

**Original Application. No. 673/2018 dated 20<sup>th</sup> September, 2018  
19<sup>th</sup> December, 2018 and 08<sup>th</sup> April, 2019**

**in the matter of  
News Item published in “THE HINDU” titled  
“More river stretches are now critically polluted: CPCB”**

## **Report**

**On**

**Prevention and Control of Pollution in River Beas: A  
**Revised Action Plan**  
for Rejuvenation of River Beas, Districts- Kullu, Mandi, Hamirpur &  
Kangra (HP)**

*(Submitted in compliance to the Hon’ble National Green Tribunal (NGT) order  
dated 20<sup>th</sup> September, 2018 and 19<sup>th</sup> December, 2018, 08<sup>th</sup> April, 2019)*



**HP State Pollution Control Board**  
Him Parivesh, Phase – III, New Shimla - 171009

# Contents

S. No.	Particulars	Page No.
1.	Background	
2.	About River Beas and its tributaries in the State of Himachal Pradesh.	
3.	Achievable Water Quality with quoted timelines	
4.	Aspects in compliance of Hon'ble NGT Order 20th September, 2018, 19 <sup>th</sup> December, 2018 and 08 <sup>th</sup> April, 2019	
	Rain Water Harvesting/ Ground Water Recharge aspects	
	Maintaining E-Flows	
	Water Shed Management	
	Use of Treated Sewage	
	Good Irrigation Practice	
	Development of Bio-diversity parks	
05.	Budget Estimate from Pooling the Recourses from State Budget, Local Bodies, SPCBs and Central Schemes, if any for all Action Plans	
06.	Executive Summery	
07.	Action Plan wise definite timeline, implementing agencies & total budget estimates	

**Comprehensive Report**  
**on**  
**Prevention and Control of Pollution in River Beas:**  
**Action Plan for Rejuvenation of River Beas from Kullu to Dehra**  
**Gopipur of Himachal Pradesh**

**1. BACKGROUND:-**Hon'ble National Green Tribunal passed the following orders in OA No. 673/2018 titled "More river stretches are now critically polluted: CPCB".

*"This application has been registered on the basis of a news item dated 17.09.2019 in "The Hindu" under the heading "More river stretches are now critically polluted: CPCB". According to the news item, 351 polluted river stretches have been noted by the Central Pollution Control Board (CPCB). 117 such stretches are in the state of Assam, Gujarat, and Maharashtra. The CPCB has apprised the concerned States of the extent of the pollution in the rivers. According to the news item, most polluted stretches are from Powai and Dharavi – with Biochemical Oxygen Demand (BOD) 250 mg/L; the Godavari – from Someshwar to Rahed – with BOD from 4.0-147 mg/L; and the Hindon-Saharanpur to Ghazibad – with a BOD of 48-120 mg/L. The CPCB has programmed to monitor the quality of rivers by measuring BOD. BOD greater than or equal to 30mg/L is termed as 'Priority I' while that between 3.1-6 mg/L is 'Priority V'. The CPCB considers a BOD less than 3mg/L an indicator of a healthy river. In its 2015 Report, the CPCB had identified 302 polluted stretches on 275 rivers, spanning 28 States and six Union Territories. The number of such stretches has now been found to be 351.*

*All States and Union Territories are directed to prepare action plans within two months for bringing all the polluted river stretches to be fit at least for bathing purposes (i.e. BOD < 3 mg/L and FC <500 MPN/100 ml) within six months from the date of finalization of the action plans.*

*The action plans may be prepared by four-member committee comprising Director Environment, Director Urban Development, Director Industries, Member Secretary, State Pollution Control Board of Concerned State. This committee will also be the Monitoring Committee for execution of the action plan. The Committee may be called "River Rejuvenation Committee" (RRC). The RRC will function under the overall supervision and coordination of Principal Secretary, Environment of the concerned State/Union Territory.*

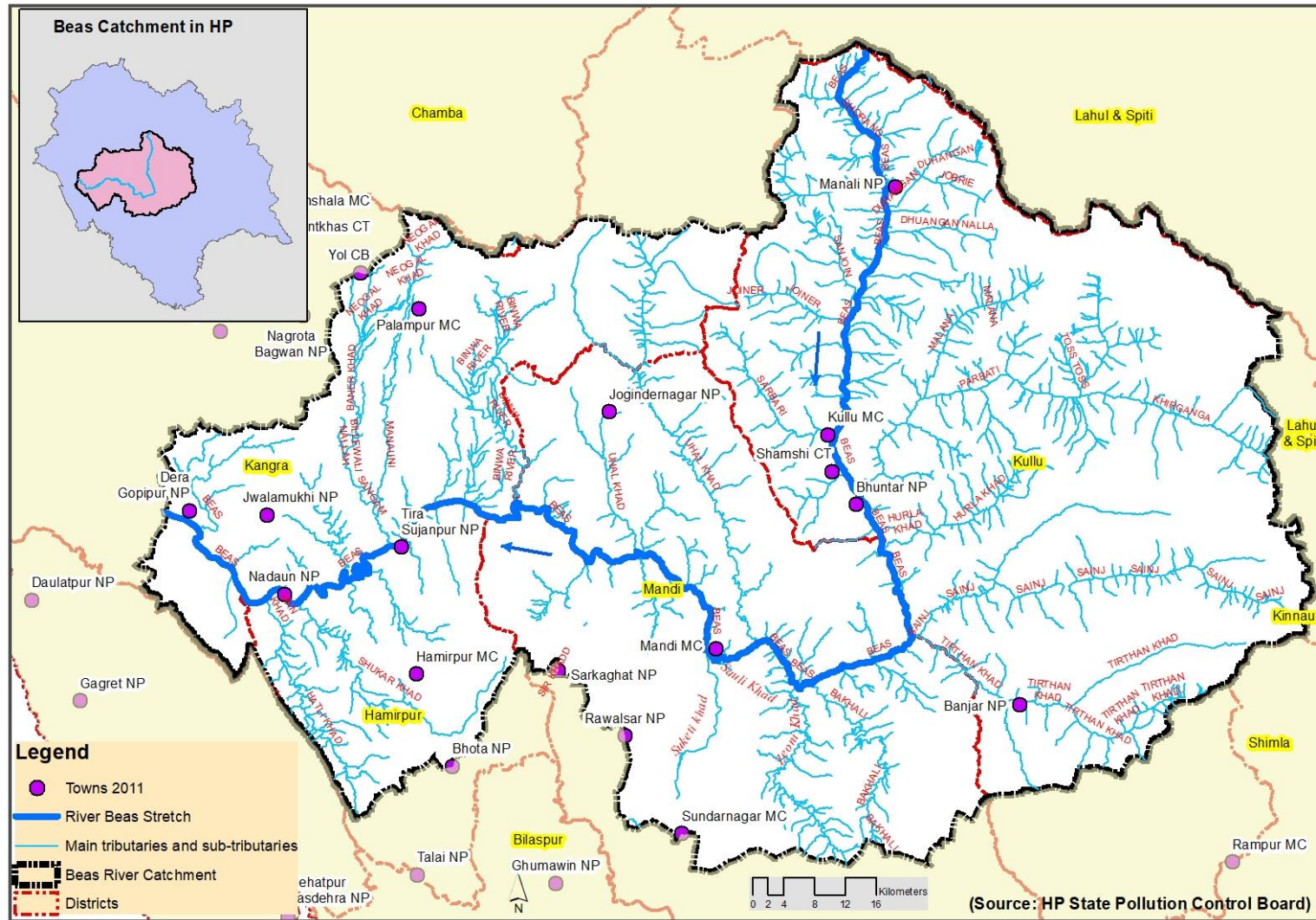
## **2.0 About River Beas and its tributaries:-**

River Beas is one of the Indus River Systems of Himalaya. The River originates from Beas Kund, near Rohtang Pass, at a height of 4,062 m above sea level, on the southern end of the Pir Panjal Range of Distt. Kullu in Himachal Pradesh and flows a distance of about 245 Kms in Himachal and merge with the Sutlej at Harike Pattan south of [Amritsar](#) in [Punjab](#) after travelling 470 kms.

The catchment area of River Beas is around 10,000 sq.kms and the River travels around 245 Km in the given stretch from Kullu to Dehragopipur. This stretch of river passes through four districts of Himachal Pradesh i.e. Kullu (from Palchan to Bajaura i.e. 63 Km), Mandi (from Bajaura to Sachuhi i.e 103 km), Hamirpur (from Sachuhi to Kaloor i.e 54 Km) & Kangra (From Kaloor to Dehragopipur i.e 35 Km). The River Beas share the boundary of District Mandi and Kullu from Bajaura to Larji (i.e. around 18 km) and also from downstream of Distt. Mandi it flows at boundary of Distt.Hamirpur on left bank and Distt. Kangra on right bank from Sachuhi near Sandhol to Kaloor (i.e. 54 km). This is a Perennial River and experiences the vast variation in the flow discharge. The winter season is the lean season due to snow shed areas along River Beas and its major tributaries. The flow of River started to increase in month of March onwards and turned to flash floods time during monsoon season.

The stretch of River Beas falls under the jurisdiction of four districts of Himachal Pradesh i.e. Kullu, Mandi, Hamirpur and Kangra. Every district has different mode of impact in respective areas, that's why the action plan has been made separately for respective districts for proper monitoring and execution.

## Drainage map of Beas Catchment from Rohtang to Dehra Gopipur, Kangra



**Figure 1: Drainage Map showing Catchment Area of River Beas basin in Himachal Pradesh**

### **2.01 The River Beas in Distt Kullu:**

The major tributaries of River Beas in Distt. Kullu are Manalsu Nalla, Alliane Nalla, Duhangan Nalla, Dobhi Nalla, Baragran Nalla, River Parvati, Hurla Nalla, Sainj and Tirthan River. The major towns on the River Beas are Manali, Kullu, Shamshi & Bhunter and the population as per census 2011 of these towns is as 8096, 18536, 8870 & 4475 respectively. Industrial establishments are very small in number and are of small scale nature. There is long fruit season in the District and tourism is becoming a major commercial activity these days. Hydro Projects are also established in significant numbers along the River Beas and its tributaries. Some stretches of the river experience flash floods in rainy season and its tributaries have created significant impact on soil erosion, loss to public properties, commercial establishments and to agricultural fields every year. The river enters District Mandi at Bajaura.

### **2.02 The River Beas in Distt Mandi:**

The River Beas enters Distt. Mandi at Bajaura. There is Larji Dam, downstream of Bajaura and Pandoh Dam, upstream of Mandi town. From Pandoh Dam the water of river is diverted by BBMB through tunnel to Govindsagar Lake, which is a reservoir of Bhakra Dam on River Sutlej. H.P. Government has made it mandatory to maintain “E-flow” and as per guidelines issued by Govt. of HP to release minimum 15% flow in lean season immediate D/s of the dam site. Hence Larji HEP and BBMB releases the 15 % discharge at immediate D/s of dam site. The Northern and Eastern tributaries of the River Beas are perennial and snow fed, while Southern are seasonal. In Mandi District, the major tributaries are Tirthan, Bakhli, Jiuni, Uhl, Suketi, Panddi, Son and Bather. The River Beas enters the District Hamirpur at Sachuhi near Sandhol. The major towns in District Mandi in the catchment of River Beas are Mandi town and Jogindernagar having population 26,422 and 5,335 persons respectively as per census 2011.

### **2.03 The River Beas in Distt Hamirpur:**

The River continues to flow in District Hamirpur from Sachuhi and major Towns in District Hamirpur situated in River Beas Stretch are Sujampur-Tihra and Nadaun. Sujampur Tihra is located on the Left bank of [River Beas](#). The Sujampur-Tihra Municipal Council has population of 7,943 as per report released by Census India 2011 and there are no industries in Sujampur Tihra Town although small Hotels/Guest-houses are situated at Sujampur Town. The second town is Nadaun on the River Bank having population around 4430 person as per census 2011. The main tributaries of the River Beas in this stretch are Binwa Khad, Mann Khad, Shukker Khad and Kunah Khad before leaving of District Hamirpur at Kaloor. In this complete stretch

of river Beas Distt. Hamirpur is at left bank of River Beas and Kangra is at the right bank upto Kaloor.

## 2.04 The River Beas in Distt Kangra

River Beas divides District Kangra and Hamirpur on the right bank is district Kangra and on left bank is district Hamirpur there is no activity on both the banks which contributes to pollution load in river Beas.. From Kaloor to Dehragopipur, the river covers around 48 Km and merges into the reservoir of Pandoh dam of BBMB. The major tributaries are Bain, Banganga, Luni, Chakki, Gaj Khad and Baner. The population of Jawalamukhi town is 5,361 persons and of Dehragopipur town is 4,816 persons (as per census 2011).

## 3.0 Achievable Water Quality with quoted timelines as per the existing provisions or guidelines/ specifications of Central Pollution Control Board (CPCB)

As River Beas is a perennial river so it is an important aspect to improve the quality of River Beas in context of its utility for drinking and Irrigation purposes. The ultimate goal for beneficial use of river will determine the level of actions to be taken for maintaining the water quality as BOD below 03 mg/liter, DO above 05 mg/liter and the total count of Faecal Coliform bacteria below 500 MPN/100. Under the present circumstances, it appears that River Beas may serve the purpose of outdoor bathing (organized) and to achieve this objective, generated domestic sewage should be treated to meet the outdoor bathing standards. Also, the industrial effluents generated from small industrial areas in Kullu, Mandi, Hamirpur and Kangra which are ultimately joining and contributing to the pollution load in River Beas should be treated to meet the effluent discharge standards stipulated under Schedule-VI of the Environment (Protection) Rules, 1986 which is given as **Annexure-VI. As per the Hon'ble NGT orders vide OA No. 673 of 2018, River Beas falls under Priority –V of designated criteria, depending upon the level of Bio-chemical Oxygen Demand.**

**Table No. 01:-** Showing Priority of River Beas stretch

Sr. No.	River Stretch Name	Stretch of Priority -V	BOD (mg/L)
1.	River Beas (Kullu, Mandi, Hamirpur and Kangra)	Kullu- to- Dehragopipur	6.0

The river water quality for outdoor bathing (organized) also requires more stringent conditions and river water has to maintain adequate Dissolved Oxygen (DO) and Coliforms. The suggested criteria for outdoor bathing (organized) in River Beas are given in the following **Table - 2. As per Hon'ble NGT Directions, following quality to be achieved within 02 Years w.e.f 01<sup>st</sup> April, 2019.**

**Table 2:** Final goal to achieve the Water quality of River Beas throughout the Stretch i.e. Kullu to Dehragopipur

Sr. No.	Parameters as per Hon'ble Court Order	Water Quality Criteria for Outdoor Bathing (Organized)
1.	pH	6.5-8.5
2.	Biochemical Oxygen Demand 5 days 20°C	Less than 3mg/l
3.	Dissolved Oxygen	More than 5.0 mg/liter
4.	Faecal Coliforms	Less than 500 MPN/100ml

#### **4.0. Aspects in compliance of Hon'ble NGT Order 20<sup>th</sup> September 2018, 19<sup>th</sup> December 2018 and 08th April, 2019**

##### **4.1. Rain Water Harvesting/ Ground Water Recharge aspects:**

The IPH department Rain water harvesting Plans already operational.

##### **4.2. Maintaining E-Flows:**

Beas River is a perennial river and the discharge of this river is sufficient lean season. However the e-flow is being maintained. Maintaining E-flow in River and rivulets is an activity covered under Watershed Management Program also. However, while formulating a scheme be it Water Supply Scheme or Irrigation department taps only 75% of available lean period discharge as dependable discharge work automatically takes care of maintaining e-flow at point of extraction. However as per Action plan for modification in existing sewage treatment plants along Kullu, Mandi, Hamirpur the treated water will be discharged. The E-flow will be assessed accordingly.

##### **4.3. Water Shed Management: -**

The Forest Department has ongoing water reservoir management plans operation on the Stretch of River Beas along drains or contributing Rivers i.e Parvati River, AD Nallahs with combined estimate of Rs.

##### **4.4. Use of Treated Sewage:**

IPH Department has proposed modification i.e provision of equalization and tertiary treatment in existing Sewage treatment Plants to bring the treated water quality up to <10 mg/l Bod, so, however there is no proposal for utilization of treated sewage as there is no sufficient land for irrigation, and also techno-economic non-viability because of pumping sewage to higher elevation, Non-acceptability of public at large.

#### **4.5. Good Irrigation Practice:**

No irrigation scheme exist as reported by IPH.

#### **4.6. Development of Bio-diversity parks:**

No Such proposal of forest Department exist till date.

#### **5.0. Budget Estimate from Pooling the Recourses from State Budget, Local Bodies, SPCBs and Central Schemes, if any for all Action Plans :**

Total Cost implication for the implementation of above Action Plan **Rs. 260.40 Crore**. The Chief Secretary has reviewed the proposal during meeting on 08<sup>th</sup> April, 2019 and directed the concerned department to complete the proposal from state government budget wherever applicable. The mass awareness, Cleanliness drive is done from funds available with SPCBs. Utilization of Environmental Compensation as levied by RRC will be used rejuvenation of Rivers. Budget for Management of Solid Waste along the stretch of River Ashwani will be done from local bodies or Urban Development Department. The details are elaborated in point no. 07.

#### **6.0. Executive Summery :**

The Action Plan mainly comprising of Sewage Treatment's Plant and proposal of new STP, Solid Waste Management, Plantation Proposal. As per the directions of Hon'ble NGT, Action Plan implementation shall be done within 02 years as directed by Hon'ble NGT vide order dated 08<sup>th</sup> April, 2019.

## 7. Proposed Action Plan

### 7.1. Proposed Action Plans (Short, Medium and Long Term Plan) with timelines including the organization/agency responsible for its implementation for Rejuvenation of River Beas, of Distt. Kullu

(Kullu)

Sr. No.	Action Plan for Rejuvenation of River Beas	Organization/ Agency Responsible for Execution of the Action plan	Time Target	Total Budget Estimate	Remarks
<b>I. Industrial Effluent Management</b>					
	(a) Inventorisation of the industries/Hotels in the catchment area of River Beas in Manali to Kullu region, covering assessment on aspects relating to Status of Consents under Water & Air Acts and Authorisation, Effluent Generation, ETP capacities and final mode of effluent discharges.	HPPCB	28 <sup>th</sup> February, 2019	Department Own Budget	
	(b) Actions against the Identified Industries / Hotels in operation without Consents under Water & Air Acts/Authorisation under the H& OW ( M & TM) Rules, 2016 as amended	HPPCB	31 <sup>st</sup> March, 2019	Department Own Budget	
	(c) Action against the industries/Hotels not installed ETPs or STPs exist but not operating or ETP outlet or treated effluent from ETP or STP is not complying to the effluent discharge standards or norms.	HPPCB	31 <sup>st</sup> March, 2019	Department Own Budget	
	(d) Directions to all the industries/Hotels which are observed to be not in operation or closed or temporarily closed to remain close till further order from HPSPCB	HPPCB	31 <sup>st</sup> March, 2019	Department Own Budget	

	(e)	Estimation of industrial effluent generation or sewage generation and to arrive gap between the industrial effluent or sewage generation and the existing capacity of treatment provided and action thereof by providing ETPs/STPs or modifications.	HPPCB	31 <sup>st</sup> May, 2019	Department Own Budget		
<b>II</b>	<b>Sewage Treatment and Management</b>						
	(a)	Area wise population, water requirement, estimation of total sewage generation, total population, water supply and existing treatment capacities, sewage presently treated in existing STPs/septic tanks, gaps in sewage treatment capacity.	I&PH and M.C Kullu Rural Development	15 <sup>th</sup> March, 2019	Department Own Budget		
	(b)	To undertake flow test, to identify the areas contributing pollution load in drains w.r.t. no. of households, commercial settlements, hotels, along with improvements. The existing mode of treatment for upgrading septic tanks, setting up of captive STPs or connectivity with sewer lines.	I&PH and M.C Kullu	31 <sup>st</sup> July, 2019	Department Own Budget		
	(c)	Channelization including diversion of sewage generated from Hotels/household/townships/villages to sewer lines/interception of all the drains presently carrying sewage and for ensuring proper treatment through the upcoming STPs at Manali region and existing STPs at Kullu region.	I&PH and M.C Kullu	Proposal for channelization of River Beas from Palchan to Aut under HP Flood & River Management Project has been submitted to the Govt. of India for funds amounting to <b>Rs. 585 crores</b> , which has	Department Own Budget		

				<p>principally been approved and final approval from Govt. of India is awaited.</p> <p><b>After approval</b> of the fund, the channelization will be completed by <b>31-03-2023</b> as proposed by I&amp;PH Department.</p>		
	(d)	<p>Proper design, execution of STPs with full utilization capacity by connecting the left out areas with existing s i.e. 1 no.STP at Manali and 6 Nos. of STP at Kullu.</p>	I&PH	<p><b>DPR submitted.</b> At Present the STP is functioning with full capacity and the DPR for the requirement /capacity of 3.0 MLD has been prepared amounting to Rs 6.17 crores and has been submitted for approval to the higher authority.</p> <p><b>Works undergoing:</b> For connecting the left out households to the sewer line, estimated cost</p>	Department Own Budget	

				<p>amounting to Rs. 1053. 89 Lakhs has been approved and work is under progress.</p> <p>A sewerage scheme for Marhi area is being executed and the estimated cost of Rs.114.32 Lakh and it has been proposed to construct a 20 KLD STP at Marhi. It is proposed to <b>complete the work by 31<sup>st</sup> December, 2019.</b></p>		
	(e)	Execution of project proposal for sewage treatment by setting up of STPs for three regions at Manali and Kullu regions (if any).	I&PH	<p><b>Proposed STPs at Manali:</b></p> <p><b>Location</b></p> <p>Sector1 &amp; Sector-2 4.21</p> <p>Jagatsukh 0.32</p> <p>Kanyal &amp; Sector-3 9.17</p> <p>Old Manali 1.28</p> <p><b>Total capacity</b> <b>12.34</b></p> <p><b>MLD</b></p>	<b>State Government Budget</b>	
	(f)	Sewage/Septage management with low cost treatment technology for rural areas.	Rural Development, Municipal Council	Solid Liquid Waste Management in Rural area in the catchment of River Beas in district- Kullu shall be	<b>State Government Budget</b>	

				completed by 31 <sup>st</sup> October, 2019			
<b>III</b>	<b>Ground Water Quality</b>						
	(a)	Sampling of Tube wells, Bore wells, Hand Pumps.	I&PH, HPPCB	28 <sup>th</sup> February, 2019	Department Own Budget		
	(b)	Sampling and analysis of Drinking Water Supply Schemes along River Beas catchment for Manali, Kullu upto Aut.	I&PH	28 <sup>th</sup> February, 2019 There is no drinking water supply scheme from River Beas, however monitoring of any left out water supply scheme in catchment of River Beas shall be covered.	Department Own Budget		
	(c)	Sealing of contaminated hand pumps and found to be unfit for drinking purpose by the public.	I&PH.	31 <sup>st</sup> March, 2019	Department Own Budget		
	(d)	Carrying assessment of ground water survey for quality and to identify over exploited and critical areas.	I&PH	15 <sup>th</sup> February, 2019 No such areas fall in this region, assessment shall be done to check if any.	Department Own Budget		
	(e)	To conduct periodic surprise inspection of the industries to rule out any forceful injection of industrial effluents into ground water sources	I&PH, HPPCB	Every 15 days.	Department Own Budget		

	(f)	All the industries should be directed to obtain NOC from HPGWA/CGWA and action against the units in operation without obtaining NOC from HPGWA/CGWA.	I&PH and CGWA	28 <sup>th</sup> February, 2019	Department Own Budget		
	(g)	Regular monitoring and sampling of water quality of River Beas from Manali to Kullu and upto Aut.	HPPCB	Every month	Department Own Budget		
	(h)	Impact of water pollution on health of public by organizing Health camp.	Health Department.	Every 3 months	Department Own Budget		
<b>IV</b>	<b>Solid Waste Management</b>						
	(a)	Setting up of common solid waste processing facility for Manali and Kullu region for Disposal of Solid Waste as per Solid Waste Management Rules, 2016	Municipal Council, Manali Municipal Council, Kullu	31 <sup>st</sup> March, 2019	Department Own Budget		
	(c)	Prohibition of disposal of Plastic and unattended dumping of solid waste, hazardous waste, e-waste and bio-medical waste by ___ actions thereof	MC Manali, MC Kullu, HPSPCB	28 <sup>th</sup> February, 2019	Department Own Budget		
<b>V</b>	<b>Flood Plain Zone</b>						
	(a)	Plantation in flood Plain Zone along Kullu and Manali region.	Forest Department.	31 <sup>st</sup> January, 2022	Department Own Budget		
	(b)	Checking encroachments on the banks of River Stretches in District Kullu i.e. Beas at Kullu, Parvati at Manikaran, Sainj at Sainj valley, Sarwari Nalla at Kullu and removal of encroachment thereof.	District Administration, Forest Department	31 <sup>st</sup> July, 2019	Department Own Budget		
	(c)	Notification of Flood Plain Zone	IPH, Forest Department, State Government	31 <sup>st</sup> July, 2019	Department Own Budget		
	(d)	Measurement of flow of all the Four Rivers i.e. Beas from Kullu to Aut Parvati at Manikaran, Sainj at Sainj valley, Sarwari Nalla at Kullu.	I&PH	31 <sup>st</sup> March, 2019	Department Own Budget		

	(e)	Prevention of muck dumping along the bank of river Beas and its tributaries	NHAI, PWD, I&PH and Mining Department	28 <sup>th</sup> February, 2019	Department Own Budget		
	(f)	Complete prevention of illegal mining along the catchment of River Beas by conducting surprise checking and sealing all illegal mining activities.	Mining Department	31 <sup>st</sup> March, 2019	Department Own Budget		
<b>VI</b>	<b>Miscellaneous</b>						
	(a)	Cleanliness drive along River Beas stretch.	District Administration, HPSPCB, MC, other stakeholders	Once every month	Department Own Budget		
	(b)	Maintaining ecological flow for ecological balance	IP&H	As per the mandate of HP Govt. HEPs release 15% of flow in the immediate downstream as “e-flow” and the real time online discharge is available in public	Department Own Budget		
	(c)	Setting up of website for public participation		HPSPCB has created a suggestion Tab on the website hppcb.nic.in.	Department Own Budget		
	(d)	Illegal mining	Mining department	Surprise inspection to stop the Illegal mining along the river. On regular basis.	Department Own Budget		

7.2. Proposed action plans (Short, Medium and Long term plans) with time lines including the organization/agency responsible for its implementation for Rejuvenation of River Beas (Mandi )

**(Mandi)**

Sr.No.	Action Plan for Rejuvenation of River Beas	Agency Responsible for Execution of Task	Time Line for Execution	Total Budget Estimate	Remarks
<b>I</b>	<b>Industrial Effluent Management</b>				
(a)	Inventorization of the water polluting industries/ Hotels in the catchment of River Beas covering assessment on aspects relating to status of Consents under Water & Air Acts and Authorization, Effluent and Sewage Generation, ETP Capacities and final mode of effluent discharge	HPSPCB	28 <sup>th</sup> February, 2019	Department Own Budget	--
(b)	Action against the identified industries and Hotels in operation without Consent under Water & Air Act/ Authorization under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.	HPSPCB	28 <sup>th</sup> February, 2019	Department Own Budget	Action as per relevant provisions of Water Act, 1974 and Air Act, 1981 shall be taken against any unit found operating
(c)	Action against the Hotels and industries who have not installed ETPs or STPs and also against the industries which have existing ETPs or STPs but not operating and treated effluent is not meeting the prescribed standards as per stipulated norms.	HPSPCB	Within 15 days and continuous feature.	Department Own Budget	Seasonal operation of cold storage (3 nos.) as when in operation sample will be collected.
(d)	Estimation of industrial effluent generation and treatment capacity exist to check the gap and actions thereof by installations of ETP/STPs or modification in existing system.	HPSPCB	Within 4 months 31 <sup>st</sup> May, 2019	Department Own Budget	--

(e)	Proper protection measures for existing dumping sites along river Beas catchment in order to prevent from littering setting up of common solid waste processing facility at Mandi.	MC Mandi	28 <sup>th</sup> February, 2019	Department Own Budget	--
<b>II</b>	<b>Domestic Sewage Management</b>				
(a)	Area wise estimation of total population, water requirement and sewage generation of Mandi and rural areas along stretch of River Beas.	IPH, Rural Development Department, MC Mandi	28 <sup>th</sup> February, 2019	Department Own Budget	
(b)	To undertake channelization of Beas River	I&PH	31 <sup>st</sup> January, 2021	Department Own Budget	
(c)	Installation of continuous Real Time Water Quality Monitoring Station at sewage treatment plant at Mandi.	MC Rohru and I&PH	31 <sup>st</sup> July, 2019	Department Own Budget	
(d)	Proper design, execution of sewerage lines and up-gradation of Sewage Treatment Plant of Mandi Town.	I&PH, Industry Department.	31 <sup>st</sup> January, 2021	Department Own Budget	
(e)	Measurement of drains contributing pollution load to River Beas through human settlements and rural areas.		28 <sup>th</sup> February, 2019	Department Own Budget	
(f)	Sewage/septage management of rural areas with low cost treatment technology.	Rural Development	31 <sup>st</sup> October, 2019	Department Own Budget	
<b>III</b>	<b>Ground Water Management</b>				
(a)	Sampling of Tube wells, Bore wells, Hand Pumps in Mandi area.	I&PH, HPSPCB	28 <sup>th</sup> February, 2019	Department Own Budget	-

(b)	Sampling and analysis of Drinking Water Supply Schemes in and around Mandi area.	I&PH	15 <sup>th</sup> February, 2019	Department Own Budget	-
(C)	Sealing of contaminated handpumps and found to be unfit for drinking purpose by the public.	I&PH, HP GWA	31 <sup>st</sup> March, 2019	Department Own Budget	-
(d)	Carrying assessment of ground water survey for quality and to identify overexploited and critical areas.	I&PH, HP GWA	15 <sup>th</sup> February, 2019	Department Own Budget	
(e)	To conduct periodic surprise inspection of the industries/hotels to rule out any forceful injection of industrial and sewage effluents onto ground water sources	I&PH, HPSPCB	Every 15 days.	Department Own Budget	-
(f)	All the industries should be directed to obtain NOC from HPGWA/CGWA and action against the units in operation without obtaining NOC from PGWA/CGWA.	I&PH	Within 15 days.	Department Own Budget	
<b>IV</b>		<b>Miscellaneous</b>			
(a)	Regular monitoring and sampling of water quality of River Beas and various drains on monthly basis.	HPSPCB	Every 1 Month.	Department Own Budget	-
(b)	Impact of water pollution on health of public by organizing Health Camps.	State Health Deptt.,	Every 3 Months	Department Own Budget	-
(c)	Plantation/a forestation in Flood Plain Zone.	Forest Department	31 <sup>st</sup> January, 2022	Department Own Budget	-
(d)	Conducting feasibility study for setting up of bio-diversity parks along the stretch of River Beas.	Forest Department	90 days	Department Own Budget	
(e)	Checking encroachment in flood plain zone of River Beas along with notifying flood plain zone along the stretch of River Beas.	IP&H Department Forest Department State Government	31 <sup>st</sup> July, 2019	Department Own Budget	
(f)	Prohibition of disposal of Municipal Plastic and Bio-medical Waste particularly in drains	District Local Administration	Within 2 months.	Department Own Budget	

(f)	Maintaining e-flow in River Beas for having ecological balance in the river system.	IPH Department		Department Own Budget	As per the mandate of HP Govt. HEPs release 15% of flow in the immediate downstream as “e-flow” and the real time online discharge is available in public domain through <b>HPSPCB website</b> <a href="http://hppcb.nic.in">hppcb.nic.in</a>
-----	---	-------------------	--	--------------------------	---

**7.3. Action Plan for Rejuvenation of River Beas Stretch (from Village Sachuhi Tehsil Sujanpur Tihra to Village Kaloor, Tehsil Nadaun falls under the jurisdiction of District Hamirpur (HP)**

**(Hamirpur)**

Sr. No.	Action Plan for Rejuvenation of River Beas	Agency Responsible for Execution of Task	Time Line for Execution	Total Budget Estimate	Remarks
<b>I</b>	<b>Industrial Pollution Control</b>				
(a)	<b>Inventorization</b> of the <b>water polluting industries</b> in the catchment of River Beas covering assessment on aspects relating to status of Consents under Water & Air Acts and Authorization, Effluent Generation, ETP Capacities and final mode of effluent discharge	HPSPCB	Completed	Department Own Budget	--
(b)	<b>Action against the identified industries</b> in operation <b>without Consent</b> under Water & Air Act/ Authorization under Hazardous and Other Wastes(Management and Transboundary Movement) Rules, 2016.	HPSPCB	Within one month 28 <sup>th</sup> February, 2019	Department Own Budget	----
(c)	<b>Action against the industries who have not installed ETPs</b> or ETPs exist but not operating or treated effluent is not meeting the prescribed standards.	HPSPCB	Completed	Department Own Budget	Presently no water polluting unit operating without ETP and future

					inspection will be carried out on regular basis of the area randomly.
<b>II</b>	<b>Ground Water Quality</b>				
(a)	Sampling of Tubewells, Borewells, Hand Pumps.	I&PH	Completed	Department Own Budget	Total 10 no's Samples have been taken by IPH Hamirpur in Sujapur & Nadaun Towns. The results reported by Executive Engineer, I&PH Hamirpur are within the limit
<b>IV</b>	<b>Miscellaneous</b>				
(a)	Cleanliness drive	District Administration, HPSPCB, MC, other stakeholders	Every month	Department Own Budget	A cleanliness drive was taken out by HPSPCB along with Administration, MC/NP, Mahila Mandal and Local residents along the River Beas at Nadoun and Sujnapurtihra.
(b)	Maintaining ecological flow for ecological balance	IP&H, HEP	Real time online display	Department Own Budget	As per the mandate of HP Govt. HEPs release 15% of flow in the immediate downstream as "e-flow" and the real time online

					discharge is available in public domain through <b>HPSPCB website</b> <a href="http://hppcb.nic.in">hppcb.nic.in</a>
(c)	Plantation and setting up of bio-diversity park.	Forest Department	31 <sup>st</sup> January, 2021	Department Own Budget	90 days for conducting feasibility study for setting up of bio-diversity park.
(d)	Notification of Flood Plain Zone along the stretch of River Beas.	IP&H District Administration	31 <sup>st</sup> July, 2019	Department Own Budget	--

**7.4. Proposed Action Plans (Short, Medium and Long Term Plan) with time lines including the organization/agency responsible for its implementation for Rejuvenation of River Beas, of Distt. Kangra**

**(Kangra)**

Sr. No.	Action Plan for Rejuvenation of River Beas	Organization/ Agency Responsible for Execution of the Action plan	Time Target	Total Budget Estimate	Remarks
<b>I.</b>	<b>Industrial Pollution Control</b>				
(a)	Inventorization of the industries/Hotels in the catchment area of River Stretches in District Kangra, covering assessment on aspects relating to Status of Consents under Water & Air Acts and Authorization, Effluent Generation, ETP capacities and final mode of effluent discharges.	HPSPCB, Department of Industries and Tourism Department. 28 <sup>th</sup> February, 2019	01 Month	Department Own Budget	There is no major water polluting industries in the catchment area. 11 units (6 Stone Crushers, 2 hotels, 2 HMP and 1 katha Bhatti) are

						situated.
	(b)	Actions against the Identified Industries/Hotels in operation without Consents under Water & Air Acts/Authorization under the H & OW ( M & TM) Rules, 2016 as amended	HPPCB	31 <sup>st</sup> March, 2019	Department Own Budget	
	(c)	Action against the industries/Hotels not installed ETPs or ETPs or exist but not operating or ETP outlet or treated effluent is not complying to the effluent discharge standards or norms.	HPPCB	31 <sup>st</sup> March, 2019	Department Own Budget	
	(d)	Prohibition of Burning of any kind of waste including agro-residues.	State Govt./District and Local authorities	<b>MC Dehra -</b> No Burning is being allowed and regularly monitoring the area to check such incidents if any	Department Own Budget	
	(e)	Directions to all the industries/Hotels which are observed to be not in operation or closed or temporarily closed to remain close till further order from PCB	HPPCB	28 <sup>th</sup> February, 2019	Department Own Budget	
	(f)	Estimation of industrial effluent generation and to arrive gap between the industrial effluent generation and the existing treatment capacity and installation, modification of ETPs/STPs	HPPCB	30 <sup>th</sup> May, 2019	Department Own Budget	
<b>II</b>	<b>Domestic Sewage Management</b>					

	(a)	Population, water supply and estimation of total sewage generation, existing treatment capacities of existing STPs/septic tanks, quantum of sewage presently treated in existing STPs to arrive gaps in sewage treatment capacity.	I&PH and M.C Rural Development	15 <sup>th</sup> April,	Department Own Budget	
	(b)	To undertake flow test, to identify the areas contributing pollution load in drains w.r.t. no. of households, commercial settlements, hotels, along with improvements. The existing mode of treatment for upgrading septic tanks, setting up of captive STPs or connectivity with sewer lines.	I&PH and M.C Dehra	31st July, 2019	Department Own Budget	
	(c)	Proper design, execution of STPs by constructing proposed STPs at left out areas and connectivity thereof.	I&PH	At present there is only 01 No. STP of capacity 2.83 MLD is functioning at Jawalamukhi town. 01 No. STP proposed for Dehra town is still under construction, which shall be completed by 31 <sup>st</sup> March, 2019.	Department Own Budget	
<b>III</b>	<b>Ground Water Quality</b>					
	(a)	Sampling of Tube wells, Bore wells, Hand Pumps.	I&PH, HPPCB	28 <sup>th</sup> February, 2019	Department Own Budget	

	(b)	Sampling and analysis of Drinking Water Supply Schemes in and around River Stretches in District Kangra.	I&PH	28 <sup>th</sup> February, 2019	Department Own Budget	
	(c)	Sealing of contaminated hand pumps and found to be unfit for drinking purpose by the public.	I&PH.	31 <sup>st</sup> March, 2019	Department Own Budget	
	(d)	To conduct periodic surprise inspection of the industries to rule out any forceful injection of industrial effluents into ground water sources	I&PH, HPPCB	Every 15 days	Department Own Budget	
	(e)	All the industries should be directed to obtain NOC from HPGWA/CGWA and action against the units in operation without obtaining NOC from HPGWA/CGWA.	I&PH, HPGWA	28 <sup>th</sup> February, 2019	Department Own Budget	
	(f)	Regular monitoring and sampling of water quality of River Beas from Harsi to Dehr in District Dehra	HPPCB	On monthly basis	Department Own Budget	
	(g)	Impact of water pollution on health of public by organizing Health camp.	Health Department	Every 3 months	Department Own Budget	
<b>IV</b>	<b>Solid Waste Management</b>					
	(a)	Setting up of solid waste facility for Disposal of Solid Waste as per Solid Waste Management Rules, 2016	M.C. Dehra	Every 3 months	Department Own Budget	
	(b)	Prohibition on littering of plastic waste, solid waste, bio-medical waste, e-waste and hazardous waste and burning of solid waste including actions thereof.	MC, HPSPCB	Regularly monitoring the hotspots	Department Own Budget	
<b>V</b>	<b>Flood Plain Zone</b>					
	(a)	Plantation in flood plain zone in the catchment area of River Beas	Forest Department.	31 <sup>st</sup> January, 2021	Department Own Budget	


	(b)	Checking encroachments on the banks of River Stretches in District Kangra i.e.along catchment area of River Beas and removal of encroachments thereof.	Forest Department /District Administration	31 <sup>st</sup> July, 2019	Department Own Budget	
	(c)	Notification of Flood Plain Zone	IPH, State Government	31 <sup>st</sup> July, 2019	Department Own Budget	
	(d)	Measurement of flow of river Bias and its Tributaries.	I&PH	31 <sup>st</sup> March, 2019	Department Own Budget	
	(e)	Prevention of muck Dumping along the bank of river Beas and its tributaries	NHAI, PWD, I&PH and Mining Department	Three months	Department Own Budget	
	(g)	Complete prevention of illegal mining by conducting surprise inspections on areas _____ and sealing all illegal mining activity.	Mining Department	31 <sup>st</sup> March, 2019	Department Own Budget	
<b>V</b>	<b>Other Aspects as NGT Order dated 20.09.2018, 19.12.2018 and 08.04.2019</b>					
(a)	Rain Water Harvesting/ Ground Water Recharge aspects	I & PH	<b>Operational.</b>	State Government Budget	Two Sites identified, DPR preparation is under	
(b)	Maintaining E-Flows	I & PH	31 <sup>st</sup> januray, 2022.	State Government Budget	<b>E-flow will be assessed.</b>	
(c)	Water Shed Management	Forest and Rural Development, Department of Environment	31 <sup>st</sup> January, 2022.	Department Own Budget	-	

(d)	Use of Treated Sewage	I & PH	-	-	Tertiary Treatment Proposed on 02 STPs but no agricultural land available. Hence not viable.
(e)	Good Irrigation Practice	I & PH	-	-	Not viable
(f)	Development of Bio-diversity parks	<b>Forest Department</b>	-	-	No Forest land available hence not viable.




Director, Urban  
Development

**RRC Member**




Director, Environment  
Science and  
Technology

**RRC Member**



Member Secretary, HP  
State Pollution Control  
Board

**RRC Member**



Director, Industry  
Department

**RRC Member**