

National Mission for Clean Ganga

Format for Submission of Monthly Progress Report by State of HP for the month of February-2020 (Hon'ble NGT in the matter of OA. No. 673/2018 dated 06.12.2019)

Sr. No.	Activity to be monitored	Timeline	Submission of Progress by State/ UT- Compliance Status			
1.	Ensure 100 % treatment of sewage at least in-situ remediation	31.03.2020	The site is identified for carrying out Phyto-remediation work for treatment of sewage at Samtel Nallah at Priority –I at Parwanoo along the catchment of Sukhna Nallah and Priority –II, Jatta Wala Nallah at Kala Amb on the Catchment of River Markanda.			
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured	31.03.2021	The Progress report for setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs for all Priority Stretches is as under:			
			S.No.	Area & Priority	Proposal	Progress
			1.	SUKHNA Nallah Stretch (Priority - I):- Parwanoo Town	Sewage Treatment Plant Proposal (2 No of 1 MLD capacity each including laying of sewerage lines in Zone-I and Zone-II in Parwanoo Town. The proposal of 49.82 Crore prepared by IPH Department. Completion time is 31st January, 2022.)	<ul style="list-style-type: none"> In Priority – I (Sukhna Nallah at Parwanoo), financial approval amounting Rs. 47.60 Crore has been accorded for the proposal of 02 STPs (01 MLD each), land has been finalized. Technical bids finalized and financial bid assessment in progress. The contract will be awarded before 31st, March2020. The work will be completed before 31st, December 2020.
			2.	River MARKANDA Stretch (Priority II):	Kala Amb and Moginand Area: Laying of Sewerage Network and Pre-treatment of Sewage. The proposal is of Rs. 30.40 crore and completion time is 31st January, 2022.	<ul style="list-style-type: none"> At, Priority – II (River Markanda at Kala Amb), the contract for installation of primary treatment system for 1.7 MLD sewage treatment and laying of sewer network awarded on 7.03.2020. The pipe line for sewer lines

4.	<p>Progress report may be furnished by the States/UTs to</p> <ul style="list-style-type: none"> Secretary, Ministry of Jal Shakti Member Secretary, CPCB 	<p>Monthly (preferably before 20th of every month)</p>	<p>The progress monitored by the Chief Secretary to the GoHP in last meeting held on 16.03.2020. The Latest Progress report is as under.</p> <p style="text-align: center;">1. <u>SUKHNA Nallah Stretch (Priority - I):- Parwanoo Town</u></p> <table border="1" data-bbox="661 414 1938 1511"> <thead> <tr> <th data-bbox="661 414 724 738">Sr. No.</th> <th data-bbox="724 414 913 738">Organization Responsible</th> <th data-bbox="913 414 1155 738">Work proposed for Execution along with cost and final Timeline.</th> <th data-bbox="1155 414 1323 738">Percentage (%) of Work to be completed as on date against timeline.</th> <th data-bbox="1323 414 1938 738">Latest Status</th> </tr> </thead> <tbody> <tr> <td data-bbox="661 738 724 1511">1.</td> <td data-bbox="724 738 913 1511">Irrigation and Public Health Department</td> <td data-bbox="913 738 1155 1511"> <p><u>Sewage Treatment Plant Proposal</u> (2 No of 1 MLD capacity each including laying of sewerage lines in Zone-I and Zone-II in Parwanoo Town. The proposal of 49.82 Crore prepared by IPH Department. Completion time is 31st January, 2022.)</p> </td> <td data-bbox="1155 738 1323 1511">33.33%</td> <td data-bbox="1323 738 1938 1511"> <ul style="list-style-type: none"> In Priority – I (Sukhna Nallah at Parwanoo), financial approval amounting Rs. 47.60 Crore has been accorded for the proposal of 02 STPs (01 MLD each), land has been finalized. Technical bids finalized and financial bid assessment in progress. The contract will be awarded before 31st, March 2020. The work will be completed before 31st December 2020. </td> </tr> </tbody> </table>	Sr. No.	Organization Responsible	Work proposed for Execution along with cost and final Timeline.	Percentage (%) of Work to be completed as on date against timeline.	Latest Status	1.	Irrigation and Public Health Department	<p><u>Sewage Treatment Plant Proposal</u> (2 No of 1 MLD capacity each including laying of sewerage lines in Zone-I and Zone-II in Parwanoo Town. The proposal of 49.82 Crore prepared by IPH Department. Completion time is 31st January, 2022.)</p>	33.33%	<ul style="list-style-type: none"> In Priority – I (Sukhna Nallah at Parwanoo), financial approval amounting Rs. 47.60 Crore has been accorded for the proposal of 02 STPs (01 MLD each), land has been finalized. Technical bids finalized and financial bid assessment in progress. The contract will be awarded before 31st, March 2020. The work will be completed before 31st December 2020.
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				Installation of Continuous Water Quality Monitoring Station. The proposal of 0.3 crore and completion time was 31st July, 2019.	100 %	The Online Continuous Water Quality Monitoring Station (OCWQMS) has been installed and online data has been connected to HPSPCB server.
				Radar system for depth and flow measurement.	100 %	The system has been provided by IPH and it is installed at River Kaushalya and is functioning properly.
			2.	HIMUDA, Municipal Council, Parwanoo Sewage Treatment Plant (1 No. of 70 KLD capacity in Sector - 5 Parwanoo) to cater to the additional load of Septic Tanks catering to the residential area. Cleaning and Overhauling of Septic Tanks.	100 %	<ul style="list-style-type: none"> The Sewage Treatment Plant of 70 KLD capacity at Sector 5 Parwanoo has been commissioned. The Cleaning and Overhauling is done by MC Parwanoo.
			3.	Department of Urban Development Waste Recovery and Reprocessing of Existing	100%	<ul style="list-style-type: none"> The legacy waste has been recovered, and dumping site has been cleared. Domestic Hazardous waste Kiosk has been

					Dumped Waste at Dumping site Sector 5, Parwanoo. Installation of Kiosk for Domestic Hazardous Waste Management.		installed at Parwanoo.
			4	BBNDA, MC Parwanoo & HPSPCB	For collection, Transportation, Processing and disposal of fresh waste at Baddi Cluster.	100 %	<ul style="list-style-type: none"> • Production Shed: The foundation work including steel columns upto ceiling level and fixing of trusses has been completed. • 30 Ton capacity weighbridge installed • The BoundaryWall is complete towards the river side. • 8 nos. of CCTV cameras installed to check and control the movement of MSW vehicles, procedure at weighbridge, unloading of the vehicle, back journey of empty vehicle, activities of operator's room, progress of work of the shed and general take care of the overall plant. • Leachate treatment: All equipment's received at site and the fitting and completion of ETP shall be done by 31.03.2020 • Hot air generator completed. • Equipment of RDF Section unit like chimney, ID fan and FD fan has been erected completely • 7 nos. trommels of different pore sizes delivered at site out of which 04 nos. trommels have been fitted at site. • 4 nos. Air Pollution Control Equipment's (cyclones) erected. • The civil work for supporting the drier is completed. • The ducting work for connecting chimney with IF

					fan is completed at site. <ul style="list-style-type: none"> The work at site is in progress and the segregation of waste shall commence by the end of the March, 2020 and subsequent services shall be operational as per the time requirement for various activities. 		
			5.	Forest Department	Plantation Proposal	100%	2200 plants have been planted so far.
			6.	Phytoremediation			The work for insitu treatment by phytoremediation in Samtel Nallah is initiated and will be completed by 30.06.2020 (MC Parwanoo).
			1. <u>River MARKANDA Stretch (Priority II):</u>				

			Sr. No.	Organization Responsible	Work proposed for Execution along with cost and final Timeline.	Percentage (%) of Work to be completed as on date against timeline.	Existing Status
			1.	Irrigation and Public Health Department & Industries Department	Kala Amb and Moginand Area: Laying of Sewerage Network and Pre-treatment of Sewage. The proposal is of Rs. 30.40 crore and completion time is 31st January, 2022.	33.33 %	<ul style="list-style-type: none"> The contract for installation of primary treatment system for 1.7 MLD sewage treatment and laying of sewer network awarded on 7.03.2020. The pipe line for sewer lines purchased. The work is started and will be completed before 31st December 2020.

				<p>Trilokpur Area: Laying of Sewerage Network & Setting up of Sewage Treatment Plants. The proposal is of Rs. 26.00 crores and completion time is 31st January, 2022.</p>	33.33%	<ul style="list-style-type: none">• Tendering work completed. The contract awarded on 7/03/2020 pipes also procured for sewer line. The land handed over to contractor. The work is started and will be completed before 31st December 2020.	
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			2.	Irrigation and Public Health Department	Installation of Continuous Water Quality Monitoring Station	100 %	<ul style="list-style-type: none"> The Online Continuous Water Quality Monitoring Station (OCWQMS) has been installed.
			3.	Department of Industries.	Kala Amb area : Proposal for setting up of CETP.	33.33%	<ul style="list-style-type: none"> The Notice Inviting Tender for setting up of CETP of 2.5 MLD at Kala Amb has already been floated. As per project report of CETP cum STP, the designed capacity of CETP cum STP is 1.50MLD industrial effluent and 1.0 MLD domestic sewage (Total 2.50MLD) for 1st phase project and 2.50 MLD of industrial effluent for second phase.
			4.	Special Area Development Authority, Kala Amb, District Administration, Rural Development Department.	Proposal for setting up of Solid Waste Management Facility. Final timeline of completion is 31st January, 2022 . The cost of the project is Rs. 3.5 crores.	33.33%	<ul style="list-style-type: none"> The land measuring 05-04-00 bighas situated at Mohalis identified for setting up a Solid Waste Management Plant. Demarcation of the plot has been done on 06.08.2019. Leveling of the plot has been done. The administrative approval and expenditure sanction has been accorded by the Chairman SADA. Supply order for supply of bailing machine to Scientific & Technologies Equipment's Corporation has been issued.

			5.	Forest Department	Plantation Proposal Phytoremediation Biodiversity park	90 %	800 plants have been planted in Trilokpur Devini Area. The work for insitu treatment by phytoremediation in Jattawala Nallah is initiated and will be completed by 30.06.2020. The work of Biodiversity park in Kala Amb, work is in progress.
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4.1	Progress Report may be comprised of details along with completion timelines on:																												
(i)	Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment		<p>The action plan of Priority –I to V are prepared based on following identified polluting sources :</p> <ol style="list-style-type: none"> 1. Domestic Sewage generation and its treatment and proposed timeline to meet the gaps. 2. Industrial Wastewater generation and its treatment and proposed timeline to meet the gaps. 3. Existing solid wastes, bio-medical waste, hazardous waste, e-waste and other waste processing along the catchment of River stretches, gaps and proposed timeline to meet the gap. 																										
(ii)	<p><u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, proposed along with completion timeline</p>		<p>Detailed Gap analysis for the approved action plan for Priority – I and Priority – II is enclosed as under:</p>																										
(iii)	<p><u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status</p>		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="6" style="text-align: center;">Gap Analysis and the Proposed Action Points as per submitted Action Plans : (P-I & II stretches)</th> </tr> <tr> <th colspan="2" style="text-align: center;">Details</th> <th style="text-align: center;">Generation</th> <th style="text-align: center;">Existing Capacity</th> <th style="text-align: center;">Gap</th> <th style="text-align: center;">Proposed Treatment facilities</th> </tr> </thead> <tbody> <tr> <td rowspan="2" style="text-align: center; vertical-align: middle;">Sewage Management</td> <td style="text-align: center;">Sukhna Nallah</td> <td style="text-align: center;">(Residing & Floating) 1357.414 KLD (1.357 MLD)</td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> • 29 Captive ETP cum STPs • 16 Common Septic tanks • 70 KLD STP <p style="margin-top: 10px;">Total capacity: 858.004 KLD (0.858 MLD)</p> </td> <td style="vertical-align: top;">499.41 KLD (0.499 MLD)</td> <td style="vertical-align: top;"> <p>➤ 02 STPs proposed of 01 MLD each.</p> <p>Total Capacity: 2000 KLD (2 MLD)</p> </td> </tr> <tr> <td style="text-align: center;">River Markanda</td> <td style="text-align: center;">(Residing & Floating) 1146.24 KLD (1.146 MLD)</td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> • 06 Captive STPs • Local Household inadequate Designed Septic Tanks. <p style="margin-top: 10px;">Total: 100 KLD (0.1 MLD)</p> </td> <td style="vertical-align: top;">1046.24 KLD (1.046 MLD)</td> <td style="vertical-align: top;"> <p>➤ 02 STPs proposed of Kala Amb and Trilokpur Area having capacity 1 MLD and 1.5 MLD respectively.</p> <p>Total capacity: 2500 KLD (2.5 MLD)</p> </td> </tr> </tbody> </table>				Gap Analysis and the Proposed Action Points as per submitted Action Plans : (P-I & II stretches)						Details		Generation	Existing Capacity	Gap	Proposed Treatment facilities	Sewage Management	Sukhna Nallah	(Residing & Floating) 1357.414 KLD (1.357 MLD)	<ul style="list-style-type: none"> • 29 Captive ETP cum STPs • 16 Common Septic tanks • 70 KLD STP <p style="margin-top: 10px;">Total capacity: 858.004 KLD (0.858 MLD)</p>	499.41 KLD (0.499 MLD)	<p>➤ 02 STPs proposed of 01 MLD each.</p> <p>Total Capacity: 2000 KLD (2 MLD)</p>	River Markanda	(Residing & Floating) 1146.24 KLD (1.146 MLD)	<ul style="list-style-type: none"> • 06 Captive STPs • Local Household inadequate Designed Septic Tanks. <p style="margin-top: 10px;">Total: 100 KLD (0.1 MLD)</p>	1046.24 KLD (1.046 MLD)	<p>➤ 02 STPs proposed of Kala Amb and Trilokpur Area having capacity 1 MLD and 1.5 MLD respectively.</p> <p>Total capacity: 2500 KLD (2.5 MLD)</p>
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(iv)	<p><u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p>	31.12.2020																											

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(v)	Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;		<p>The latest water quality of polluted rivers are enclosed as under:</p> <p style="text-align: center;"><u>Polluted River Stretch Priority-I</u> (Sukhna at Parwanoo Town, District –Solan,H.P) <u>Latest Water Quality as per Assessment Targeted (Characteristics of River and major Drains)</u> <u>Sukhna Nallah upstream of Parwanoo Town at Shivloti Temple, Village – Ambota</u></p> <table border="1"> <thead> <tr> <th>Month/Year</th> <th>pH</th> <th>D.O. mg/l</th> <th>BOD mg/l</th> <th>FC MPN /100ml</th> <th>TC MPN /100ml</th> </tr> </thead> <tbody> <tr> <td>January, 2019</td> <td>7.8</td> <td>8.0</td> <td>1.2</td> <td>2.0</td> <td>32.0</td> </tr> <tr> <td>April, 2019</td> <td>7.08</td> <td>8.0</td> <td>0.2</td> <td><1.8</td> <td>2.0</td> </tr> <tr> <td>July, 2019</td> <td>7.45</td> <td>7.2</td> <td>0.3</td> <td>6.8</td> <td>17</td> </tr> <tr> <td>October, 2019</td> <td>7.94</td> <td>7.2</td> <td>0.1</td> <td><1.8</td> <td>6.1</td> </tr> <tr> <td>January, 2020</td> <td>7.73</td> <td>6.6</td> <td>0.1</td> <td><1.8</td> <td><1.8</td> </tr> </tbody> </table>	Month/Year	pH	D.O. mg/l	BOD mg/l	FC MPN /100ml	TC MPN /100ml	January, 2019	7.8	8.0	1.2	2.0	32.0	April, 2019	7.08	8.0	0.2	<1.8	2.0	July, 2019	7.45	7.2	0.3	6.8	17	October, 2019	7.94	7.2	0.1	<1.8	6.1	January, 2020	7.73	6.6	0.1	<1.8	<1.8
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February, 2020	7.34	6.5	0.1	1.8	3.6
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2. Sukhna Nallah D/s Water Quality at Kalka Barrier.

Month/Year	pH	D.O. mg/l	BOD mg/l	FC MPN /100ml	TC MPN /100ml
Jan., 2019	8.16	4.0	52.0	350	1600
Feb., 2019	7.74	6.3	12.0	26	140
March, 2019	7.69	5.0	72.0	920	>1600
April, 2019	7.55	5.2	16.0	17	47
May, 2019	7.92	4.2	25.0	220	920
June, 2019	7.93	2.5	32.0	240	540
July, 2019	7.60	6.1	2.8	33	70
August, 2019	7.78	6.2	2.8	170	920
Sept., 2019	7.51	5.9	2.2	94	170
Oct., 2019	7.91	5.2	1.6	22	70
Nov., 2019	7.15	4.9	1.8	26	94
Dec., 2019	7.25	5.8	2.8	27	170
Jan, 2020	7.48	5.6	2.8	22	170
Feb, 2020	6.29	5.4	2.8	17	47

Characteristics of major drains contributing toPollution:

Sector IV Nallah

Month/Year	pH	D.O. mg/l	BOD mg/l	FC MPN /100ml	TC MPN /100ml
October, 2019	7.80	3.0	1.0	20	38
November, 2019	8.06	5.9	1.2	17	40
January, 2020	7.03	4	1.2	22	110

Samtel Nallah

Month/Year	pH	D.O. mg/l	BOD mg/l	FC MPN /100ml	TC MPN /100ml
October, 2019	7.46	2.5	0.6	4	48
November, 2019	7.03	6.4	1	21	48
January, 2020	6.32	4.3	1.8	26	140

Polluted River Stretch Priority-II
(River Markanda at Kala Amb, District –Sirmour, H.P.)

Characteristics of River and Major Drains: Water Quality of River Markanda Upstream Kala Amb

Month	Year				
		pH (6.5-8.5)	DO (in mg/L), 05 Mg/L or more	BOD (in mg/L), 03 Mg/L or less	TC (MPN) -
January	2019	8.01	8.9	1.7	47.0
February	2019	8.24	8.4	0.9	63.0
March	2019	8.05	7.4	0.7	79
April	2019	8.14	7.7	0.9	79
May	2019	8.24	7	0.7	110
June	2019	7.98	6	0.7	63
July	2019	7.85	6.8	0.8	63
August	2019	7.87	6.5	0.6	140
September	2019	7.64	6	0.9	70
October	2019	7.43	8.7	0.7	48
November	2019	7.63	9.2	0.5	32.0
December	2019	7.07	8.9	0.4	26
January	2020	7.65	8.8	0.9	21.0
February	2020	7.19	9.0	0.7	41

Characteristics of River and Major Drains: Water Quality of River Markanda Downstream Kala Amb

Month	Year				
		pH	DO (in mg/L)	BOD (in mg/L)	TC (MPN)
January	2019	8.04	9.6	1.8	48.0
February	2019	8.25	9.1	0.8	70.0
March	2019	8.06	8.5	0.9	58
April	2019	8.19	7.4	0.9	84
May	2019	8.29	6.7	0.8	140
June	2019	Source Dry			
July	2019	7.88	6.6	0.9	70
August	2019	7.13	6.4	0.7	220
September	2019	7.77	6.5	0.9	84
October	2019	7.65	8.6	0.8	49
November	2019	7.68	9.1	0.7	41.0
December	2019	7.6	8.8	0.6	34.0
January	2020	7.62	9.0	0.6	21.0
February	2020	7.32	8.8	0.8	40

Water Quality of River Markanda D/s Jattan Wala Nallah at Sadhora

Month	Year	Parameters			
		pH	DO (in mg/L)	BOD (in mg/L)	FC (MPN)
January	2019	7.78	6.4	5	>1600
April	2019	Source dried			
July	2019	Source dried			
October	2019	7.4	7.5	2	79
January	2020	7.51	8.8	0.9	21.0

Characteristics of major drains contributing to pollution

Water Quality of Jattan Wala Nallah

Month	Year	Parameters			
		pH	DO (in mg/L)	BOD (in mg/L)	FC (MPN)
January	2019	7.39	0.5	85	>1600
April	2019	7.76	0.3	27	70000
July	2019	7.24	Nil	45	72000
October	2019	7.92	0.5	32	14000
January	2020	6.99	1.0	90.0	92000

Water Quality of SalaniNallah (SalaniKhad Near Bridge NH-7 Moginand Kala Amb) , a tributary of River Markanda

Month	Year				
		pH (6.5-8.5)	DO (in mg/L), 05 Mg/L or more	BOD (in mg/L), 03 Mg/L or less	TC (MPN) -
January	2019	8.0	8.5	1.5	41.0
February	2019	7.99	7.8	1.3	63.0
March	2019	8.11	8.9	0.7	46.0
April	2019	8.2	7.8	0.8	58.0
May	2019	SOURCE DRIED			
June	2019	SOURCE DRIED			
July	2019	SOURCE DRIED			
August	2019	7.72	6.5	0.6	120.0
September	2019	7.65	6.5	0.6	47.0
October	2019	7.65	8	0.5	43.0
November	2019	7.60	8.5	0.8	39.0
December	2019	6.96	7	0.6	33.0
January	2020	7.58	8.2	0.7	46
February	2020	7.23	8	0.8	41

Water Quality of RoonNallah (RoonNallah Near Meerpur Kotla, Gurudwara), a tributary of River Markanda

Month	Year	Parameters			
		pH (6.5-8.5)	DO (in mg/L), 05 Mg/L or more	BOD (in mg/L), 03 Mg/L or less	TC (MPN) -
January	2019	Sample not received			
February	2019	8.21	8.3	1.2	58.0
March	2019	8.11	8.5	0.4	49
April	2019	Source Dried			
May	2019	Source Dried			
June	2019	Source Dried			
July	2019	Source Dried			
August	2019	7.19	6.7	0.8	58
September	2019	7.87	6.5	0.7	46
October	2019	7.6	7	0.7	39
November	2019	7.74	8.0	0.8	43.0

			<table border="1"> <tr> <td>December</td> <td>2019</td> <td>6.79</td> <td>5</td> <td>0.9</td> <td>31</td> </tr> <tr> <td>January</td> <td>2020</td> <td>7.69</td> <td>7.5</td> <td>0.9</td> <td>47</td> </tr> <tr> <td>February</td> <td>2020</td> <td>7.49</td> <td>7</td> <td>0.8</td> <td>43</td> </tr> </table>	December	2019	6.79	5	0.9	31	January	2020	7.69	7.5	0.9	47	February	2020	7.49	7	0.8	43
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January	2020	7.69	7.5	0.9	47																
February	2020	7.49	7	0.8	43																
(vi)	Preventing dumping of waste and scientific management including bio-medical wastes, plastic wastes and decentralizing waste processing, including waste generated from hotels, ashrams etc.		<p><u>Solid Waste Management</u> <u>Priority – I (Sukhna Nallah at Parwanoo)</u></p> <ul style="list-style-type: none"> • At Priority – I, (Sukhna at Parwanoo), total solid waste generation is 7-8 MT/Day. • The legacy waste has been recovered, and dumping site has been cleared. Domestic Hazardous waste Kiosk has been installed at Parwanoo. • The dry waste generated along the stretch of River Sukhna at Parwanoo has been regularly collected and further transported to the Waste processing site at Baddi • The wet waste is processed into Composting Pits constructed. • 5000 MT legacy waste cleared <p><u>Priority – II (River Markanda at Kala Amb)</u></p> <ul style="list-style-type: none"> • Total solid waste generation is 3-4 MT/Day • The waste generated along the stretch of River Markanda at Kala Amb is disposed in the waste processing site at Nahan. • The Solid waste processing facility is proposed for Kala Amb which is to be completed by 31.12.2020. <p><u>Hazardous Waste Management :</u> <u>Priority – I (Sukhna Nallah at Parwanoo)</u></p> <ul style="list-style-type: none"> • There are 48 industrial units falling in the stretch of Sukhna Nallah out of which 06 units are closed. • Total Hazardous waste generation inform ETP Sludge is 97 MT. • There is no common TSDF site in Parwanoo area. • All hazardous waste is being collected by M/s Shivalik Solid Waste Management Ltd (TSDF), Village Dabhota, Tehsil: Nalagarh, District Solan by the TSDF GPS enabled vehicle and same is further treated and landfilled. • The industries have provided separate storage facilities under covered shed within their premises. • No incident/accident regarding illegally dumping of hazardous waste has ever been reported 																		

- The capacity of landfill site at Dhabota is 10 Lac MT, hence there is no Gaps in treatment of Industrial Hazardous Waste Treatment.

Priority – II (River Markanda at Kala Amb)

- There are 94 industrial units falling in the stretch of River Markanda.
- Total Hazardous waste generation inform of ETP Sludge is 165 MT.
- There is no common TSDF site in Kala Amb area.
- All hazardous waste is being collected by M/s Shivalik Solid Waste Management Ltd (TSDF), Village Dabhota, Tehsil: Nalagarh, District Solan by the TSDF GPS enabled vehicle and same is further treated and landfilled.
- The industries have provided separate storage facilities under covered shed within their premises.
- No incident/accident regarding illegally dumping of hazardous waste has been reported yet.
- The capacity of landfill capacity of Landfill site at Dhabota is 10 lacs MT, hence there is no Gaps in treatment of Industrial Hazardous Waste Generated by industrial units along River Markanda Stretch.

Bio-medical Waste Management:

Priority – I (Sukhna Nallah at Parwanoo)

- The bio medical waste generated is being disposed to M/s Enviro Engineers, a Common Bio Medical Waste Disposal Facility having capacity 100 Kg/hr, located at Shalaghat, District - Solan (H.P).
- One Hospital in the name and Style of ESIC Hospital, Parwanoo, and 03 private clinics which collectively generate 30 Kg/Day anddisposes Bio-medical Waste at afore-mentioned site.

Priority – II (River Markanda at Kala Amb)

- The bio medical waste generated is being disposed to M/s Enviro Engineers, a Common Bio Medical Waste Disposal Facility having treatment capacity 100 Kg/hr, located at Shalaghat, District - Solan (H.P).
- One Hospital in the name and Style of ESIC Hospital, Kala Amb and 01 clinic which collectively generate 05 Kg/Day and disposes Bio-medical Waste at afore-mentioned site.

Plastic Waste Management:

- **Buy back Policy:** The Government of Himachal Pradesh has notified a Policy regarding Buy-back of non-recyclable and Single Use Plastic Waste including plastic bags in the Himachal Pradesh from the Rag pickers and households, providing Minimum Support Price of **Rs. 75/- (Rupees**

			<p>Seventy Five) only per kilogram.</p> <ul style="list-style-type: none"> • EPR Implementation: Directions are issued to plastic waste Producers and Brand owners to set up waste collection system along Priority- I & II. • Proposal for Bio-fuel at Parwanoo • Proposal for RDF manufacturing (4-6 MT/ month)
(vii)	Ground water regulation		Presently Jal Shakti Department has stopped drilling of new borewells for extraction of ground water in Himachal Pradesh as per order of the Hon'ble High Court of Himachal Pradesh. The Himachal Pradesh Ground Water Regulation & Control of Development & Management Act is under formulation will be notified after approval from the Government.
(viii)	Adopting good irrigation practices,		The Jal Shakti Department now totally discourages Flood irrigation and convergence of water through open channels. The use of irrigation water in the fields is optimized by extension services offered by Horticulture and Agriculture Department by micro irrigation methods.
(ix)	Protection and management of Flood Plain Zones (FPZ)		No flood plain zone have been identified in Himachal Pradesh till date.
(x)	Rain Water Harvesting,		<p>As per Town & Country Planning Act, 1977 (Act No. 12 of 1977), it is mandatory for all the commercial buildings to have roof top rain water harvesting system and recharging pit. The guidelines for capturing, storage, integration and distribution of rain water harvesting is as under as per the aforementioned Act :-</p> <ol style="list-style-type: none"> 1. The Rain Water Harvesting Structures are allowed to be constructed in set backs below ground level. If the storage is desired at any level above ground level, it has to be away from set backs within the permitted covered area. 2. The community Rain Water Harvesting Structure shall also be permissible. 3. Proper system for rain water capturing, storage as well as integration and distribution shall be ensured. 4. The stored rain water shall be utilized regularly for non-drinking usages including fire fighting, landscaping, gardening apart from domestic usages. 5. No water supply connection shall be given to any building till Rain Water Harvesting System is put in place and subsequently operationalized. 6. The minimum capacity of Rain Water Harvesting Structure shall be worked out @ 20 Liters per square Metre of the roof top area. 7. Violator shall be liable for disconnection of Public Water Supply connection. 8. The owners of existing buildings without Rain Water Harvesting System shall have to install Rain Water Harvesting System within eighteen months after coming into the operation of these Regulations.

(xi)	Maintaining minimum environmental flow of river		<p>The following steps have been taken to maintain environmental flow in the river/ Nallah</p> <ul style="list-style-type: none"> • The RTWQMS along with Radar system for water quality monitoring and flow measurement, respectively, have been installed in river Markanda near Vill. Ogli, Kala Amb town. The system is being run on trial basis and calibration is being done. • The RTWQMS along with Radar system for water quality monitoring and flow measurement, respectively, has 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.
(xii)	Plantation on both sides of the river	Completed	<p>As per the latest progress on Plantation carried out at Priority – I and Priority – II is as below :-</p> <p><u>Priority-I (Sukhna Nallah at Parwanoo)</u></p> <p>1. Total 2200 Plants are planted and as per the Action Plan, 100 % work is done.</p> <p><u>Priority-II (River Markanda at Kala Amb)</u></p> <p>1. Total 800 Plants are planted and as per the Action Plan 90 % work is completed.</p>
(xiii)	Setting up of biodiversity parks on flood plains by removing encroachment		<ul style="list-style-type: none"> • As per the Action Plan of Priority I & II, Bio-diversity Park is proposed, at Kala Amb and the work is progress. • However, for the Setting up of Bio-diversity parks, for Priority-III the total financial targets estimated by the Department of Forests for the years 2019-20 and 2020-21 are 25.0 Lakh and 32.0 Lakh respectively. For the financial year 2019-20, total budget amounting to Rs. 17.85 Lakh has been spent for Setting up of Bio-diversity parks along all the polluted river stretches in HP.