		
				Dec-19	Jan-20 (KLD)	Feb-20 (KLD)
1	Ambala City	Yes	5	6	6	7
2	Ambala cantt.	Yes	2	0	100	100
3	Shahabad	Yes	1	49.5	40.5	22.5
4	Ladwa	Yes	2	300	200	200
5	Jind	Yes	3	7.2	8	8.6
6	Julana	No	2	24	19	17
7	Kaithal	Yes	5	120	125	120
8	Kalayath	Yes	2	5	5	5
9	Tohana	Yes	2	0	50	50
10	Hisar	Yes	14	35	25	20
11	Narnaund	No	2	10	14	18
12	Barwala	Yes	3	11	10	10
13	Panchkula	Yes	4	7	8	8

4.2.5 Conclusions and Recommendations

In view of the discussion held with Distt. Level officers and District Level Special Task Forces of various districts of State of Punjab, Haryana, Himachal Pradesh and UT. Chandigarh and State Level Officers of these States and UT. Chandigarh, visits to pollution sources, information collected from various departments w.r.t performance of existing STPs, installation of new STPs, upgradation of existing STPs, irrigation schemes to utilize the treated sewage for irrigation, installation of STPs in rural areas, status of health check up camps, water quality in river Ghaggar, water quality of the groundwater sources located in the vicinity of river Ghaggar, IEC activities and environmental flow etc, **the Executive Committee has made the following conclusions and recommendations.**

4.2.5.1 State of Punjab

1) Punjab water Supply and Sewerage Board shall complete and commission 08 New STPs for 6 towns (Boha, Dhuri, Sangrur, Bassi Pathana, Sirhind and Patiala), whose work has been completed upto 10-41%, should be completed by 31.12.2020.

- 2) Sewage treatment plants for 19 towns for which funds have been tied up should be completed and commissioned by 31.03.2021.
- 3) For upgradation of existing sewage treatment plants for the towns namely Baretta (3 MLD), Bhikhi (3 MLD) and Sardulgarh (4 MLD), funds may be arranged by the Department of Local Government by 31.05.2020 and Punjab Water Supply and Sewerage Board shall ensure that these STPs should be upgraded by 31.03.2021.
- 4) GMADA shall upgrade its existing STP of capacity 45.5 MLD at Mohali by 31.03.2021.
- 5) The authority of Military Engineering Services (MES) shall install and commission new STP's of capacity 6 MLD and 1 MLD for MES Patiala and MES Nabha, respectively, by 31.03.2021.
- 6) The Executive Committee has observed that there is gap in Sewage Quantity to be treated is 86.26 MLD of 17 towns. It is recommended that the Department of Local Government shall make necessary arrangements for planning, designing and installation of new sewage treatment plants to treat the gap in sewage quantity by 31.03.2021.
- 7) Water Quality of river Ghaggar has been monitored by Punjab pollution Control Board during November-2019 to February-2020 and it has been observed that no significant improvement in water quality of river Ghaggar w.r.t. BOD and DO parameters and no improvement w.r.t Coliform Parameter has been observed at 12 locations out of 14 locations of river Ghaggar.
- 8) PPCB has carried out ground water sampling at 11 locations located in the vicinity of river Ghaggar after monsoon. The analysis results indicate that water of 1 tubewell is not potable and as such this tubewell is required to be capped. Also, the concentration of iron in 1 handpump sample has been found much beyond the prescribed limits. Therefore, the Executive Committee recommends that these 02 ground water sources should be capped by PPCB by 07.04.2020 and display boards with caption "Water is not fit for drinking", may be erected at these sites.
- 9) The Executive Committee has observed that in order to utilize the treated sewage of STP's of 2 towns, irrigation schemes are under progress and the work of the same has been completed upto 80%. The Executive Committee recommends that the irrigation schemes should be completed by 31.05.2020.
- 10) To utilize the treated sewage (51 MLD) of 4 towns (Mandi Gobindgarh, Patiala, Dhuri and Sangrur) for irrigation having command area of 1961 hectares, the Department of soil and water conservation shall take up the matter with the Department of Finance, Punjab for early release of funds and work of laying of irrigation network may be started by 01.05.2020 and the same shall be completed by 30.09.2020.
- 11) The funds for laying of irrigation network to utilize the treated sewage of 24 STPs of 20 towns for irrigation may be tied up by the State of Punjab 31.05.2020 and funds for irrigation network for these towns may be released by 31.08.2020 so that irrigation schemes may be completed by 31.03.2021 i.e. simultaneously along with the commissioning of STPs.
- 12) The Executive Committee has observed that the treated sewage of 4 towns namely Budhlada: 6.5 MLD, Zirakpur: 17 MLD, SAS Nagar: 45.4 MLD and MC Derabassi: 4 MLD cannot be utilized for irrigation due to non feasibility because of urbanized land and no command area available. Therefore, these urban local bodies may utilize their treated sewage for construction activities,

gardenings, vehicle cleaning, road cleaning and toilet flushing etc. The Department of Local Governemnt shall isuue necessary directions in this regard.

13) The Monitoring of Sewage Treatment Plants of the towns carried out by PPCB during the period December-2019 to February-2019 indicates that 7 STP's (Banur: 4 MLD, Zirakpur: 17 MLD, Dera Bassi: 4 MLD, Dera Bassi (PSIEC): 2 MLD, Sardulgarh: 3 MLD, Bhikhi: 3 MLD and Bareta: 3 MLD) are not achieving the standards w.r.t BOD and F.Coli parameters. Therefore, the Executive Committee recommends as under:

The Executive Committee recommends that following departments shall take immediate action to improve the functioning of STPs.

- i) PWSSB shall improve the performance of STPs Banur (4MLD), Dera Bassi (4 MLD) and Zirakpur (17 MLD) by 30.04.2020.
- ii) PSIEC shall improve the functioning of 2 MLD STP for Derabassi by 30.04.2020 and utilize the treated sewage for irrigation by 31.05.2020.
- iii) STPs for the towns Sardulgarh (3MLD), Bhikhi (3 MLD) and Bareta (3MLD), which are based on WSP technology, should be upgraded by 31.03.2021.

14) It has been observed that no inspections of the industries/ Pollution sources have been carried out by District Level Special task Force. PPCB has inspected 23 industries during December-2019 to February-2020 and none of the industries was found non compliant. Therefore, PPCB and District Level Special Task force of Districts namely SAS Nagar, Patiala, Sangrur and Mansa shall continue to carry out inspections of industries and other Pollution Sources and action against the defaulting industries/ Pollution sources be taken under the provisions of the Water Act, 1974.

15)It has been reported by the Department of Rural Development and Panchayat that out of 87 villages taken in Phase-1 for insallation of sewage treatment plants, treatment systems have been installed in 23 villages and in 5 villages, treatment plants are under construction.

The Executive Committee recommends that the STPs of 5 villages should be completed by 30.06.2020. For the treatment of sewage of remaining 59 villages, funds amounting to Rs 50 crores have been sanctioned but the funds have not been released so far. The Department of Rural Development and Panchayat shall take up the matter with Department of Finannce, Punjab for early release of funds.

16)The data w.r.t. health check up camps organized in 4 districts (SAS Nagar, Patiala, Sangrur and Mansa) located in the catchement area of river Ghaggar during the period December-2019 to February-2019 indicate that out of total 3126 patients checked during these camps, 94 patients have been found suffered with water borne diseases.

Therefore, the Executive Committee recommends that safe drinking water be supplied to the villages by the department of Water Supply and Sanitation, where the patients have been found suffered with water borne diseases by 30.06.2020.

- 17) To create awareness among the public about water quality of river Ghaggar, water quality of ground water sources located along river Ghaggar, water borne diseases, utilization of treated sewage for irrigation and less consumption of water for domestic usage, more IEC activities may be carried out by PPCB, Department of Local Government and Department of Rural Development and Panchayat.
- 18) In order to maintain Environment Flow in river Ghaggar, Department of Soil and Water Conservation shall construct check dams/ storage ponds in the catchment area of river Ghaggar so as to regulate the flow in river Ghaggar for whole of the year to maintain environment flow in the river.
- 19) For septage and faecal sludge management, the Executive Committee recommends that PPCB shall take following actions
- a) To identify the source of generation of Septage and Faecal sludge from rural and urban area and the quantity of septage /Faecal sludge extracted per month by 31.05.2020.
 - b) To prepare comprehensive plan to dispose off these materials in environmentally sound manner by 30.06.2020.
 - c) To identify the nearby STPs where the regulated quantity of septage/ faecal sludge can be taken for treatment by 30.06.2020.
- 20) For removal of solid waste from river Ghaggar and drains/nallahs falling into it, the Executive Committee recommends that PPCB, Department of Rural Development and Panchayat and Department of Water Resources (Drainage) shall jointly survey river Ghaggar and its tributaries and identify its stretches, where the solid waste is found dumped. The survey may be completed by 31.03.2020 and action to lift these solid waste from river Ghaggar and its tributaries be taken by the Department of Water Resources by 31.05.2020.

4.2.5.2 U.T. Chandigarh

- 1)** The data w.r.t. performance of 6 existing sewage treatment plants (Raipur Khurd: 5.63 MLD, 3 BRD :49.5 MLD, Raipur Kalan: 22.5 MLD, Dhanas: 7.5 MLD, Maloya: 22.5 MLD and Diggian: 135 MLD) of U.T. Chandigarh, as monitored by CPCC during the period December-2019 to February-2020 indicate that STPs: Raipur Kalan (22.5 MLD), Dhanas (7.5 MLD) and Diggian (135 MLD) are not meeting with the prescribed limits for BOD parameter. However, none of the STP's is meeting with F-coli parameter.
- 2)** The sewage treatment plants of capacity 5 MLD, being installed at industrial area Phase III, Raipur Kalan, has been completed upto 90%, the said STP should be completed by 30.06.2020

2 MLD STP to treat the gap in sewage quantity of U.T. Chandigarh should be completed by 31.12.2020
- 3)** In order to meet with the stringent parameters, the Executive Committee recommends that 6 STP's (Raipur Khurd: 5.63 MLD, 3 BRD (49.5 MLD), Raipur Kalan: 22.5 MLD,

Dhanas: 7.5 MLD, Maloya: 22.5 MLD and Diggian: 135 MLD) should be technologically upgraded by 31.03.2021.

- 4) CPCC shall continue to carry out inspection of industries located in the catchment area of river Ghaggar and action against the violating industries/polluting sources be taken as per the provisions of the Water Act 1974.
- 5) Municipal Corporation Chandigarh shall utilize the treated sewage of STPs for gardening, watering of parks and golf course and vehicle washing etc so as to control the discharge of treated sewage into choes/nallahs/drains further leading to river Ghaggar.
- 6) The data provided by CPCC, as mentioned at point 4.2.2.8, indicate that there is no improvement in river Ghaggar water w.r.t. BOD and F.Coli parameters. Therefore, the Executive Committee recommends that Municipal corporation Chandigarh should upgrade its existing STPs to meet with the stringent standards for BOD, F.Coli and other parameters by 31.03.2021.

4.2.5.3 State of Himachal Pradesh

- 1) The Executive Committee recommends that the Executive agency of the sewage treatment plants of State of Himachal Pradesh shall ensure that 2 STPs each of capacity 1 MLD to treat the sewage of Parwanoo area, 1 STP of capacity 1.15 MLD to treat the sewage of Trilokpur (Kala Amb area) and 1 CETP cum STP of capacity 5 MLD to treat the industrial and domestic wastewater of Kala Amb area should be completed and commissioned by 31.12.2020.
- 2) Sewage treatment plants for 4 villages of Kala Amb area, District Sirmour should be completed by 31.12.2020.
- 3) HPPCB shall identify more villages, which are located in the catchment area of Sukhna Nallah, Jattanwala Nallah and river Markanda and prepare comprehensive plan for treatment of sewage of these villages by 31.05.2020.
- 4) HPPCB shall continue to make surprise inspection of industries located in the catchment area of Sukhna Nallah, Jattanwala Nallah and Markanda river further leading to river Ghaggar and action against the defaulting industries be taken as per the provisions of the Water Act, 1974.
- 5) Water Quality of Sukhna Nallah in terms of BOD, DO and T.Coli, as monitored by HPPCB, during December-2019 to February-2020 indicate that there is improvement of in water Quality of Sukhna Nallah in terms of said parameters.
- 6) Monitoring of Water Quality of river Markanda was carried out by HPPCB during December-2019 to February-2020 and its analysis results indicate that water quality of River Markanda downstream of Jattanwala Nallah has been degraded in terms of BOD and F-coli parameter because in Jattanwala Nallah, the values of BOD and F-coli have been found varied between 37.3-54.6 mg/l and 58333-74400 MPN/100 ml. The Executive Committee recommends that HPPSB shall identify the sources contributing high value of BOD and F-coli by 7.04.2020 and shall take action against the defaulting industries/ agencies by 15.05.2020.

- 7) The data w.r.t. health check up camps organized by Department of Health during December-2019 to February-2020 indicate that out of 410 patients checked in District Solan, 47 patients were found suffered with water borne diseases. Similarly, in district Sirmour, 432 patients were checked out of which 9 patients were found affected with water borne diseases.

Therefore, the Executive Committee recommends that in catchment area of river Markanda and Sukhna Nallah, where the patients have been found suffered with water borne diseases, should be provided with potabile and safe drinking water supply to the residents by the Department of public Health.

- 8) HPPCB shall continue to create public awareness about water quality of river Markanda, Jattanwala Nallah and Sukhna Nallah, Ground water quality of water sources located in the catchment area of Sukhna Nallah, Jattanwala Nallah and river Markanda and status of health check up camps organized by Department of Health.
- 9) In order to maintain environmental flow in river Markanda and Sukhna Nallah, the Department of irrigation shall explore the possibility of providing check dams/ storage ponds in the vicinity of river Markanda and Sukhna Nallah by 30.04.2020 so as to discharge the regulated flow in the Nallah/River to maintain E-Flow.
- 10) For septage and Faecal Sludge Management, HPPCB shall taken up the matter with DDPOs of Districts Solan and District Sirmour w.r.t. improvement in the performance of Septic Tanks and degradation of septage and faecal sludge so that there is no illegal disposal of septage and faecal sludge into any nallah/river. HSPPCB shall make surprise inspections in the catchment area of Sukhna Nallah, Jattanwala Nallah and river Markanada and ensure that there is no illegal disposal of septage and faecal sludge from septic tanks into said Nallahs/ivers.

4.2.5.4 State of Haryana

- 1) Performance study of existing Sewage Treatment Plants carried out by HSPCB indicates that out of 61 STPs, 51 STPs were monitored w.r.t. BOD, TSS and F.Coli parameters. Out of these 51 STPs, 40 STPs were not found complying with the standards prescribed for F.Coli parameters. 51 STPs were found meeting with the standards prescribed for BOD and TSS parameters.
- The Executive Committee recommends that Local body Department, HSVP and Public Health Engineering Department shall upgrade their existing 40 STPs to meet with the prescribed standards of F.coli parameters by 31.12.2020.
- 2) With regard to construction of new STPs, it has been reported that 6 STPs (Baretta: 4 MLD, Jind: 7 MLD, Urban state, Thanesar: 15 MLD, Kurukshetra: 25 MLD, Sirsa: 20 MLD and Fatehbad: 3 MLD) have been commissioned but are under stabilization. The Executive Committee recommends that these STPs should be put into operation by 15.04.2020.

Poor progress has been made w.r.t. construction of 4 New STPs [Billa{0.75 MLD}:7%, Khuda Khurd Ambala{12 MLD}:5%,Babyal{10 MLD}:3% and Shahpur Machhonda{7.5 MLD}:2%. The Urban Local Bodies, HSVP and Public Health Engineering Department of State of Haryana shall take proactive steps to ensure that these STPs should be completed by 30.09.2020. The remaining STPs, whose progress is almost more than 74% except STP for Ambala (5 MLD), where progress has been achieved upto 30%, should also be completed and commissioned by 30.06.2020.

- 4) For technological upgradation of STPs of State of Haryana, only 1 STP of Sector 20, panchkula having capacity of 57 MLD has been considered for upgradation. However, the Executive Committee recommends that State of Haryana should make comprehensive proposal to upgrade its STPs to achieve stringent parameters (BOD:10mg/l) including F.Coli parameters. The comprehensive proposal should be prepared by 30.06.2020 and work of upgradation of existing STPs should be completed by 31.03.2021.
- 5) State of Haryana through HSPCB has claimed that there is only gap of 15.8 MLD untreated sewage of Ambala area for which sewage treatment plants has been proposed to be installed, whereas the monitoring data of river Ghaggar water, carried out by HSPCB during December-2019 to February-2019, indicate that values of BOD and F.Coli parameters vary between 56-78 mg/l and 300000-486667 MPN/100ml, which indicate that untreated sewage of some of the areas is entering into River Ghaggar.

Therefore, the Executive Committee recommends that the Department of Irrigation and HSPCB shall jointly identify the drains carrying untreated sewage into river Ghaggar and quantity of sewage flowing into these drains should be measured and necessary directions be issued to the concerned departments of State of Haryana to prepare DPR for installation of STPs and ensure that STPs for gap in sewage quantity should be installed by 31.03.2021 so that water quality of river Ghaggar may be improved.

- 6) For the treatment of sewage of villages, there is proposal to install STPs in 45 villages, the estimated cost of which is about Rs 718.50 crore. These STPs for treatment of sewage of villages should be completed by 31.12.2020.
- 7) HSPCB shall continue to make surprise inspection of industries/polluting sources and action against the defaulting industries be taken under the provisions of the Water Act, 1974.
- 8) The data w.r.t. water quality of ground water sources located in the catchment area of river Ghaggar indicate that out of 76 Ground Water samples analyzed, 40 ground water samples have been found complying with the norms. 36 Ground Water Samples have been found non complying. Therefore, the Executive

Committee recommends that HSPCB shall re-monitor ground water quality of those ground water samples which were found non compliant atleast one time more before making any conclusion on the water quality monitoring report. In case, these ground water samples are again found non compliant, HSPCB may cap these ground water sources and potable and safe drinking water be supplied to the persons / inhabitants which depend upon these ground water sources by the Department of Public Health.

- 9) The data w.r.t. health check up camps organized during the months December-2019 to February-2020 and provided by HSPCB indicate that 52 Health Check up camps were organized during December-2019 to February-2020. In these health checks up camps, 3787 patients were examined, out of which 332 patients were found suffered with water borne diseases. Therefore, the Executive Committee recommends that affected inhabitants should be supplied safe drinking water by the Department of Public Health.
- 10)** To create awareness among the public about water quality of river Ghaggar, water quality of ground water sources located along river Ghaggar, water borne diseases, utilization of treated sewage for irrigation and less consumption of water for domestic usage, more IEC activities may be carried out by HSPCB, Urban Local Bodies Department and Department of Rural Development and Panchayat.
- 11)** In order to maintain Environment Flow in river Ghaggar, Department of Irrigation shall construct check dams/ storage ponds in the catchment area of river Ghaggar so as to regulate the flow in river Ghaggar for whole of the year to maintain environment flow in the river.
- 12)** With regard to management of septage and faecal sludge, the data submitted by HSPCB indicate that septage and faecal sludge of 13 towns with quantity of 5-300 KLD in the month of December-2019, 5-200 KLD in January-2020 and 5-200 KLD in the month of February-2020 was transported to the existing STPs through the tankers. However, the Executive Committee recommends as under:
 - a)** The tankers deployed for collection and transportation of septage and faecal sludge to STPs should be properly covered.
 - b)** All the tankers should be provided with GPS with its connectivity to HSPCB and urban local bodies Department so that movement of the trucks may be checked at any time.
 - c)** To identify the nearby STPs where the regulated quantity of septage/ faecal sludge can be taken for treatment by 30.06.2020.
- 13)** To utilize the treated sewage for irrigation, the Government of Haryana has prepared a consolidated project costing Rs. 1098.25 crore to utilize 1828 MLD of treated sewage out of total 2795.2 MLD of treated wastewater from 207 STPs (Ghaggar and Yamuna). 1828 MLD treated sewage shall be utilized for irrigation in command area 162000 hectares. The completion period of the project is 5 years which also depends upon the availability of funds.

Out of these 207 STPs, 35 STPs have been chosen for Rs 500 crores MI projects under NABARD assisted Micro Irrigation Projects. The remaining funds of Rs 598.25 crore (Rs 1098.25 crores-Rs 500 crores) shall be made available under annual budget as the project stands approved by the State Government.

The Executive Committee recommends that Urban Local Body Department, HSVP and Public Health Engineering Department shall supply the details along with capacity of STPs of the towns located in the catchment area of river Ghaggar, where STPs are in operation to the Department of Irrigation. The Department of Irrigation shall ensure that the treated sewage of the towns located on river Ghaggar should be covered under the consolidated project or separate schemes for utilization of treated sewage for irrigation may be prepared, constructed and commissioned by 31.03.2021.

Dr. Babu Ram

Ms. Urvashi Gulati

Justice Pritam Pal

Former Judge
Punjab & Haryana High Court