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2012 - 13

H.P. STATE POLLUTION CONTROL BOARD

HIM PARIVESH, PHASE-III, NEW SHIMLA

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CHAPTER –1

INTRODUCTION

The Himachal Pradesh State Pollution Control Board was constituted in the year 1974 under the provision of Water (Prevention and Control of Pollution) Act, 1974. Subsequently the implementation of the provision contained in Water (Prevention and Control of Pollution) Cess Act, 1977, Air (Prevention and Control of Pollution) Act, 1981 and Environmental Protection Act, 1986 in addition to Rules framed under these Acts were also entrusted to the State Board. The prime objective of all these Acts is maintaining, restoring and preserving the wholesomeness of quality of environment and prevention of hazards to human beings and terrestrial flora and fauna.

Himachal Pradesh State Pollution Control Board is a nodal agency in the administrative structure of the State Government for planning, coordination, prevention & control of pollution and so also protection of environment in the framework of environmental regulations. The State Board has always endeavoured to strike a rational balance between economic growth and environmental preservation. In the pursuit of attaining the objectives enshrined in the environmental legislations the State Board has followed the principles of sustainable development. Continuous efforts are being made by the board to expand its activities to fulfill the demands of emerging environmental concerns, challenges and new statutes.

The following legislative measures are significant and worth mentioning here vis-à-vis the functions and duties of the State Board.

- **Water (Prevention & Control of Pollution) Act, 1974:** The Parliament in the 25th year of the Republic promulgated this legislation in pursuance to Clause-1 of Article 252 of the Constitution of India, with the objective of prevention and control of water pollution and maintenance and restoration of wholesomeness of water. The H.P. State Pollution Control Board was constituted in 1974 under the provisions of this Act.
- **Water (Prevention & Control of Pollution) Cess Act, 1977:** This Act provides for levy of cess on the water consumed for specific purposes with a view to dissuade wasteful and indiscreet use of water.
- **Air (Prevention & Control of Pollution) Act, 1981:** On the analogy of the Water (Prevention & Control of Pollution) Act, 1974 the Union Government promulgated another identical legislation which was exclusively meant to deal with the problems of air quality and preservation and maintenance thereof.
- **Environment (Protection) Act, 1986:** In order to provide the existing legislation for control of water and air pollution more effectively and to remove the deficiency of these legislations, the Union Government enacted umbrella legislation in 37th Year of Republic. The prime objective of the legislation was to plug the existing statutory gaps whereby tremendous

responsibilities by way of functions have been entrusted to the State Board. The following prominent rules and notifications are significant in context to the role and functions of the H.P. State Pollution Control Board:

1) Manufacture, Storage and Import of Hazardous Chemical Rules, 1989.
2) The Hazardous Waste (Management, Handling & Transboundary Movement) Rules, 2008.
3) Rules for Manufacture, Use, Import, Export and Storage of Hazardous Microorganism, Genetically Engineered Organisms or Cells, 1989.
4) Noise Pollution (Control and Regulation) Rules, 2000.
5) Bio-medical Wastes (Management & Handling) Rules, 1998.
6) Recycled Plastics Manufacture and Usage Rules, 1999/2003.
7) Municipal Solid Wastes (Management & Handling) Rules, 2000.
8) Ozone Depleting Substances (Regulation & Control) Rules, 2000.
9) Batteries (Management & Handling) Rules, 2000.

1.1 OTHER AREAS/ACTS/RULES CONCERNING GENERAL PUBLIC:

The following Rules, which have bearing on, the state of the environment and health of the society are also in existence/enactments. Under these Rules, the H.P. State Pollution Control Board is not the only agency responsible for the implementation of these Rules but nevertheless these Rules and enactments are of great significance. They are as under:

- Public Liability Insurance Act, 1991.
- H.P. Non-Biodegradable Garbage (Control) Act, 1995.
- Motor Vehicle Act, 1988.

1.2 MANDATE OF THE STATE BOARD:

The mandate of the State Board has increased manifold since its constitution. The State Board has adopted a major shift in its policy from purely regulatory set-up to an interactive scientific organization by performing various functions under the domain of pollution control.

- Plan a comprehensive program for prevention, control or abatement of pollution of air, streams, rivers and wells in the state and to secure the execution thereof.
- Advise the state government on any matter concerning the prevention, control or abatement of water and air pollution.
- Collect and disseminate information related to water and air pollution and prevention, control or abatement thereof.
- Lay down or modify standards for quality of air, sewage and trade effluents.

- Inspect any pollution control equipment, sewage or trade effluents, works and plants and takes steps for the prevention.
- Provide technical assistance and guidance in problems related to water and air pollution and control thereof.
- To implement the provision of Environmental Impact Assessment (EIA) notification, 2006 for specified categories of development project listed in its schedule.
- Delimitation of pollution control areas.
- Creating mass-awareness and training programs relating to prevention, control or abatement of environmental pollution.
- Encourage, conduct and participate in investigation and research relating to problems of water & air pollution and prevention, control or abatement.
- To perform such other functions as may be prescribed or as may, from time to time; be entrusted by the Central Board or the State Government.
- Advise the State Government with respect to the location of any industry the carrying of which is likely to pollute stream or well or cause air pollution.
- To make, vary or revoke any order: –

  i) For the prevention, control or abatement of discharge of waste into the stream or wells.

  ii) Requiring any person concerned to construct new systems for the disposal of sewage and trade effluents or to modify, alter or extend any such existing system or to adopt such remedial measures as are necessary to prevent, control or abate water pollution etc.

  iii) To integrate environmental aspects into development planning /activity through spatial environmental planning.

  iv) To perform such other functions as may be prescribed by the State/Central Governments from time to time.

1.3 ADMINISTRATIVE STRUCTURE:

The Himachal Pradesh State Pollution Control Board as per the provisions of Water Act, 1974 is headed by the Chairman. The executive head of the State Board is Member Secretary. The State Board has ten Regional Offices at Shimla, Parwanoo, Paonta Sahib, Baddi, Una, Rampur, Jassur, Chamba, Kullu and Bilaspur and one Sub Regional Offices located at Kala Amb to perform regulatory functions for prevention and control of pollution as prescribed under various environmental legislations. The State Board has one Central Laboratory located at Parwanoo and there Regional Laboratories at Paonta Sahib, Jassur and Sunder Nagar for providing scientific support to the regulatory functions. This administrative setup of the State Board caters to the diverse environmental matters in Himachal Pradesh. The Organizational Structure of the State Board is shown in *Annexure-I*.

CHAPTER – 2

CONSTITUTION OF STATE BOARD

The Government of Himachal Pradesh vide Notification No. STE-A(1)-4/2001-I dated 17.06.2011 appointed Additional Chief Secretary (Env. S&T) to the Govt. of Himachal Pradesh as Chairperson and reconstituted the State Board for a period of three years. Following are the members of the Board:-

2.1 OFFICIAL MEMBERS:

1)	Principal Secretary (Industries) Govt. of H.P. Shimla or representative.	Member
2)	Principal Secretary (UD), Govt. of H.P Shimla, or representative.	Member
3)	Principal Secretary (MPP & Power) Govt. of H.P.	Member
4)	Principal Secretary (IPH), Govt. of H.P. Shimla or representative.	Member
5)	Director (Env. Science & Technology), H.P. Shimla.	Member
6)	Managing Director (HRTC), Shimla.	Member
7)	Chief Executive Officer (HIMURJA), Shimla.	Member

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CHAPTER – 3

MEETING OF THE BOARD

The following major decisions were taken by the State Board in its 65th & 66th meetings held on 24.09.2012 & 23.03.2013.

The decisions taken by the State Board in its 65th meeting dated 24.09.2012:

1. The proposal for authorizations to Senior Environmental Engineers of the Board for the purpose of obtaining information, inspection and sampling according to the provisions of Section 20, 21 & 23 of the Water (Prevention and Control of Pollution) Act, 1974 and Sections 24, 25 & 26 of the Air (Prevention and Control of Pollution) Act, 1981 was considered and approved by the Board.

2. The proposal for delegation powers to scientific staff (Pr. Scientific Officer, Sr. Scientific Officer, Scientific Officer & Jr. Scientific Officer) under section 23 of the Water (Prevention and Control of Pollution) Act, 1974 and under section 24 of the Air (Prevention and Control of Pollution) Act, 1981 of the H.P. State Pollution Control Board was considered and approved by the Board subject to due authorization by the Member Secretary on each occasion.

3. The proposal for taking of exhibition rights of short film "Bunty's Tree" on environment from M/s MAD Arts, Mohali, Chandigarh for overall cause of environment and forest protection and as multiplier in sensitization and awareness of masses for preservation of environment and forests in Himachal Pradesh was considered and approved by the Board.

4. The Board ratified the expenditure sanction of Rs. 12,34,090/- incurred on the recommendation of Director, Information & Public Relation, Government of H.P for publishing episodes & promos of various government departments to highlight the activities of State Pollution Control Board on a booklet titled *" The Real Action-Green Growth Development Story of Himachal Pradesh"* as per budgetary provision.

The decisions taken by the State Board in its 66th meeting dated 23.01.2013

1. The Board approved Annual Accounts of the H.P. State Pollution Control Board for the year 2010-11 & Budget estimate for the year 2013-14.

2. The proposal for delegation powers under Municipal Solid Wastes (Management and Handling) Rules, 2000 to ensure proper management of Municipal Solid and to increase the frequency of inspections to the officers of the State Board having the rank of Junior Scientific Assistants and Junior Environmental Engineer and above in the Head Quarter was considered and approved by the Board.

3. The proposal regarding providing of Rs. 7.0 Crores funds for setting up of Solid Waste Management Plant at Baddi was placed before the Board. The Board approved the proposal of financial assistance for setting up of solid waste management plant for BBN area at Baddi and observed that the amount be made available after studying all aspects & the provisions made in the DPR to assess requirement of funds. It was further observed that this shall be only a one time arrangement & the matter required further deliberations for considering funding of infrastructure projects in future.

4. The proposal for providing of employment on compassionate ground to Sh. Abhishek Sharma S/O Late Sh. Hitender Sharma deceased Supdt. Grade-II of H.P. State Pollution Control Board was considered and approved by the Board.

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CHAPTER – 4

STATUS OF AMBIENT AIR, RIVER WATER QUALITY & VEHICULAR POLLUTION IN HIMACHAL PRADESH

AMBIENT AIR QUALITY MONITORING:

The monitoring of Ambient Air Quality was started in 1986-87 under the **National Ambient Air Quality Monitoring Programme (NAMP)** with the objective to find the current status of pollution and to study the trends as a result of increasing industrialization. The general objectives of the programme are:

1. To evaluate the general air quality conditions in the cities and to provide the basis for analyzing long term trends of pollution concentrations.
2. To provide the data for subsequent development of air quality standards and pollution prevention and control programme for the cities.

The Respirable Suspended Particulate Matter (RSPM) is monitored with the help of Respirable Dust Sampler on the basis of three days per station per week for 24 hours at 10 Towns/Cities covering 20 nos. of locations in the State. The State Board has also initiated air quality monitoring stations at Dharamshala.

National ambient air quality standards (NAAQS) as notified in 18th November 2009 are given in Table-4.1

TABLE-4.1

S. No.	Pollutant	Time Weighted Average	Concentration in Ambient air		
			Industrial, Residential, Rural and Other Area	Ecologically Sensitive Area (Notified by Central Govt.)	Method of Measurement
1	Sulphur Dioxide	Annual*	50 µg/m^3	20 µg/m^3	-Improved West and Gaeke -Ultraviolet fluorescence
		24hours**	80 µg/m^3	80 µg/m^3	
2	Nitrogen Dioxide	Annual*	40 µg/m^3	30 µg/m^3	-Modified Jacob and Hochheiser (Na-Arsenite) -Chemiluminescence
		24hours**	80 µg/m^3	80 µg/m^3	
3	Particulate Matter (PM_{10}) (size less than 10 micron)	Annual*	60 µg/m^3	60 µg/m^3	-Gravimetric -TOEM -Beta attenuation
		24hours**	100 µg/m^3	100 µg/m^3	
4	Particulate Matter ($PM_{2.5}$) (size less than 2.5 micron)	Annual*	40 µg/m^3	40 µg/m^3	-Gravimetric -TOEM -Beta attenuation

S. No.	Pollutant	Time Weighted Average	Concentration in Ambient air		
			Industrial, Residential, Rural and Other Area	Ecologically Sensitive Area (Notified by Central Govt.)	Method of Measurement
5	Ozone (O_3)	8 hours**	100 µg/m³	100 µg/m³	-UV photometric -Chemiluminescence -Chemical method
		1 hour**	180 µg/m³	180 µg/m³	
6	Lead (Pb)	Annual*	0.50 µg/m³	0.50 µg/m³	-AAS/ICP method after sampling on EPM 2000 or equivalent filter paper -ED-XRF using Teflon filter
		24hours**	1.0 µg/m³	1.0 µg/m³	
7	Carbon Monoxide (CO)	8 hours	2.0 mg/m³	2.0 mg/m³	-Non Dispersive Infra Red (NDIR) Spectroscopy
		1 hour	4.0 mg/m³	4.0 mg/m³	
8	Ammonia (NH_3)	Annual*	100 µg/m³	100 µg/m³	-Chemiluminescence -Indophenol blue method
		24hours**	400 µg/m³	400 µg/m³	
9	Benzene (C_6H_6)	Annual*	5.0 µg/m³	5.0 µg/m³	-Gas Chromatography based continuous analyzer -Adsorption and desorption followed By GC analysis
10	Benzo(a) Pyrene (BaP)-Particulate phase only	Annual*	1.0 ng/m³	1.0 ng/m³	-Solvent extraction followed by HPLC/GC analysis
11	Arsenic (As)	Annual*	6.0 ng/m³	6.0 ng/m³	-AAS/ICP method after sampling on EPM 2000 or equivalent filter paper
12	Nickel (Ni)	Annual*	20.0 ng/m³	20.0 ng/m³	-AAS/ICP method after sampling on EPM 2000 or equivalent filter paper

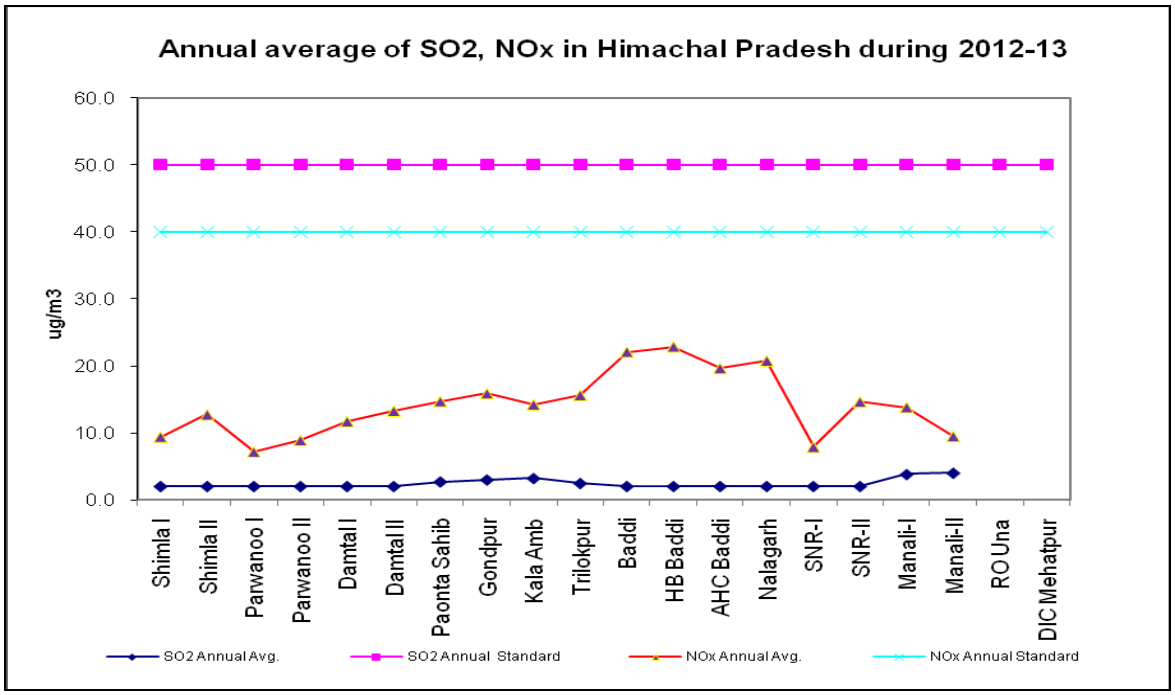
* Annual arithmetic mean of minimum of 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

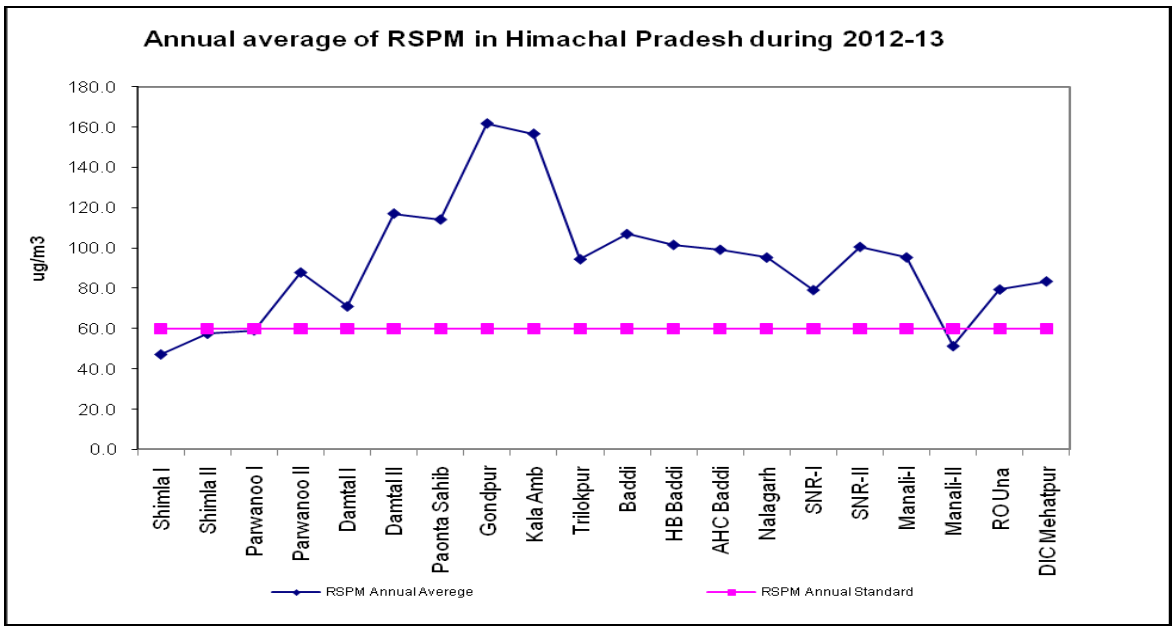
** 24 hourly or 08 hourly or 01 hourly monitored values, as applicable, shall be compiled with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.

(A) AMBIENT AIR QUALITY STATUS IN HIMACHAL PRADESH

Ambient air quality is being monitored in 10 towns/cities at Shimla, Parwanoo, Jassur, Paonta Sahib, Kala Amb, Baddi, Nalagarh, Sunder Nagar, Manali and Una under National Ambient Air Quality Monitoring Program. Air quality standards fixed for 24 hour average is 100 µg/m³ for RSPM and 80 µg/m³ for SO_2 &

NO_2 and annual average standard is 60 µg/m³for RSPM, 50 µg/m³ for SO_2 & 40 µg/m³ for NO_2. The data collected of all the stations for the year 2012-13 scrutinized for the annual average and peak values for 20 locations and trends of annual average of SO_2, NO_2 and RSPM are shown below;





CONCLUSION:

Annual average values of SO_2 and NO_x at all the NAMP stations were observed well below the permissible limit for the annual average. The peak value of SO_2 was observed as high as 25.8 µg/m³ in the month of June 2012 at Hidimba Road

Manali NAMP station and 97.0 μg/m^3 for NOx in the month of February 2013 at Housing Board Baddi NAMP station.

The annual average values of RSPM at both the station at Shimla, Sector IV Parwanoo, Hidimba Road Manali were observed well below the permissible limits for the annual average. While for other stations it was observed above the permissible limit for the annual average.

At NAMP stations at Shimla, Parwanoo, Kala Amb, Manali, Paonta Sahib, Housing Board Baddi and MC Office Sunder Nagar in comparison to previous year's data, there is decrease in the level of RSPM observed.

At NAMP stations Damtal, Gondpur, DIC Baddi, AHC Baddi, MC Nalagarh, Office Building Sunder Nagar, Regional Office Una and DIC Mehatpur in comparison to previous year's data, there is increase in the level of RSPM observed.

Table-4.2

Stations	SO_2 (Annual Average)	Peak	NO_x (Annual Average)	Peak
Shimla I	2.0	6.8	9.4	28.8
Shimla II	2.0	9.7	12.7	48.7
Parwanoo I	2.0	17.3	7.2	30.7
Parwanoo II	2.0	8.9	8.9	28.4
Damtal I	2.0	2.0	11.7	38.3
Damtal II	2.0	2.0	13.3	53.3
Paonta Sahib	2.7	21.5	14.7	37.0
Gondpur	3.0	6.0	15.9	20.1
Kala Amb	3.2	9.0	14.2	22.0
Trilokpur	2.5	5.0	15.6	23.8
Baddi	2.0	5.4	22.0	92.5
HB Baddi	2.0	16.0	22.8	97.0
AHC Baddi	2.0	9.1	19.6	83.5
Nalagarh	2.0	13.2	20.7	18.2
SNR-I	2.0	2.0	7.9	27.9
SNR-II	2.0	2.0	14.6	29.5
Manali-I	3.8	25.5	13.8	52.7
Manali-II	4.0	25.8	9.5	74.2
RO Una		0.0		0.0
DIC Mehatpur		0.0		0.0

Table-4.3

Stations	RSPM Annual Average	Peak
Shimla I	47.4	167.0
Shimla II	57.6	203.0
Parwanoo I	59.3	349.4
Parwanoo II	88.0	187.2
Damtal I	71.2	225.0
Damtal II	117.2	389.0
Paonta Sahib	114.3	532.0
Gondpur	161.9	445.0
Kala Amb	156.8	587.0
Trilokpur	94.6	317.0
Baddi	107.1	249.0
HB Baddi	101.7	505.0
AHC Baddi	99.3	259.0
Nalagarh	95.4	420.0
Sunder Nagar-I	79.3	305.0
Sunder Nagar-II	100.7	262.1
Manali-I	95.5	448.4
Manali-II	51.5	219.5
RO Una	79.6	245.3
DIC Mehatpur	83.6	333.8

Recommendations:

- Action required for controlling the stack emission from induction furnace, brick kiln, stone crushers etc.
- Condition of roads is required to be improved.
- Regular vehicular monitoring is required to be conducted.
- Open burning of waste/papers/ MSW etc. to be discouraged
- Forest fire is required to be prevented.
- Construction activities like Road, Bridge, Building, Project etc. should be carried out in planned manner and debris is required to be managed properly.
- Regular air quality monitoring/ stack emission of industries is required to be carried out.
- Air polluting industries should not be allowed to be set up in future at Baddi industrial area, Parwanoo industrial area, Kala Amb industrial area and Gondpur industrial area (Paonta Sahib).

STATUS OF RIVER WATER QUALITY:

Assessment of the status of water quality of the natural water bodies is one of the most important activities of the Pollution Control Board. Water quality data not only help to ascertain the nature and extent of the requirement for pollution control measures but also indicates its impact on water quality. The Central Pollution Control Board under the National Programme: **MONITORING OF NATIONAL AQUATIC RESOURCES (MINARS)** is sponsoring the water quality monitoring of major rivers of the State. The monitoring has been carried out in the month of April, July, October and January every year. In all 219 points have been selected on major rivers Satluj, Beas, Ravi, Yamuna, Parvati, Sirsa, Markanda & Sukhna and their tributaries in the State. These 219 points include 104 points under **MINARS** project including 39 points in major industrial towns for the monitoring of ground water, 115 points of State monitoring includes 50 points on Hydel projects.

The Samples are being analyzed for physico-chemical and bacteriological contents. The results are shown below;

TABLE 4.4 : PRIMARY WATER QUALITY CRITERIA

Designated Best Use	Class of Water	Criteria
Drinking water source without conventional treatment but after disinfection.	A	1. Total Coliform organism MPN/100ml. shall be 50 or less. 2. pH between 6.5 and 8.5. 3. Dissolved Oxygen 6 mg/l or more. 4. Biochemical Oxygen Demand 5 days 20^{o}C 2 mg/l or less.
Outdoor bathing (Organized)	B	1. Total Coliform organism MPN/100ml.shall be 500 or less. 2. pH between 6.5 and 8.5. 3. Dissolved Oxygen 5 mg/l or more. 4. Biochemical Oxygen Demand 5 days 20^{o}C 3 mg/l or less.
Drinking Water Source after conventional treatment and disinfection	C	1. Total Coliform organism MPN/100ml. shall be 5000 or less. 2. pH between 6 and 9. 3. Dissolved Oxygen 4 mg/l or more. 4. Biochemical Oxygen Demand 5 days 20^{o}C 3 mg/l or less.
Propagation of Wild Life & Fisheries	D	1. pH between 6.5 and 8.5. 2. Dissolved Oxygen 4 mg/l or more. 3. Free Ammonia (as N) 1.2 mg/l or less.
Irrigation, Industrial Cooling Controlled Waste Disposal	E	1. pH between 6.5 and 8.5. 2. Electrical Conductivity at 25^{0}C micro mhos /cm max. 2250. 3. Sodium absorption ratio Max. 26. 4. Boron Max 2 mg/l.

If three parameters falls in category 'A' but fourth parameter falls in category C. The overall quality of river will fall under Class 'C'.

Following conclusion were drawn from the above studies:

In case of major rivers on the basis of Primary Water Quality Criteria, it can be concluded that quality of rivers fall under '**A**' category of water with respect to pH, DO and BOD in general. The critical parameters observed is Total Coliform according to which category of river comes down to either category '**B**' if the Total Coliform are more than **50** MPN/ 100 ml or category '**C**' if the Total Coliform are more than **500** MPN/100ml.

A: WATER QUALITY OF MAJOR RIVERS IN HIMACHAL PARDESH MONITORED UNDER MINARS AND STATE WATER QUALITY MONITORING PROGRAMME DURING 2012-13

Result of MINARS Points from April-2012 to March 2013:

Name of location		Apr - 12	May- 12	Jun- 12	Jul- 12	Aug- 12	Sep- 12	Oct- 12	Nov- 12	Dec- 12	Jan -13	Feb -13	Mar- 13
River Pabbar U/s Dhambari	pH	6.88	7.89	7.25	6.85	8.04	6.52	6.85	7.81	6.57	7.26	--	7.32
	DO	9.9	9.6	9.8	8.9	9.5	9.2	9.4	9.8	10.1	9.1	--	10.5
	BOD	0.2	Nil	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	--	0.2
	TC	6	2	Nil	2	10	10	2	4	12	8	--	56
River Pabbar U/s Rohru	pH	8.91	6.33	7.85	7.18	7.68	7.25	6.69	6.8	7.48	8.13	--	7.4
	DO	8.6	9.4	9.6	9.2	9.1	8.9	8.7	8.9	9.8	8.9	--	10.2
	BOD	0.1	Nil	0.5	0.2	0.2	0.4	0.1	0.2	0.5	0.1	--	0.2
	TC	14	8	146	Nil	12	12	8	2	Nil	Nil	--	28
River Pabbar D/s TRT of Swara kuddu	pH	7.24	7.65	7.29	7.88	7.11	7.25	7.3	7.99	7.38	7.35	--	8.12
	DO	8.3	9.2	9.9	9.5	8.5	9	9.4	9.2	9.5	9.2	--	9.8
	BOD	0.2	0.2	0.5	0.4	0.1	0.2	0.1	0.5	0.5	0.1	--	0.5
	TC	20	12	56	Nil	8	8	2	2	14	8	--	44
River Tons at HP Boundary	pH	7.59	6.77	7.67	7.25	7.17	7.7	7.2	7.21	7.3	7.69	--	7.6
	DO	8.4	9.3	9.7	9.4	8.9	9.1	9	9.1	9.4	9.5	--	9.9
	BOD	0.4	0.2	0.2	0.3	0.2	0.4	0.2	0.4	0.5	0.1	--	0.5
	TC	16	20	138	Nil	10	10	1	2	12	4	--	20
Ashwani Khad U/s Yashwant Nagar	pH	8.78	8.48	--	8.45	--	--	--	8.4	-	-	-	-
	DO	9.2	9	--	7.8	--	--	--	--	--	--	--	--
	BOD	1	0.8	--	0.5	--	--	--	0.5	--	--	--	--
	TC	30	42	--	8	--	--	--	2	--	--	--	--
Giri River U/s Yashwant Nagar	pH	8.28	8.21	--	7.75	--	--	--	7.84	--	--	--	--
	DO	8.9	9.5	--	7.1	--	--	--	-	--	--	--	--
	BOD	1.8	0.8	--	0.5	--	--	--	0.5	--	--	--	--
	TC	10	18	--	10	--	--	--	14	--	--	--	--
River Sukhna at Parwanoo	pH	7.98	--	--	--	7.72	7.3	--	--	--	--	--	7.87
	DO	3.2	--	--	--	7.8	6.7	--	--	--	--	--	2.1
	BOD	6	--	--	--	6	0.2	--	--	--	--	--	40
	TC	450	--	--	--	15	60	--	--	--	--	--	320

Name of location		Apr - 12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan -13	Feb -13	Mar-13
Lift Nallah D/s MSW Processing Site	pH	6.79	6.8	7.39	7.53	7.48	7.59	7.11	8.44	7.04	7.67	7.62	7.43
	DO	5.5	4.5	3.8	4.5	4.1	4.2	4.3	-	3.2	5.3	4.1	3.1
	BOD	60	220	1	52	2	4	2	0.5	12	54	7	18
	TC	102	168	238	30	24	24	10	8	36	60	3360	160
River Sirsa U/s Sitomajri Nallah	pH	7.96	7.65	7.83	7.64	8.07	7.68	7.49	7.71	7.68	8.28	8.01	8.13
	DO	10.1	9.7	8.2	2.5	8.4	8.9	8.1	7.8	7.8	8.4	1	7.4
	BOD	1	0.4	0.5	1	0.8	0.4	0.5	4.5	2	0.1	8.4	10
	TC	134	280	86	32	50	50	368	22	24	16	13	540
River Sirsa D/s Nalagarh Bridge	pH	7.63	7.57	8.17	8.18	8.09	7.75	7.85	8.01	7.23	7.8	8.09	8.3
	DO	6.5	5.6	6.4	6.4	6.3	6.7	6.4	6.2	6.1	5.4	5.8	5.8
	BOD	4	0.8	2	2.5	2	2	0.7	4	3	15	3	4.5
	TC	250	128	210	32	62	64	38	80	20	30	16	250
River Sirsa D/s Nalagarh Town	pH	8.11	7.69	8.21	8.16	7.87	7.98	8.05	7.8	7.45	7.89	8.23	8.23
	DO	10.5	8.5	6.1	6.2	6	6.2	6.4	5.9	5.8	6.2	6.1	6.3
	BOD	2	0.2	1	2	3	2	0.4	3	3	4.8	2.5	4
	TC	56	182	160	160	150	80	36	24	22	24	40	107
River Yamuna U/s of Paonta Sahib	pH	7.67	7.08	6.18	7.02	7.38	7.3	7.28	7.06	7.75	6.96	7.60	8.24
	DO	8.3	8.0	8.0	7.9	6.1	6.6	7.5	8.4	8	8.2	8.2	7.8
	BOD	1.0	1.4	1.2	1.4	1.4	1.4	1.4	1.6	1.2	1.0	1.6	1.4
	TC	20.0	26.0	29.0	26.0	16.0	21.0	20.0	16.0	25.0	21.0	29.0	22.0
River Yamuna D/s of Paonta Sahib	pH	7.86	7.28	6.46	7.40	7.47	7.5	7.57	7.39	7.96	6.86	7.63	8.20
	DO	8.0	7.3	7.8	7.2	6.2	6.2	7.7	8.5	8.3	8.0	8.0	8.0
	BOD	1.2	1.0	1.6	1.4	1.2	1.6	1.2	1.2	1.0	1.2	1.0	1.2
	TC	23.0	24.0	28.0	20.0	18.0	24.0	23.0	19.0	20.0	22.0	28.0	21.0
River Bata U/s of Paonta Sahib	pH	7.91	7.16	6.6	7.64	7.42	7.2	7.53	7.64	7.99	6.97	7.56	8.46
	DO	9.0	7.4	6.8	6.9	6.4	6.0	7.4	8.9	8.6	7.8	8.1	8.2
	BOD	1.2	1.0	1.8	1.6	1.0	1.6	1.4	1.6	0.8	1.0	1.2	1.0
	TC	12.0	20.0	24.0	17.0	15.0	19.0	19.0	9.0	15.0	17.0	22.0	18.0

Name of location		Apr - 12	May- 12	Jun- 12	Jul- 12	Aug- 12	Sep- 12	Oct- 12	Nov- 12	Dec- 12	Jan -13	Feb -13	Mar- 13
River Bata D/s of Paonta Sahib	pH	7.76	7.18	6.47	7.32	7.58	7.4	6.73	7.35	7.93	6.85	7.54	8.29
	DO	8.9	7.3	6.6	6.8	6.3	6.0	7.4	8.8	8.5	7.6	8.1	7.8
	BOD	1.2	1.2	1.6	1.4	2.4	1.4	1.2	1.0	0.8	1.2	1.0	1.4
	TC	13.0	18.0	20.0	18.0	16.0	23.0	18.0	11.0	15.0	18.0	25.0	19.0
River Markanda at Shambhuwala (Paonta Sahib)	pH	7.68	6.97	6.45	7.38	7.06	7.6	7.04	7.4	7.72	7.34	7.61	8.15
	DO	7.1	8.2	7.1	7.8	6.4	6.3	8	8.4	8.3	7.9	7.5	8.1
	BOD	1.6	1.4	1.0	1.2	1.2	1.2	1.0	1.2	1.4	1.0	1.2	1.2
	TC	18.0	24.0	25.0	18.0	18.0	17.0	15.0	18.0	15.0	16.0	19.0	22.0
River Markanda U/s of Kala Amb	pH	7.95	7.01	6.30	7.59	7.33	7.50	7.34	7.58	8.06	7.23	6.86	8.2
	DO	8.1	6.2	6.2	6.4	6.2	6.0	7.6	8.2	8.0	8.0	7.3	7.7
	BOD	1.4	1.6	1.8	1.4	1.4	1.6	1.0	1.4	1.2	1.4	1.4	1.4
	TC	24.0	26.0	32.0	20.0	20.0	24.0	19.0	16.0	20.0	22.0	28.0	24.0
River Markanda D/s of Kala Amb	pH	7.83	SOURCE DRIED	SOURCE DRIED	7.51	7.50	7.50	7.46	7.54	7.8	7.3	7.36	7.82
	DO	7.8			6.2	6	6.0	7.4	7.7	7.9	6.8	6.8	7.4
	BOD	1.6			1.6	1.8	1.6	1.2	1.6	1.4	1.4	1.6	1.6
	TC	25.0			20.0	20.0	25.0	23.0	20.0	25.0	24.0	29.0	26.0
River Giri U/s of CCI, Mines	pH	7.71	6.66	6.39	7.56	7.65	7.60	7.41	7.56	7.85	7.04	7.51	7.84
	DO	8.2	7.2	7.0	7.2	6.3	6.3	6.6	7.6	7.5	7.2	6.7	7.9
	BOD	1.0	1.0	1.4	1.2	1.2	1.2	1.4	1.8	1.4	1.0	1.0	1.2
	TC	18.0	15.0	18.0	12.0	12.0	14.0	16.0	10.0	16.0	20.0	19.0	13.0
River Giri D/s of CCI, Mines	pH	7.76	6.84	6.44	7.62	7.56	7.00	7.17	7.64	7.73	7.19	6.46	8.04
	DO	8.1	7.1	7.0	7.3	6.1	6.3	6.9	7.8	7.2	7.1	6.5	8.1
	BOD	1.2	1.2	1.4	1.2	1.4	1.2	1.4	1.4	1.2	1.0	1.2	1
	TC	18.0	15.0	19.0	11.0	10.0	15.0	17.0	9.0	14.0	18.0	21.0	12.0
Renuka Ji Lake	pH	8.14	6.92	6.66	7.72	7.67	7.4	7.49	7.71	7.67	7.19	7.64	8.33
	DO	8.0	7.1	5.6	6.0	6.0	6.0	5.9	5.2	4.8	6	5.5	5.4
	BOD	1.4	1.4	1.8	1.6	1.8	2.4	1.8	2.6	2.8	1.6	1.8	1.8
	TC	24.0	32.0	34.0	26.0	24.0	24.0	31.0	33.0	28.0	28.0	34.0	25.0

Name of location		Apr - 12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan -13	Feb -13	Mar-13
U/S Slapper, River Satluj	pH	8.1	7.97	8.23	8.28	7.99	8.2	8.54	8.33	7.64	8.35	8.24	8.19
	DO	9.1	9.4	9.6	9.8	7.8	8.5	9	9.5	10.8	11.6	9.8	9.3
	BOD	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
	TC	280	350	240	350	170	130	140	220	130	170	180	280
D/S Slapper, Satluj River after Conf. with River Beas	pH	8.05	8.07	8.22	8.35	8.23	8.24	8.21	8.26	8.36	8.21	8.22	8.37
	DO	9.7	9.5	9.4	9.6	7.9	9.9	9.7	9.9	10.6	11.7	9.6	9.9
	BOD	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.3
	TC	180	220	220	240	140	110	140	170	170	180	130	220
Exit of Dehar Power House, Beas River	pH	7.64	7.52	7.84	7.94	7.75	7.24	8.06	7.68	8.17	8.27	8.33	8.33
	DO	10.6	9.4	9.5	10.2	7.7	10.7	9.8	9.6	10.7	12.1	9.2	10.2
	BOD	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1
	TC	140	130	140	180	130	70	170	110	79	70	110	140
D/s Bilaspur at Govindsagar	pH	8.04	8.15	8.24	8.09	8.29	8.3	8.34	8.29	8.33	8.28	8.27	8.4
	DO	9.2	8.9	9.6	9.7	8.1	9	9.6	7.4	8.8	10.7	7.7	9
	BOD	0.2	0.4	0.3	0.5	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.6
	TC	350	540	920	920	350	540	350	540	350	350	180	94
U/s Mandi, Beas River	pH	7.88	7.49	7.65	7.8	8.23	7.44	8.39	8.33	8.37	8.35	7.87	8.2
	DO	7.5	8	8.6	9.1	8.3	7.7	7.4	9.9	9.5	10.7	8.5	9
	BOD	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.3
	TC	220	280	350	240	220	180	220	220	140	180	180	140
D/s Mandi, Beas River	pH	7.46	6.95	6.46	7.64	7.7	7.49	8.5	8.28	8.49	8.27	7.77	8.25
	DO	7.3	7.1	7.2	9.5	8.2	7.9	8.4	9.4	10.1	11.7	8.4	9.2
	BOD	0.3	0.2	0.3	0.4	0.4	0.6	0.4	0.4	0.3	0.2	0.2	0.2
	TC	920	1600	920	540	350	350	220	350	350	280	170	540
Rewalsar Lake	pH	7.1	7.45	7.27	7.47	8.06	8.23	8.55	7.78	7.79	8.29	8.28	7.58
	DO	1.2	1.1	1	4.1	1.1	1.2	1.9	1.7	2.2	3.5	1.3	0.8
	BOD	2	1.6	1.2	1.6	2	2.4	6	1.8	7.5	2.2	6	3.6
	TC	≥2400	2400	≥2400	≥2400	≥2400	≥2400	≥2400	≥2400	≥2400	≥2400	≥2400	≥2400

Name of location		Apr - 12	May- 12	Jun- 12	Jul- 12	Aug- 12	Sep- 12	Oct- 12	Nov- 12	Dec- 12	Jan -13	Feb -13	Mar- 13
D/s Mandi, Suketi Khudd	pH	7.91	7.74	7.84	8.29	8.41	8.13	8.22	8.68	8.13	8.56	8.26	8.55
	DO	7.1	8.5	6.7	8	7.3	7.7	7.5	8.9	9.1	12.9	9.1	9.6
	BOD	0.5	0.4	0.3	0.6	0.6	0.6	0.8	0.8	1.2	0.3	0.4	1.6
	TC	≥2400	1600	1600	≥2400	≥2400	1600	≥2400	≥2400	1600	≥2400	≥2400	920
R.Beas, U/s Pandoh Dam	pH	7.69	7.35	7.87	7.83	7.6	7.69	7.98	7.92	8.18	8.24	7.58	7.77
	DO	8.7	7.9	8.4	9	8.2	8.1	8.2	9.4	9.4	10.5	9.7	9.7
	BOD	0.3	0.2	0.3	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.2
	TC	350	240	180	220	170	140	110	220	140	140	170	280
R.Beas, D/s Pandoh Dam	pH	7.64	8.1	7.66	8.13	8.18	7.73	7.97	7.69	8.07	8.25	7.71	7.93
	DO	7.4	8.4	8.7	9.8	8.4	8.3	7.3	9.1	9.9	11	9.7	9.6
	BOD	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.3
	TC	240	220	130	170	130	110	140	170	180	170	180	350
R.Beas, D/s Aut	pH	7.64	7.17	7.25	6.85	7.81	7.09	8.11	7.32	8.19	7.6	8.33	8.23
	DO	9.2	8	8.2	9.9	8.7	8.5	8.6	8.3	10	9	9.3	8.1
	BOD	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2
	TC	220	170	220	240	180	170	130	170	220	130	140	170
R.Sainj, D/s Largi	pH	8.12	7.52	6.46	6.99	8.09	7.15	8.36	7.98	7.6	7.72	8.3	8.38
	DO	7.3	8.2	8.2	100	8.6	8.3	8.7	8.1	11	8.6	8.7	8.2
	BOD	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2
	TC	170	170	140	110	110	94	94	110	79	94	130	140
River Parvati, U/s Manikaran	pH	8.54	6.61	7.24	6.95	7.12	6.88	8.09	7.79	7.76	8.21	8.01	8.32
	DO	8.3	10.4	8.4	9.1	6.6	8.8	9.1	8.4	10.5	9.7	9.5	9.6
	BOD	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1
	TC	110	94	70	49	33	23	8	22	23	17	19	130
River Parvati, D/s Manikaran	pH	7.58	7.2	7.34	8.21	7.07	6.53	7.95	7.72	7.87	8.26	8.16	8.27
	DO	8.2	8.8	8.4	8.9	7.4	9	9	8.3	10.5	9.6	9.4	9.4
	BOD	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2
	TC	220	110	94	70	49	33	13	33	33	26	21	170

Name of location		Apr - 12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan -13	Feb -13	Mar-13
River Beas, U/s Manali	pH	7.7	7.12	6.64	7.57	8.09	8.02	8.99	8.11	8.09	8.22	8.12	8.15
	DO	9.8	7	7.6	8.5	8.5	8.6	9.1	8.6	9.1	9.9	9.3	9.3
	BOD	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.6
	TC	130	110	70	46	49	46	34	94	49	46	46	180
River Beas, D/s Manali	pH	7.24	7.15	7.38	7.05	8.31	7.88	8.24	7.64	8.69	7.94	8.48	8.15
	DO	9.7	6.6	8	8.3	8	8.7	8.9	8.4	9	9.7	9.2	9.3
	BOD	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.8
	TC	350	240	180	280	140	79	70	79	70	63	63	220
River Beas, U/s Kullu	pH	7.61	7.71	7.55	7.4	8.25	7.75	7.91	7.83	7.66	8.29	8.27	8.29
	DO	9.5	6.1	8.1	8.2	7.8	8.4	9.8	8.6	9.1	9.3	9	9
	BOD	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	TC	350	350	240	220	170	180	140	220	140	130	94	280
River Beas, D/s Kullu	pH	7.49	7.62	7.81	7.12	8.09	7.59	8.05	7.62	7.86	8.46	8.23	8.3
	DO	9.5	8.4	8.4	8.1	8.1	8.3	8.5	8.5	9.2	9	9	8.9
	BOD	0.3	0.1	0.1	0.1	0.2	0.4	0.3	0.5	0.3	0.2	0.2	0.3
	TC	540	920	350	350	220	280	280	350	350	240	170	350
Parvati River, before confluence to R. Beas at Bhunter	pH	8.42	7.22	7.09	7.09	7.99	7.09	7.99	7.67	8.11	7.76	8.19	8.13
	DO	9.5	7.2	8.5	9.9	9.1	8.6	8.6	8.4	9.1	9.4	9.5	9.3
	BOD	0.2	0.3	0.2	0.3	0.4	0.5	0.4	0.3	0.1	0.2	0.2	0.3
	TC	540	350	350	350	280	140	220	280	130	170	180	350
River Satluj U/s Tattapani	pH	8.26	8.25	8.22	8.28	8.37	7.85	8.42	8.3	8.18	8.26	7.66	7.16
	DO	8.8	8.7	8.4	9	8.9	9.4	8.8	9.2	9.5	9.2	9.1	8.9
	BOD	0.3	0.2	0.4	0.3	0.5	0.5	0.6	0.4	1	0.4	0.4	0.4
	TC	350	240	220	240	140	170	180	170	220	180	94	280
River Satluj U/s Rampur	pH	8.21	7.64	7.89	8.46	8.36	8.23	8.59	8.43	8.37	8.28	8.03	7.41
	DO	8.9	8.5	8	8.7	8.8	9.6	8.2	9.6	9.6	9.6	9.5	9.5
	BOD	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3
	TC	350	240	180	140	94	130	110	110	140	94	110	350

Name of location		Apr - 12	May- 12	Jun- 12	Jul- 12	Aug- 12	Sep- 12	Oct- 12	Nov- 12	Dec- 12	Jan -13	Feb -13	Mar- 13
River Satluj D/s Rampur	pH	8.06	8.17	8.1	8.4	8.39	8.29	8.48	8.6	8.27	8.38	8.13	7.5
	DO	8.8	8.6	8	8.9	8.6	9.4	8.5	9.5	9.5	9.5	9.4	9.6
	BOD	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.6
	TC	920	540	280	240	140	220	140	180	170	130	140	540
Wangtu Bridge (Satluj at Nathpa Jhakri)	pH	8.28	8.15	8.2	8.39	8.4	8.07	8.32	8.27	8.08	8.34	8.28	7.62
	DO	8.8	8	8.5	8.3	8	9.8	8.6	9.7	----	9.9	10.2	9.8
	BOD	0.2	0.1	0.1	0.1	0.3	0.3	0.3	0.2	0.3	0.1	0.3	0.1
	TC	170	220	170	220	180	94	130	110	79	79	70	94
River Baspa U/s reservoir at Kuppa	pH	7.91	8.03	7.81	7.94	7.85	7.92	8.49	7.83	8.36	8.14	8.39	7.95
	DO	8.7	8.9	8.5	8.7	8.8	9.5	8.4	9.4	9.6	9.6	9.6	9.6
	BOD	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	TC	94	70	49	70	46	70	49	33	70	21	22	63
River Satluj before conf. with River Spiti at Khab	pH	8.25	7.9	8.18	8.32	8.26	8.32	8.35	8.36	8.32	8.35	7.91	7.72
	DO	8.9	8.8	8.9	8.7	8.8	10.4	8.5	10.2	10.4	10.4	10.1	9.9
	BOD	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.3
	TC	94	79	94	49	79	70	79	33	79	26	26	49
River Spiti before conf. with River Satluj at Khab	pH	8.05	8.13	8.01	8.37	7.26	8.26	8.47	8.04	8.28	8.19	8.29	7.8
	DO	8.7	8.9	8.8	8.5	8.9	10.7	8.1	9.8	10.9	10.8	9.9	9.8
	BOD	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	TC	33	46	33	70	46	49	79	21	46	17	46	43
River Satluj after conf. with River Spiti at Khab	pH	8.29	8.14	8.2	8.46	7.93	8.29	8.53	8.27	8.46	8.42	8.34	7.89
	DO	8.7	8.8	8.9	8.8	8.8	10.6	8.8	10.1	10.5	10.6	10.2	9.9
	BOD	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
	TC	94	49	70	70	46	70	79	49	79	34	34	46
River Ravi D/S Chamba	pH	7.44	7.27	7.23	8.04	8.06	--	--	--	8.46	7.88	8.37	8.21
	DO	9.8	10.4	9.8	--	--	--	--	--	9.2	9.6	9.8	9.4
	BOD	0.7	0.4	0.6	0.3	1				0.4	0.4	0.9	0.5
	TC	--	--	--	--	--	--	--	--	--	--	--	--

Name of location		Apr - 12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan -13	Feb -13	Mar-13
River Ravi U/S Chamba	pH	6.91	6.95	7.32	8.72	7.79	--	--	--	8.34	8.18	8.72	8.26
	DO	10.1	10.8	9.6	--	--	--	--	--	9	9.5	9.6	9.5
	BOD	0.2	0.4	0.4	0.3	0.4	--	--	--	0.5	0.4	0.6	0.6
	TC	--	--	--	--	--	--	--	--	--	--	--	--
River Siul D/S Surgani	pH	7.91	8.21	7.21	8.38	8.35	--	--	--	8.65	8.28	8.25	8.39
	DO	9.2	10.8	9.4	--	--	--	--	--	8.1	9.4	9.7	9.2
	BOD	0.9	0.3	0.8	0.2	0.6	--	--	--	0.3	0.9	5.5	0.2
	TC	--	--	--	--	--	--	--	--	--	--	--	--
Chamera Reservoir stage -I	pH	8.16	8.11	7.29	8.11	8.22	--	--	--	8.17	8.81	8.35	8.24
	DO	9.4	9.9	9.8	--	--	--	--	--	8.5	9.5	9.2	9
	BOD	0.4	0.6	0.4	0.5	0.6	--	--	--	0.3	0.2	0.9	0.4
	TC	--	--	--	--	--	--	--	--	--	--	--	--
Madhopur Head Works River Ravi	pH	8.11	7.57	8.21	8.14	8.29	8.48	8.56	8.64	8.58	8.51	8.4	8.51
	DO	9.8	7.5	8.4	8.1	6.2	7.7	6.2	7.5	8.9	7.9	7.4	8.8
	BOD	0.4	0.5	0.8	0.6	0.6	0.4	0.5	0.4	0.6	0.7	0.6	0.5
	TC	--	--	--	--	--	--	--	--	--	--	--	--
Khajiar Lake	pH	6.72	6.28	6.35	6.94	7.15	--	--	--	6.42	--	6.76	6.52
	DO	8.8	9.3	10.7	9.5	--	--	--	--	5.5	--	9.2	7
	BOD	2.5	3.4	7	2	2	--	--	--	52	--	14	170
	TC	--	--	--	--	--	--	--	--	--	--	--	--
Pong Dam Lake at Pong Village	pH	8.15	8.74	8.36	8.74	8.52	8.62	8.89	8.72	8.82	7.91	8.85	8.62
	DO	7.8	8.4	7	7.2	7	6.2	6.3	6	7.5	6.7	8.4	9.4
	BOD	0.9	0.8	0.6	0.8	0.5	0.7	0.7	1	0.5	0.6	0.5	0.7
	TC	--	--	--	--	--	--	--	--	--	--	--	--
D/S Pong Dam R. Beas	pH	7.47	7.86	7.93	7.95	7.75	8.26	8.22	8.84	7.86	8.36	8.9	8.84
	DO	7.8	5.2	7.5	3.8	7.3	7	4.4	7.2	7.9	9.5	8.2	8.6
	BOD	0.9	0.7	0.4	0.4	0.4	0.5	0.7	1.2	0.4	0.7	0.5	1.4
	TC	--	--	--	--	--	--	--	--	--	--	--	--

Name of location		Apr - 12	May- 12	Jun- 12	Jul- 12	Aug- 12	Sep- 12	Oct- 12	Nov- 12	Dec- 12	Jan -13	Feb -13	Mar- 13
D/S Dehra River Beas	pH	8.09	7.95	7.84	8.12	8.23	8.78	8.71	8.45	8.86	8.59	8.78	8.61
	DO	8	7.5	6.7	8.3	7.8	9.6	7	8	9	--	8	8.9
	BOD	0.5	0.4	0.4	4	0.8	0.7	0.9	1.1	0.7	0.6	0.6	1.6
	TC	--	--	--	--	--	--	--	--	--	--	--	--
D/S Jaisinghpur River Beas	pH	7.82	8.42	7.94	8.23	8.15	8.74	8.69	8.26	8.16	8.48	8.83	8.71
	DO	8.5	7.8	7.5	7.1	6.6	8.6	7	9.4	8.8	7.8	6.7	7.6
	BOD	0.8	1.5	1.4	0.2	1.5	0.4	0.3	0.6	0.5	0.7	1.2	1.4
	TC	--	--	--	--	--	--	--	--	--	--	--	--
D/S AlampurRiver Beas	pH	7.25	8.72	8.03	8.17	8.12	8.55	8.35	8.18	8.95	8.79	8.81	8.76
	DO	8.7	7.7	7.6	7	6.5	8.5	7.4	9.6	8.6	7.7	6.5	7.2
	BOD	0.6	1	1	0.2	1	0.4	1.1	0.4	0.4	0.3	0.6	1.2
	TC	--	--	--	--	--	--	--	--	--	--	--	--
D/S ThuralNeugalKhad	pH	7.98	7.89	7.81	8.08	7.54	8.12	8.31	8.45	7.87	8.29	8.4	8.53
	DO	7.4	7.3	6.8	7.5	7.6	6.3	6.6	9.5	7.8	9.8	7.9	8.6
	BOD	0.8	0.4	1	0.2	0.8	0.6	0.6	0.7	0.3	0.4	1.4	0.5
	TC	--	--	--	--	--	--	--	--	--	--	--	--
D/S BinwaBaijnathPaprola	pH	8.31	7.86	8.18	7.81	7.69	7.91	8.18	8.22	7.53	8.18	8.58	7.62
	DO	8.8	7.5	7.6	6.4	8.2	6.7	6	7.2	8.6	--	7.2	8.2
	BOD	0.4	0.5	0.4	0.3	0.3	0.4	4.1	1.1	0.4	0.6	0.9	0.3
	TC	--	--	--	--	--	--	--	--	--	--	--	--
River Satluj D/s Bhakhra	pH	7.96	8.08	8.29	8.04	7.89	8.62	8.62	8.38	8.72	8.12	8.39	8.24
	DO	9	9.3	7.7	6.8	7.5	9.2	9.8	9.1	8.9	8.6	6.6	6.8
	BOD	0.8	0.7	0.3	0.3	0.4	0.4	0.7	2.9	0.6	0.6	0.5	0.6
	TC	--	--	--	--	--	--	--	--	--	--	--	--
River Swan D/s Santokhgarh	pH	7.53	8.11	7.91	7.81	8.54	8.49	8.56	8.69	8.39	7.82	8.78	8.36
	DO	7.4	8.8	5.4	6	6.8	8	7.8	7.5	6.6	7.8	6.4	6.3
	BOD	0.6	1.4	9	0.6	2	0.5	0.9	2.3	4.4	14	0.8	15
	TC	--	--	--	--	--	--	--	--	--	--	--	--

Name of location		Apr - 12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan -13	Feb -13	Mar-13
River Ravi D/S proposed dam of Chamera-III HEP	pH	8.32	7.52	7.42	8.41	8.04	--	--	--	8.28	8.86	8.59	8.02
	DO	9.7	9.2	9.3	--	--	--	--	--	8	9.5	9.8	9.6
	BOD	0.4	0.5	0.4	0.4	0.6	--	--	--	0.3	0.2	0.3	0.2
	TC	--	--	--	--	--	--	--	--	--	--	--	--

Result of SWQM from April-2012 to March 2013:

Location	Parameter	April 2012	July 2012	October 2012	January 2013
U/s Parwanoo Town	pH	8.15	-	-	-
	DO	7	-	-	-
	BOD	0.1	-	-	-
	TC	60	-	-	-
D/s Intake Channel of WSS	pH	8.06	-	-	-
	DO	7.5	-	-	-
	BOD	0.4	-	-	-
	TC	74	-	-	-
U/s WSS Sector - 4, Parwanoo	pH	7.49	-	-	-
	DO	NIL	-	-	-
	BOD	0.2	-	-	-
	TC	382	-	-	-
D/s WSS Kalka	pH	7.71	-	-	-
	DO	Nil	-	-	-
	BOD	1	-	-	-
	TC	360	-	-	-
U/s Sukhna Nallah Sector V, Parwanoo (Landfill Site)	pH	7.64	-	-	-
	DO	5	-	-	-
	BOD	4	-	-	-
	TC	270	-	-	-
D/s Sukhna Nallah Sector V, Parwanoo (Landfill Site)	pH	7.76	-	-	-
	DO	3.3	-	-	-
	BOD	8	-	-	-
	TC	330	-	-	-
U/s Morepan Lab	pH	8.12	-	-	-
	DO	8.2	-	-	-
	BOD	4	-	-	-
	TC	120	-	-	-

Location	Parameter	April 2012	July 2012	October 2012	January 2013
D/s Morepan Lab	pH	7.46	-	-	-
	DO	2.5	-	-	-
	BOD	280	-	-	-
	TC	260	-	-	-
River Sirsa D/s Sitomajri Nallah	pH	7.56	7.38	7.36	8.08
	DO	5.8	6.9	5.8	7.3
	BOD	1	0.2	12	1
	TC	210	84	114	32
River Sirsa U/s Sitomajri Nallah	pH	7.44	7.31	7.67	7.53
	DO	4.8	3.5	7.1	4.5
	BOD	4	2.5	1.5	1.4
	TC	120	50	88	22
River Bald D/s Landfill site at Baddi	pH	7.6	7.56	7.8	7.63
	DO	4.5	6.7	6.8	7
	BOD	6	1.5	1.5	1
	TC	138	64	160	46
River Sirsa U/s Sandholi Nallah	pH	7.68	7.69	8	8.03
	DO	3.1	6.8	-	7
	BOD	1.2	1.5	-	0.6
	TC	460	74	104	22
Sandholi Nallah	pH	6.69	6.83	7.65	7.23
	DO	Nil	0.7	-	0
	BOD	280	210	170	300
	TC	720	500	704	110
River Sirsa D/s Sandholi Nallah	pH	7.57	7.61	8.1	7.8
	DO	Nil	6.2	-	6.1
	BOD	60	2	2	2
	TC	842	48	496	50
River Sirsa U/s Housing Board Nallah	pH	7.72	7.3	7.53	7.92
	DO	0.5	1.6	-	5.7
	BOD	22	12	8	0.6
	TC	260	420	408	20
River Sirsa D/s Housing Board Nallah	pH	7.52	7.62	7.7	7.71
	DO	Nil	6.2	-	6.2
	BOD	22	2	27	3
	TC	320	70	256	84
Housing Board Nallah	pH	8.02	7.92	7.69	7.06
	DO	0.6	4.6	1.2	0.8
	BOD	60	6	10	36
	TC	180	209	408	120

Location	Parameter	April 2012	July 2012	October 2012	January 2013
River Ratta Before Conf. to River Sirsa	pH	7.6	7.61	7.5	7.58
	DO	7.4	6.8	6.3	9.5
	BOD	2	2.5	18	14
	TC	132	104	80	26
River Sirsa U/s River Ratta	pH	7.85	7.71	7.72	7.7
	DO	2.4	7.1	5.3	7.1
	BOD	16	1.2	8	1
	TC	72	66	50	20
River Sirsa D/s River Ratta	pH	7.65	7.49	7.8	7.67
	DO	0.5	6.8	5.1	7.6
	BOD	22	2.2	17	8
	TC	110	32	72	22
U/s TSDF Site at Majra (Well)	pH	7.79	7.37	7.46	7.4
	DO	-	-	-	-
	BOD	0.4	1.5	7	2
	TC	48	92	24	16
D/s TSDF Site at Majra (Well)	pH	7.55	7.45	8.33	8.21
	DO	-	-	-	-
	BOD	Nil	0.1	0.1	0.2
	TC	52	Nil	80	1
U/s Lift Nallah before conf. to Ashwani Khad	pH	6.58	7.8	7.64	7.42
	DO	8.9	9.6	9.3	9.2
	BOD	0.6	0.2	0.1	0.1
	TC	42	16	3	112
D/s Ashwani Khad	pH	6.47	7.57	7.36	7.56
	DO	8.8	9.4	9	6.8
	BOD	0.8	0.2	0.3	0.2
	TC	30	14	9	80
Lift Nallah D/s Hotel Combermere, Shimla	pH	6.73	7.67	7.16	6.98
	DO	5.1	4.3	4.7	5.9
	BOD	42	1.5	18	41
	TC	182	50	7	12
Lift Nallah U/s Bridge at Bye Pass Road Near MC Waste Processing Site	pH	6.8	7.72	7.11	6.93
	DO	5.4	4.6	4.5	5.8
	BOD	52	2	15	50
	TC	110	10	2	60
D/s Chirgaon	pH	6.97	8.2	6.69	8.03
	DO	9.6	9	8.9	8.9
	BOD	0.4	0.6	0.1	0.1
	TC	8	4	2	16

Location	Parameter	April 2012	July 2012	October 2012	January 2013
D/s Rohroo	pH	7.64	7.95	7.28	7.49
	DO	8.8	9.1	8.6	8.7
	BOD	0.4	0.8	0.2	0.4
	TC	10	2	8	Nil
U/s Hatkoti	pH	7.69	7.17	6.84	7.37
	DO	8.7	9.4	8.4	9.6
	BOD	0.1	0.5	0.1	0.1
	TC	14	2	3	Nil
D/s Hatkoti	pH	7.34	7.11	7.27	8.53
	DO	8.8	9.1	9.2	9.3
	BOD	0.1	0.5	0.3	0.1
	TC	26	Nil	4	12
River Yamuna U/s of Ranbaxy	pH	7.28	7.27	6.73	6.97
	DO	8.5	6.3	7.4	7.9
	BOD	1.0	1.2	1.2	1.2
	TC	10.0	21.0	18.0	20.0
River Yamuna D/s of Ranbaxy	pH	7.76	7.76	7.02	7.12
	DO	8.3	6.2	7.4	7.3
	BOD	1.6	1.4	1.0	1.4
	TC	11.0	22.0	21.0	20.0
River Yamuna U/s of MSW land fill site	pH	7.79	7.08	7.42	6.93
	DO	8.4	6.1	7.5	8.1
	BOD	1.0	1.8	1.0	1.2
	TC	23.0	20.0	24.0	23.0
River Yamuna D/s of MSW land fill site	pH	7.70	7.12	7.30	7.23
	DO	7.9	6.20	7.0	7.7
	BOD	1.4	1.6	3.2	1.0
	TC	22.0	21.0	18.0	21.0
River Markanda U/s of MARKANDA BRIDGE	pH	7.97	7.56	7.11	7.31
	DO	7.3	6.6	7.2	8.2
	BOD	1.4	1.4	1.2	1.4
	TC	24.0	21.0	20.0	26.0
River Markanda U/s of JATTAN WALA NALLAH	pH	7.63	7.71	7.44	7.30
	DO	6.5	6.2	7.4	6.7
	BOD	1.6	1.2	1.2	1.6
	TC	25.0	23.0	22.0	28.0
JATTAN WALA NALLAH	pH	6.83	6.52	6.14	5.69
	DO	Int.	Int.	Int.	Int.
	BOD	260.0	250.0	200.0	205.0
	TC	46.0	44.0	60.0	78.0

Location	Parameter	April 2012	July 2012	October 2012	January 2013
River Markanda D/s JATTAN WALA NALLAH	**pH**	7.01	6.74	6.07	6.23
	DO	Int.	Int.	Int.	1.0
	BOD	80.0	75.0	15.0	80.0
	TC	38.0	35.0	50.0	50.0
D/s ACC Bar., Satluj River	pH	7.92	8.43	8.22	8.51
	DO	9.8	10	9.6	11.8
	BOD	0.5	0.2	0.3	0.3
	TC	1600	350	240	170
R. Suketi U/s of conf. of dragger outfall of SNR Balancing reservoir	pH	8.51	8.25	8.36	8.32
	DO	9.8	7.7	7.4	10.6
	BOD	0.4	0.4	0.2	0.2
	TC	110	130	79	63
River Suketi at Dadour bridge	pH	7.88	8.28	8.08	8.33
	DO	8	9	4.4	12.2
	BOD	0.4	0.3	0.2	0.3
	TC	920	350	280	220
U/s Mandi, Suketi Khudd	pH	8.12	7.89	8.24	8.65
	DO	8	8.1	6.8	10.6
	BOD	0.9	0.5	0.2	0.3
	TC	≥2400	920	350	280
River Beas, U/s of conf. of envisaged TRT of UHL-III	pH	8.24	8.15	8.49	8.28
	DO	8.8	9.3	8.2	12.6
	BOD	0.1	0.1	0.1	0.1
	TC	220	170	140	79
River Beas, D/s of conf. of envisaged TRT of UHL-III	pH	8.02	7.87	8.29	8.34
	DO	8.6	9.3	8.8	12.3
	BOD	0.1	0.1	0.1	0.1
	TC	350	240	180	94
R.Beas, D/s of conf.of TRT of Largi HEP power house.	pH	7.98	6.95	8.02	8.06
	DO	9.3	11.6	8.5	9
	BOD	0.1	0.1	0.1	0.1
	TC	130	140	110	94
River Beas, U/s Fermenta Biodil.	pH	7.71	6.65	8.33	7.84
	DO	9.3	10	8.6	9.2
	BOD	0.1	0.1	0.1	0.1
	TC	350	240	170	130
River Beas, D/s Fermenta Biodil.	pH	7.68	7.05	7.4	7.95
	DO	9.2	9.8	8.6	9.1
	BOD	0.1	0.1	0.1	0.2
	TC	540	540	220	170

Location	Parameter	April 2012	July 2012	October 2012	January 2013
R. Parvati U/s of Dam site of Parvati-II at Pulga	pH	8.18	6.84	7.52	8.05
	DO	7.9	9.2	9.2	9.9
	BOD	0.1	0.1	0.1	0.1
	TC	23	33	27	22
R. Parvati D/s of Dam site of Parvati-II at Pulga	pH	8.8	6.82	7.75	8.09
	DO	7.5	9	9	9.8
	BOD	0.1	0.1	0.1	0.1
	TC	33	46	34	27
R.Beas, U/s Waste processing facility, Manali.	pH	7.37	7.11	7.73	7.79
	DO	9.1	8.2	10	9.7
	BOD	0.1	0.1	0.1	0.2
	TC	350	180	94	70
R.Beas, D/s Waste processing facility, Manali.	pH	7.41	7.05	7.83	7.75
	DO	9.1	8.1	10	9.6
	BOD	0.2	0.1	0.1	0.2
	TC	920	350	130	110
R.Beas, D/s of confluence with Allaign Nalla.	pH	7.38	7.3	8.16	7.75
	DO	9.3	8.3	9.9	9.7
	BOD	0.1	0.1	0.1	0.1
	TC	540	240	140	130
Allaign Nalla before confluence with R.Beas	pH	7.57	7.27	8.02	8.13
	DO	9.3	8.6	10.1	9.8
	BOD	0.1	0.1	0.1	0.1
	TC	110	94	70	63
R.Beas, D/s confluence with Duhangan Nalla.	pH	7.95	6.97	7.81	7.84
	DO	9.4	8.3	10.1	9.8
	BOD	0.1	0.1	0.1	0.1
	TC	350	220	140	94
Duhangan Nalla before confluence with R.Beas	pH	7.57	7.1	8.03	8.21
	DO	9.3	8.5	9	9.8
	BOD	0.1	0.1	0.1	0.1
	TC	130	140	110	70
R. Beas, U/s of confluence of R.Parvati	pH	7.48	7.04	8.03	8.37
	DO	9.4	10.1	8.3	9.4
	BOD	0.5	0.2	0.1	0.1
	TC	1600	540	220	180
R .Beas, D/s of confluence of R.Parvati	pH	7.59	7.14	8.1	8.1
	DO	9.3	11.2	8.2	9.1
	BOD	0.6	0.1	0.1	0.2
	TC	920	540	170	130

Location	Parameter	April 2012	July 2012	October 2012	January 2013
R. Beas, U/s Waste processing facility Kullu.	pH	8.18	7.05	8.09	8.38
	DO	9.7	11	8.4	9
	BOD	0.2	0.1	0.1	0.2
	TC	920	540	140	110
R.Beas, D/s Waste processing facility Kullu.	pH	7.68	7.12	8.08	8.33
	DO	9.6	10	8.2	9.2
	BOD	0.3	0.1	0.1	0.2
	TC	1600	920	170	140
R. Sainj, U/s envisaged power house site of Parvati-II.	pH	8.32	7.18	8.18	8.21
	DO	8.2	9.1	8.1	9.2
	BOD	0.1	0.1	0.1	0.1
	TC	79	94	70	79
R. Sainj, D/s envisaged power house site of Parvati-II.	pH	8.02	7.76	8.16	8.29
	DO	7.1	8.8	8.4	9.1
	BOD	0.1	0.1	0.1	0.1
	TC	110	140	94	110
R. Sainj, U/s envisaged power house site of Parvati - III.	pH	7.79	7.08	7.84	8.24
	DO	7	8.7	7.9	8.7
	BOD	0.1	0.1	0.1	0.1
	TC	170	220	110	130
R. Sainj,, D/s envisaged power house site of Parvati - III.	pH	7.85	8	8.17	7.32
	DO	7	8.9	7.8	8.5
	BOD	0.1	0.1	0.1	0.2
	TC	280	240	140	94
River Satluj U/s Landfill Site Rampur	pH	8.14	8.29	8.38	8.32
	DO	8.2	8.7	8.4	9.7
	BOD	0.1	0.2	0.1	0.1
	TC	170	180	140	140
River Satluj D/s Landfill Site Rampur	pH	8.2	8.33	8.44	8.36
	DO	8.4	8.5	8.5	9.6
	BOD	0.1	0.2	0.1	0.2
	TC	280	350	170	130
R. Satluj D/s Duttnagar, D/s envisaged conf. of TRT of RHEP	pH	8.22	8.33	8.73	8.46
	DO	8.1	8.9	8.5	9.4
	BOD	0.2	0.2	0.1	0.2
	TC	350	240	130	170
River Satluj U/s TRT of Nathpa Jhakri Project	pH	8.22	8.34	8.58	8.62
	DO	8.2	8.4	8.1	9.7
	BOD	0.1	0.1	0.1	0.2
	TC	350	350	170	180

Location	Parameter	April 2012	July 2012	October 2012	January 2013
River Satluj D/s TRT of Nathpa Jhakri Project	pH	8.26	8.27	8.3	8.72
	DO	8.5	8.5	8.6	4
	BOD	0.1	0.1	0.1	0.2
	TC	280	240	130	170
River Satluj U/s confluence with Ganvi Khad	pH	8.2	8.29	8.37	8.3
	DO	8.2	8.8	8.6	9.7
	BOD	0.1	0.1	0.1	0.1
	TC	350	280	170	140
River Satluj D/s confluence with Ganvi Khad	pH	8.22	8.26	8.59	8.36
	DO	8	8.9	8.7	9.4
	BOD	0.1	0.1	0.1	0.1
	TC	220	180	140	170
Ganvi Khad before confluence to River Satluj	pH	8.28	8.25	8.38	8.43
	DO	8	9	8.9	9.3
	BOD	0.1	0.1	0.1	0.1
	TC	170	130	94	49
River Satluj U/s confluence with Sorang Khad	pH	8.12	8.27	8.79	8.25
	DO	8.3	8.7	8.8	9.8
	BOD	0.1	0.1	0.1	0.1
	TC	540	350	140	140
River Satluj D/s confluence with Sorang Khad	pH	8.22	8.22	8.59	8.37
	DO	8.3	8.7	8.9	9.7
	BOD	0.1	0.1	0.1	0.2
	TC	350	240	130	170
River Sorang before confluence to River Satluj	pH	8.3	8.37	8.33	8.3
	DO	8.1	8.5	8.5	9.3
	BOD	0.1	0.1	0.1	0.1
	TC	170	140	94	46
Karcham Dam	pH	8.29	8.36	8.6	8.05
	DO	7.8	8.8	8	9.8
	BOD	0.2	0.3	0.1	0.1
	TC	350	540	180	170
Baspa River Baspa Project	pH	8.2	8.04	8.57	8.17
	DO	7.9	8.5	8.5	9.4
	BOD	0.1	0.1	0.1	0.1
	TC	130	110	94	130
River Baspa D/s reservoir at Kuppa	pH	8.12	7.99	8.68	7.38
	DO	8	8.9	8.5	9.5
	BOD	0.2	0.2	0.1	0.1
	TC	280	140	170	63

Location	Parameter	April 2012	July 2012	October 2012	January 2013
River Tidong before conf. to River Satluj	pH	8.11	8.2	8.67	8.38
	DO	8.2	8.5	8.9	9.3
	BOD	0.1	0.1	0.1	0.1
	TC	140	240	70	43
River Satluj U/s conf. with River Tidong	pH	8.3	8.39	8.44	--
	DO	8.1	8.4	8.5	--
	BOD	0.1	0.1	0.1	--
	TC	280	180	140	--
River Satluj D/s conf. with River Tidong	pH	8.36	8.44	8.59	8.45
	DO	8.2	8.4	8.4	9.8
	BOD	0.1	0.1	0.1	0.1
	TC	220	170	110	79
ChhounchhKhad U/S Ind. Area Kandrori	**pH**	--	--	8.44	--
	DO	--	--	5.4	--
	BOD	--	--	0.5	--
	TC	--	--	--	--
ChhounchhKhad D/S Ind. Area Kandrori	**pH**	8.54	8.15	8.51	--
	DO	8	7.7	5.6	--
	BOD	16	0.4	0.6	--
	TC	--	--	--	--
U/S Pong Dam River Beas	**pH**	8.38	8.71	8.78	8.42
	DO	7.9	7	6.5	6.9
	BOD	0.6	0.7	0.7	0.6
	TC	--	--	--	--
D/S Swan Khad Ind. Area Sansarpur Terrace	**pH**	7.79	7.85	7.82	7.81
	DO	7.5	5.8	4.2	7.4
	BOD	0.4	1	1.2	0.8
	TC	--	--	--	--
Well at Jaisinghpur	**pH**	--	7.66	7.05	7.7
	DO	--	--	--	--
	BOD	--	0.3	1.8	1
	TC	--	--	--	--
Well at Kherra	**pH**	--	7.83	7.03	7.16
	DO	--	--	--	--
	BOD	--	0.3	0.9	1
	TC	--	--	--	--
Well at Sai	**pH**	--	6.28	6.78	7.18
	DO	--	--	--	--
	BOD	--	0.6	0.6	0.3
	TC	--	--	--	--

Location	Parameter	April 2012	July 2012	October 2012	January 2013
BhiralKhad U/S STP Palampur	pH	--	7.58	7.28	7.98
	DO	--	5.8	7.1	--
	BOD	--	0.3	1.2	1.5
	TC	--	--	--	--
BhiralKhad D/S STP Palampur	pH	--	7.56	7.65	7.72
	DO	--	6	7	--
	BOD	--	0.2	2.3	2
	TC	--	--	--	--
Well at Baijnath	pH	--	6.89	6.51	7.81
	DO	--	7.3	--	--
	BOD	--	0.5	0.6	0.4
	TC	--	--	--	--
Well at Paprola	pH	--	6.27	6.57	7.14
	DO	--	--	--	--
	BOD	--	0.3	1.3	0.5
	TC	--	--	--	--
Dal lake Naddi	pH	--	7.47	8.66	7.38
	DO	--	4.1	7.6	--
	BOD	--	0.7	3.9	12
	TC	--	--	--	--
CharanKhad U/S STP Dharamshala	pH	--	8.03	9.65	8.75
	DO	--	5.9	6.1	--
	BOD	--	0.1	1.2	0.8
	TC	--	--	--	--
CharanKhad D/S STP Dharamshala	pH	--	8.06	9.46	8.71
	DO	--	5.5	--	--
	BOD	--	0.4	1.8	1
	TC	--	--	--	--
Well at Rajiana	pH	--	7.28	7.7	8.12
	DO	--	--	--	--
	BOD	--	0.3	0.8	0.4
	TC	--	--	--	--
Well at Khouli	pH	--	7.17	7.64	7.81
	DO	--	--	--	--
	BOD	--	0.6	1	0.4
	TC	--	--	--	--
BanerKhad U/S STP TMC	pH	--	7.73	7.49	8.18
	DO	--	5.4	7	
	BOD	--	0.2	1.4	1.2
	TC	--	--	--	--

Location	Parameter	April 2012	July 2012	October 2012	January 2013
BanerKhad D/S STP TMC	pH	--	7.88	8.52	6.8
	DO	--	5.3	7	--
	BOD	--	0.6	1.2	2
	TC	--	--	--	--
Well at PuranaKangra	pH	--	7.15	7.26	7.16
	DO	--	--	--	--
	BOD	--	0.2	1.5	1.2
	TC	--	--	--	--
Luhadkhad U/S STP Jawalamukhi	pH	--	7.85	8.94	8.22
	DO	--	4.8	7.1	--
	BOD	--	5	2.4	1.4
	TC	--	--	--	--
Luhadkhad D/S STP Jawalamukhi	pH	--	8.07	8.63	8.38
	DO	--	5	7.3	--
	BOD	--	3	1.9	2.5
	TC	--	--	--	--
Well at Jawalamukhi	pH	--	--	7.58	7.78
	DO	--	--	--	--
	BOD	--	--	0.3	0.6
	TC	--	--	--	--
River Satluj U/S Bhakhra	pH	8.22	8.58	8.92	7.29
	DO	8.9	6.4	9	9.3
	BOD	0.3	0.4	1	0.4
	TC	--	--	--	--
River Swan U/S MSW Landfill site Santokhgarh	pH	7.39	8.06	8.6	8.32
	DO	6.1	6.2	9.9	8.1
	BOD	0.5	0.4	0.6	0.5
	TC	--	--	--	--
River Swan D/S MSW Landfill site Santokhgarh	pH	7.41	7.79	8.53	7.67
	DO	7.6	6.1	8.3	7.1
	BOD	0.6	1.5	1.6	15
	TC	--	--	--	--
Well at Ind. Area Gagret	pH	--	--	8.27	8.16
	DO	--	--	5.1	5.4
	BOD	--	--	1	0.4
	TC	--	--	--	--
Well at Amb	pH	--	--	8.24	7.88
	DO	--	--	7.2	5.2
	BOD	--	--	0.9	0.6
	TC	--	--	--	--

Location	Parameter	April 2012	July 2012	October 2012	January 2013
Swan River U/S Ind Area Gagret	pH	--	--	8.76	8.14
	DO	--	--	8.3	7.5
	BOD	--	--	0.9	0.5
	TC	--	--	--	--
Swan River D/S Ind Area Gagret	pH	--	--	8.63	8.26
	DO	--	--	9.1	6.8
	BOD	--	--	1	0.3
	TC	--	--	--	--
U/S Swan Khad Ind. Area Sansarpur Terrace	pH	--	7.87	--	7.88
	DO	--	6	--	7.7
	BOD	--	1	--	0.4
	TC	--	--	--	--
River Ravi U/S MC Land Fill Site	pH	7.92	8.12	--	8.22
	DO	7.9	--	--	9.4
	BOD	0.4	0.3	--	0.6
	TC	--	--	--	--
River Ravi D/S MC Land Fill Site	pH	7.88	8.01	--	8.59
	DO	7.8	--	--	9.2
	BOD	0.4	0.4	--	0.7
	TC	--	--	--	--
River Ravi before conf. with Baira River	pH	--	8.01	--	7.84
	DO	--	--	--	9.6
	BOD	--	0.7	--	0.6
	TC	--	--	--	--
River Ravi D/S TRT Power House Chamera HEP-I	pH	8.18	8.35	--	8.57
	DO	9.6	--	--	9.2
	BOD	0.4	0.4	--	0.5
	TC	--	--	--	--
River Ravi D/S Dam of Chamera HEP-I	pH	8.37	8.27	--	8.51
	DO	8.6	--	--	9.6
	BOD	0.9	0.5	--	0.4
	TC	--	--	--	--
R.Ravi after conf. with Baira River	pH	8.09	7.92	--	7.96
	DO	9.8	--	--	10
	BOD	0.5	0.3	--	0.3
	TC	--	--	--	--
River Ravi before conf. with Baira River	pH	--	8.01	--	8.19
	DO	--	--	--	9.8
	BOD	--	0.7	--	0.2
	TC	--	--	--	--

Location	Parameter	April 2012	July 2012	October 2012	January 2013
Siul River U/s Dam on siul for BairaSiul	pH	8.03	8.24	--	8.51
	DO	10.1	--	--	9.2
	BOD	0.6	1.5	--	0.8
	TC	--	--	--	--
Siul River D/s Dam on siul for BairaSiul	pH	8.26	8.26	--	8.39
	DO	9.8	--	--	9
	BOD	0.3	0.5	--	0.8
	TC	--	--	--	--
Baira River before conf. of TRT Power House	pH	8.27	8.39	--	8.33
	DO	9.1	--	--	9.6
	BOD	0.4	1	--	1
	TC	--	--	--	--
Baira River after conf. of TRT Power House	pH	8.1	8.34	--	8.42
	DO	8.9	--	--	9.5
	BOD	0.2	0.6	--	0.8
	TC	--	--	--	--
Baled Khad U/S Dam HEP	pH	8.15	8.32	--	8.49
	DO	9.9		--	8.9
	BOD	0.4	0.4	--	0.5
	TC	--	--	--	--
Baled Khad D/S Dam HEP	pH	8.31	8.35	--	8.42
	DO	9.8	--	--	9
	BOD	0.9	0.4	--	0.2
	TC	--	--	--	--
Baira River U/S Dam on Baira of BSHEP	pH	7.87	8.47	--	8.64
	DO	9.7	--	--	9.6
	BOD	0.6	0.4	--	0.3
	TC	--	--	--	--
Baira River D/S Dam on Baira of BSHEP	pH	7.96	8.14	--	8.71
	DO	9	12	--	9.7
	BOD	0.7	0.5	--	0.3
	TC	--	--	--	--
D/S Chamera Dam-II River Ravi	pH	8.42	8.39	--	8.58
	DO	8.6	--	--	10
	BOD	0.8	0.4	--	0.2
	TC	--	--	--	--
River Ravi U/S Chamba-II	pH	8.07	8.09	--	8.54
	DO	8.3	--	--	9
	BOD	0.5	0.3	--	0.2
	TC	--	--	--	--

Location	Parameter	April 2012	July 2012	October 2012	January 2013
River Ravi U/s of Conf. of Budhil HEP	pH	8.14	8.54	--	8.72
	DO	9.9	--	--	9
	BOD	0.7	0.3	--	0.3
	TC	--	--	--	--
River Ravi D/S TRT of Budhil HEP	pH	8.18	8.62	--	8.64
	DO	9.8	--	--	9
	BOD	0.4	0.5	--	0.2
	TC	--	--	--	--
BudhilNallah U/S Budhil HEP	pH	8.25	8.7	--	8.26
	DO	10.2	--	--	9
	BOD	0.6	0.3	--	5.5
	TC	--	--	--	--
BudhilNallah D/S Budhil HEP	pH	8.29	8.78	--	8.12
	DO	10.1	--	--	9.5
	BOD	0.7	0.6	--	12
	TC	--	--	--	--

RECOMMENDATIONS

(1) Frequent sampling be done if river water is used for drinking purpose and water should be properly treated and disinfected.

(2) All towns existing on the bank of rivers be provided the planned sewage treatment work and should not be allowed to discharge the urban waste without treatment into or on the bank of river.

(3) Number of Hotels & Tourist Resorts are coming on the bank of rivers must have proper sewage treatment plants.

(3) All industrial units should not be allowed to discharge untreated effluent into rivers/khads/ nallahs.

(4) Urban waste affects water quality near towns, hence water resources are required to be treated and disinfected before it is used for drinking purpose.

(5) Regular monitoring and sampling of effluent discharge of industries located on the catchment of Jattawala Nala, Sandholi Nala, Housing Board Nala, Masulkhana Nala, Sukhna Nala is recommended.

SAMPLES ANALYSIS IN THE STATE BOARD LABORATORIES:

The State board has 4 laboratories for carrying out analysis of water, waste water, solid waste, air and bio-monitoring samples collected by the Board's officers. One small laboratory for analysis of only SO2, NOx & RSPM in ambient air is at Shimla. The details of samples analyzed by the laboratories during the year 2012-13 is as follows

S. No.	Type of Samples		Number of Samples Analyzed in State Boards Laboratories			
			Parwanoo	Paonta Sahib	Jassur	Sunder Nagar
1	Water & Waste Water	Trade Effluent	1111	663	337	568
		RM/GW/ Study etc. water samples	321	198	339	502/42/50
2	Soil/Solid Waste		17	13	8	8
3	Air Monitoring		497	102	131	439
4	Commercial		16	54	84	115
5	Complaint		--	Nil	--	4
6	Bio-Monitoring		Nil	36	--	--
7	Noise Monitoring		Nil	2	--	93
7	Ambient Air Monitoring under NAMP project		SPM - 815 RSPM- 815 SO_2 – 1591 NOx- 1591	SPM - 1692 RSPM -1692 SO_2 -3311 NOx - 3311	SPM - 831 RSPM- 831 SO_2 -1628 NOx- 1628	SPM - 415 RSPM-415 SO2 – 802 NOx- 802

S. No.	Type of Samples	Number of Samples Analyzed in State Boards NAMP Laboratories			
		Shimla	Baddi	Manali	Una
1	Ambient Air Monitoring under NAMP project	SPM - 359 RSPM- 359 SO_2 – 703 NOx-703	SPM - 1159 RSPM- 1159 SO_2 – 2277 NOx-2277	SPM - 578 RSPM- 578 SO_2 – 1132 NOx-1132	SPM - 613 RSPM-613

VEHICULAR MONITORING IN HIMACHAL PRADESH:

The State Board is carrying out vehicular monitoring camps in the State in collaboration with local administration. Therefore, in order to implement the provisions of law, effective and efficient measures are required for vehicular pollution control in the State.

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CHAPTER-5

POLLUTION CONTROL, SURVEILLANCE & MONITORING

The objectives and functions of the Board are defined in under section 17 of the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) Act, 1981. In order to achieve the larger objectives of the aforesaid acts and yet maintain the pace of sustainable growth, the State Board ensures that development takes place in harmony with the environment. The State Board has a field network of Regional Offices to exercise regular checks on the sources of pollution and regulation of the conditions of consent granted to the industries with the prime objective of controlling pollution at source.

5.1 CONSENT MECHANISM:

According to the provisions of the aforesaid Acts, Consent of the State Board is required by the development projects, the industrial units, tourism projects, Hydel projects, mining units and sewage treatment systems.

The consent mechanism mandates the above mentioned development projects to obtain prior consent Under provisions of sections 24 and/or 21 of the Water (Prevention & Control of Pollution) Act, 1974 and/or Air (Prevention & Control of Pollution) Act, 1981 respectively, as may be applicable to

(a) Establish or take any steps to establish any industry, operation or process, or any treatment and disposal system or an extension or addition thereto, which is likely to discharge sewage or trade effluent into a stream or well or sewer or on land (such discharge being hereafter in this section referred to as discharge of sewage); or
(b) Bring into use any new or altered outlets for the discharge of sewage; or
(c) Begin to make any new discharge of sewage;
(d) Establish or operate any industrial plant in an air pollution control area

The different stages of the consent mechanism concurrent to the implementation of the projects are briefly discussed below:

Consent to Establish is granted to the industry after evaluation of the potential environmental pollution and after the examination of the engineering design and details of the systems proposed for controlling the pollution. The conditions consistent to pollution control requirements are incorporated in Consent to Establish. These conditions are reviewed in terms of their compliance and 'Consent to Establish' is converted to 'Consent to Operate' after ensuring that the engineering systems for control of water and air pollution are fully implemented. The 'Consent to Operate' is usually valid for one year which is also granted subject to the condition that the control systems shall be so operated and maintained as to ensure compliance to the standards prescribed for emissions and/or effluents as the case may be. Consent to operate initially granted for one year and performance

of the pollution control systems is regularly monitored. Actions are taken against the non-complying cases by issuing directions for suspension of production and disconnection of power supply till the unit improves the functioning of pollution control systems to comply norms. Depending upon the performance of the pollution control systems, further renewal of consent is granted.

The achievements made during 2012-13 in discharge of regulatory functions under the provisions of the Water (Prevention and Control of Pollution) Act, 1974, and Air (Prevention and Control of Pollution) Act, 1981 are given hereunder:

Table: 5.1
CONSENT MANAGEMENT AT A GLANCE
(2012-13)

S. NO.	PARTICULARS	GRANTED DURING THE YEAR 2012-13		REFUSED DURING THE YEAR 2012-13		CUMULATIVE AS ON 31.03.13	
		At HQ	At ROS	At HQ	At ROS		
1.	Consent to Establish (a) Water Act, 1974 (b) Air Act, 1981 (c) Both Acts	 3 0 130	 54 22 182	 - 1 8	 1 - 4	 2014 878 6875	
2.	Consent to Operate (a) Water Act, 1974 (b) Air Act, 1981 (c) Both Acts	 4 3 85	 44 19 109	 - - 2	 1 - 3	 1918 768 6575	
3.	No objections to non-polluting / exempted categories of industries	0	35	-	-	1120	
4.	Renewal of Consent (a) Water Act, 1974 (b) Air Act, 1981 (c) Both Acts	 31 2 398	 127 38 342	 4 - 22	 - - 4	 NA NA	 NA NA
5.	Consent Fees (in Rs.)	126442360.00*					
6.	Samples of industrial wastes, solid wastes, and stack/ dust emissions, ground and surface water other than those under MINARS and NAAQM collected during the year.	No. of Samples Collected					
		WATER/ EFFLUENTS	AIR / EMMISIONS	SOLID WASTES	VEHICLES CHECKED		
		2139	1823	37	920		

Table: 5.1 continued……

7.	Surveillance and Inspections under Water & Air Acts & Hazardous Wastes (Management & Handling) Rules, 1998/2003.	Number of Industries	Actual Inspections done
		9206	12050
8.	Public complaints/ representations	Received	Attended
		251	217
9.	Notices & Directions:	Issued	Implemented/Complied
	(i) Number of Notices issued. (ii) Number of directions issued U/S 33-A and 31 A of Water & Air Acts respectively.	189 64	189 64
10.	Number of Industries which filed Environment Audit Reports	842	

***Provisional subject to reconciliation after Audit.**

5.2 SURVEILLANCE & MONITORING:

The evaluation of operational and qualitative efficiency of the pollution control devices installed in different industries largely depends on regular surveillance and monitoring of the pollution control equipment. State Board has also taken initiative to start online real-time monitoring in the Cement Plants.

5.2.1 MONITORING OF INDUSTRIAL POLLUTION:

This activity is presently being conducted by a network of 10 Regional Offices of the Board headed by Environmental Engineers and Assistant Environmental Engineers. During the year 2012-13, the surveillance and monitoring was carried out and the salient achievements in the context are presented below:-

(i) Number of Water Pollution Control Systems (Cumulative): 2976

(ii) Number of Air Pollution Control System (Cumulative): 2776

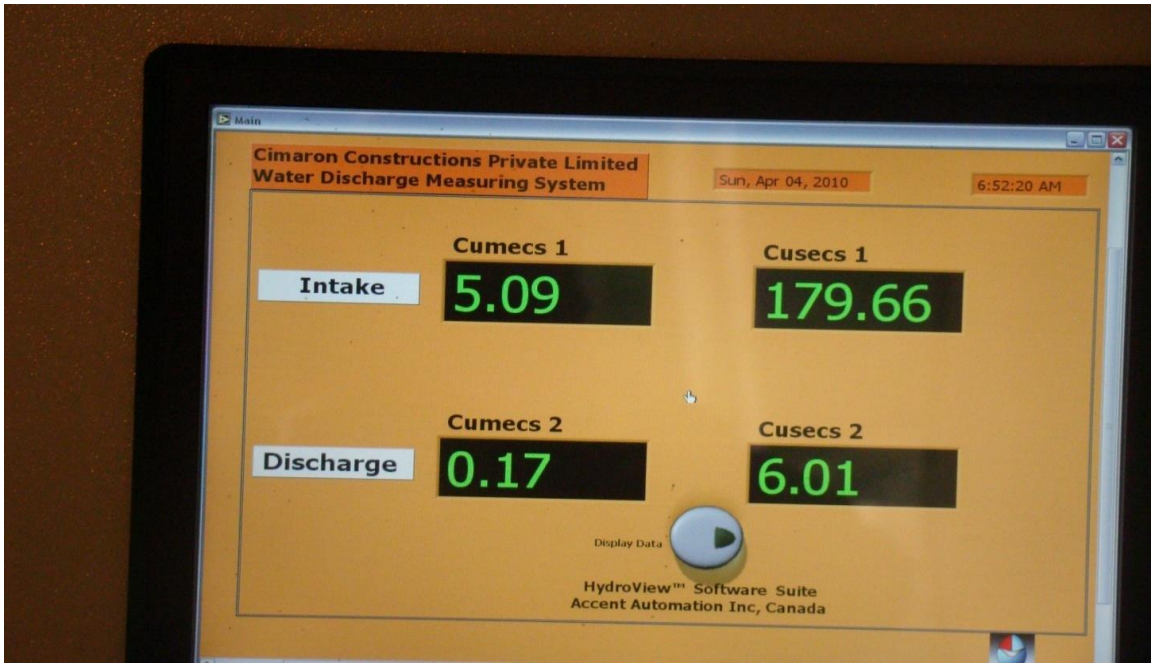
(iii) Number of Inspections conducted in 2012-13: 12050

(iv) Number of Samples of Water, Waste Water and emission including ambient air & noise in 2102-13 3999

(v) Number of vehicles checked: 920

5.2.2. MONITORING OF HYDEL PROJECTS:

State Board has continued the photo monitoring of the Hydel Projects for reviewing and making required interventions in the management of muck. State Board has also initiated the process to get the Real time on-line Continuous Flow Measurement & Data logging device installed for flow measurement to monitor the mandatory 15 % release of water the operational hydel projects. Some projects have already installed the device and the others are being directed through persuasion by the State Board.



15 % FLOW MEASUREMENT DEVICE INDICATING READINGS

MUCK USED FOR SOCIAL UTILITY

5.3 POLLUTION PREVENTION & CONTROL:

Consequent to regular surveillance & monitoring activities, constant pressure is maintained on the polluting industries for operation and maintenance of the

pollution control equipment. During the year 110 new pollution control systems were got installed in the new industries to whom consents to operate were granted during the year. In addition to the three stages conventional treatment comprising of physico-chemical and biological treatment, State Board has also taken initiative to introduce tertiary level of treatment in the industrial units particularly those in Baddi-Barotiwala area.

Improvements in the already existing control systems in respect of 111 industries were also got incorporated including those, which were ordered disconnection of power due to non-performance of the pollution control systems. In addition smooth functioning of the pollution control systems installed in the existing industries was ensured by exercising regular checks by the Regional Offices.

TERTIARY TREATMENT PLANT

AIR POLLUTION CONTROL DEVICE

5.4 ENVIRONMENTAL IMPACT ASSESSMENT:

Although the potential environmental impacts due to any proposed developmental activity are evaluated and the environmental management plans are got formulated and implemented while processing the cases for consent to establish/operate or renewal thereof under the provisions of the Water Act, 1974 and /or Air Act, 1986, the Government of India has specifically made Environmental Impact Assessment (EIA) and Environmental Management Plans (EMP) mandatory in respect of categories of projects specified in the Schedule of EIA Notification, 2006 issued by the Ministry of Environment and Forests, Government of India vide No.SO-1533(E) dated 14-09-2006 . Role of the State Board under this notification is to conduct the Public Hearing as part of the public consultation mechanism prescribed by the Government of India.

During the year 2012-13, the State Board granted 391 Consent to establish and 264 consent to operate including expansion under Water and Air Acts to the new units after due examination of environmental impacts and management plans under Water and Air Acts.

5.5 ENVIRONMENTAL MONITORING OF HYDEL PROJECTS:

In view of the amount of work involved in the Environmental Monitoring of Hydroelectric Projects, the State Board has been finding it increasingly difficult to conduct the proper surveillance and monitoring of Hydroelectric Projects from its own resources in terms of manpower and mobility. At the same time in view of the public concerns and the requirement of mandatory provisions of the Water Act, 1974, Air Act, 1981 and Environmental Clearance; it is essential that the periodic monitoring is conducted and regular checks are exercised on the activities of Hydel Projects which have adverse impacts from Water & Air besides muck/debris management. In this regard the State Board at the time of evaluating the EIA/EMP of the proposed projects ensures that costs in respect of monitoring of Environmental Management Plan with reference to checking of muck management, restoration plan, water and air quality monitoring are in-built in the EIA/EMP.

At present Fourteen projects have been approved namely: 1. Parbati (Stage-II) Hydroelectric Project, Distt. Kullu; 2. Kol Dam Hydroelectric Project, Distt. Bilaspur; 3. Chamera (Stage-III) Hydroelectric Project, Distt. Chambal; 4. Karcham Wangtu Hydroelectric Project, Distt. Kinnaur; 5 Rampur Hydel Project, Distt. Shimla/Kullu; 6 M/s Budhil Hydrolelctric Project, Chamba; 7. Sawda-Kuddu Hydroelectric Project, Distt. Shimla, 8. M/s Sorang Hydrelectric Project, Distt. Kinnaur; 9. M/s Tidong Hydroelectric Project, Kinnaur 10. M/s Uhl Stage-III Hydroelectric Project, Distt. Mandi. 11. Tangnu Romai-I HEP, Rohroo, Distt. Shimla 12. Sainj HEP, Distt. Kullu and 13.Kut HEP, Rampur, Distt. Shimla.14.Baragaon HEP, Distt. Kullu.

5.6 PUBLIC COMPLAINTS / REPRESENTATIONS:

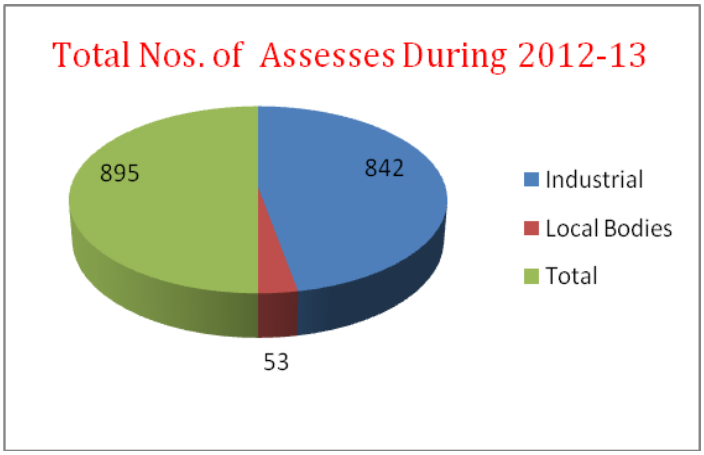
The Regional Offices of the State Board are engaged not only in the activities of surveillance and monitoring of the industries, but also to maintain a constant vigil on the environmental quality and impact thereof on the people. The Regional Offices of the State Board not only keep liaison with the people but also take prompt action for mitigation of the public grievances. During the year 2012-13, the State Board took remedial action on 217 public complaints/representations that were received during the year.

5.7 MANAGEMENT OF WATER CESS:

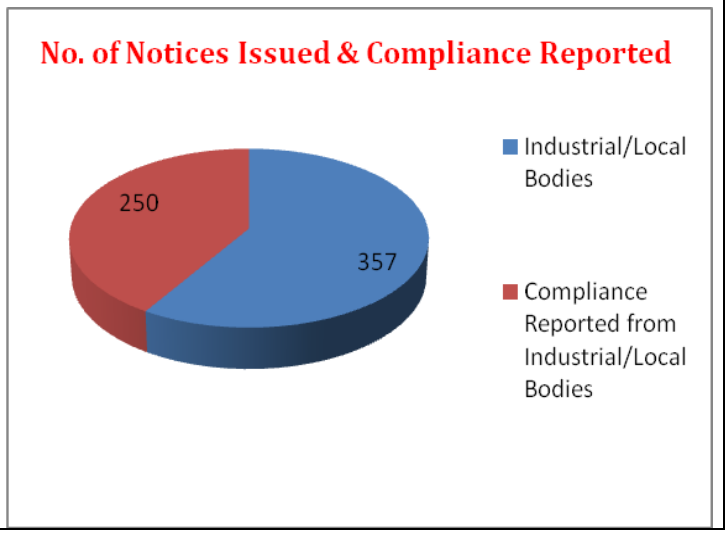
The Water (Prevention & Control of Pollution) Cess Act, 1977 provides for levy and collection of Cess from the specified categories of projects based upon the water consumption. Although in Himachal Pradesh, the number of water intensive industries is far too less in comparison to the industrially developed states, the State Board has been enforcing this Act since its enactment by the Union Government. The main achievements of the Board with respect to this legislation in 2012-13 are as under:

TABLE-5.2

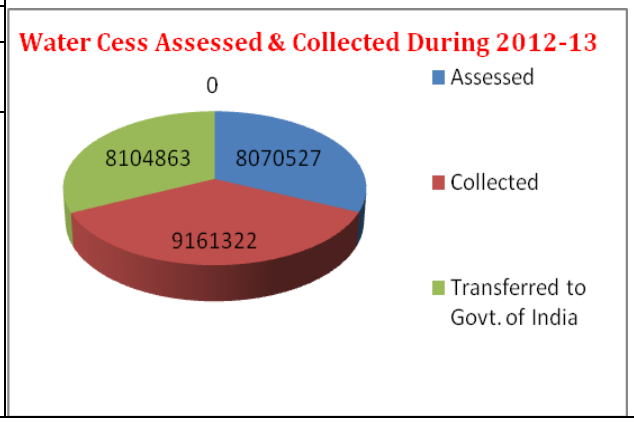
Number of Assesses (Cumulative)		
1	Industrial	842
2	Local Bodies	53
3	Total	895



No. of Notices issued Under Water Cess Act 1977 During 2012-13		
1	Industrial/Local Bodies	357
2	Compliance reported to Industrial/Local Bodies	250



Amount of Cess Assessed & Collected During 2012-13 (In Rs.)			
1	Assessed	88,70,527/-	
2	Collected	91,61,322/-*	
3	Transferred to Govt. of India	81,04,863/-	
4	Reimbursement Received from Govt. of India	Nil	



** Provisional subject to reconciliation after Audit.*

5.8 MANAGEMENT OF SOLID WASTE UNDER THE ENVIRONMENT (PROTECTION) ACT, 1986:

5.8.1 BIO-MEDICAL WASTE (MANGEMENT & HANDLING) RULES, 1998:

Till 31st March 2012, the State Board has inventorised and covered 567 Health Care facilities under Biomedical Waste (Management & Handling) 1998 Rules. During 2012-13, 89 health care facilities have been granted authorization/renewal of authorization for the block year 2011-14.

5.8.2 HAZARDOUS WASTE (MANGEMENT, HANDLING & TRANSBOUNDARY MOVEMENT) RULES, 2008.

Till the year 31st March, 2013, the Board has identified about 2610 units generating hazardous waste. Out of which 2084 are operational as on 31st March, 2013 and responsible for generating hazardous waste under Hazardous Waste (Management, Handling & Transboundary Movement) Rules, 2008. All such are required to obtain authorization under the said rules. The Board has granted authorization to 2087 units. The Common Treatment, Storage, Disposal Facility (TSDF) at Village Majra, Tehsil Nalagarh, District Solan is operational since June, 2008 and is being used for scientific disposal of landfillable hazardous waste generated by the industries. A total of 58539 MT of landfillable hazardous waste has been disposed off in TSDF by various landfillable hazardous waste generating industries in the State till date and 11138 MT of landfillable hazardous waste has been disposed off in TSDF during the year 2012-13.

5.8.3 IMPLEMENTATION STATUS OF MUNICIPAL SOLID WASTE (MANAGEMENT & HANDLING) RULES, 2000

As required under the provisions of Municipal Solid Waste (Management & Handling) Rules, 2000, the State Board performed all its functions and ensured compliance of all the provisions entrusted to it under the said Rules. The Annual

Report was prepared and forwarded to Central Pollution Control Board within the stipulated time period. As per the Annual Report, the implementation status of Municipal Solid Waste (Management & Handling) Rules was not found satisfactory. The compliance w.r.t collection / segregation / storage / transportation by all the 56 numbers of Municipal Authorities in the State of Himachal Pradesh was found partial. Although ten number of municipal authorities (covering 12 Municipal Authorities) namely Shimla, Solan, Nahan, Kullu/Bhunter, Manali, Una, Kangra,/Nagrota, Hamirpur, Dharamshala and Chamba had installed Waste Processing Facilities but the performance of these treatment facilities was also not found satisfactory.

The State Board had apprised concerned higher authorities like Pr. Secretary (Urban Development), Director, Urban Development, and Deputy Commissioners about the status of implementation of Municipal Solid Waste (Management & Handling) Rules, 2000 for their intervention. Besides this, the State Board had regularly been pursuing Urban Local Bodies to comply with the provisions of these Rules.

TABLE-5.3

S. No	Municipal Authority	Total No.	Applications received during the Period (2012-13)			
			Applications received for		Authorizations Status for	
			Waste Processing Facility	Waste Disposal Facility	Setting up/operation of Waste Processing Facility	Setting up/operation of Waste Disposal Facility
1.	Municipal corporation	1	1	1	_	_
2.	Municipal Council	25	6	5	01 MC Naina Devi,	3 Nahan, Kullu, Mandi
3.	Nagar Panchayat	23	3	6	04 NP Banjar, Bhunter, NP Talai, NP Sarkaghat	_
4.	Cantonment Board	7	0	01	01 C.B. Jatog	_
		56	10	13	6	3

During the period 2012-13, the State Board received 10 numbers of applications for setting up and operation of waste processing facility and 13 numbers of applications for setting up and operation of waste disposal facility. The State Board processed all the applications received from various municipal authorities and granted 09 numbers of Authorizations for setting up and operation of waste processing facility and disposal facility. The Authorization status for the year 2012-13 is detailed in Table-5.3.

The remaining municipal authorities could not obtain authorization due to non submission of complete information.

5.8.3.1 Implementation of the provisions of the Water (Prevention and Control of Pollution) Act, 1974

Water (Prevention & Control of Pollution) Act, 1974 provides for prevention & control of water pollution and maintaining or restoring wholesomeness of water thus requiring provision of pollution control measures i.e. sewerage schemes and sewage treatment plants so as to check the entry of raw sewage in to recipient water bodies. As per Section 25/26 of the aforesaid Act, it is mandatory to obtain prior Consent of the Board to discharge Sewage/trade effluent.

Provision of sewage management system is the fundamental responsibility Urban Development Department and I & PH Deptt. The State Board has only regulatory function with regard to monitoring the performance of operational STPs as well as sewage management systems. The concerned departments are required to obtain consent to establish/operate and renewal thereof prior to establishing/operating STPs/ Sewage management systems**.**

The State Board processed all the of cases received for Consent to Establish/ Consent to Operate/Renewal of Sewage Treatment Plants owned by I&PH Department and granted consents to 2 number of STPs i.e STP Naina Devi and STP Mehtpur. Besides this, the consent under the provisions of Water Act had also been granted to MC Kullu, NP Bhunter and NP Talai.

In order to ensure speedy installation of Sewage Treatment Facilities and Sewerage Schemes and implementation of the provisions of Water (Prevention & Control of Pollution) the State Board had constantly been apprising Principal Secretary (I & PH), Engineer-in-Chief / Chief Engineers, I&PH department about the status of compliance of provisions of Water Act for their intervention and necessary directions. The detail of Sewage Treatment Plants in H.P. is detailed in Table-II:

Total No. of STPs		68 (One is under HPPWD)
1.	**Operational**	38
	With Consent	18
	Without Consent	20
2.	**Under Construction**	30

TABLE-5.4

Names of STPs in operation		**Names of STPs (Proposed or under construction)**
With Consent	**Without Consent**	
Joginder Nagar -2015	Sundernagar	Bilaspur,
Zone-C, Una-2015	Arki	Sarkaghat
Manali-2016	Palampur	Nagrota

Lanka Bekar, Kullu-2015	Rampur (Khopri)	Jard, Bhunter
Rohroo Stage –I-2016	Rampur (Chhuabha)	Hati-Than, Bhunter
Zone-I , Hamirpur-2015	Reckong-Peo	Zone-I, Keylong
Zone- II, Hamirpur-2015	Badah (Kullu)	Zone-II,Keylong
Jubbal -2016	Zone- III, Hamirpur	Zone-III, Keylong
Mela ground, Bhunter 2016	Shitla Bridge, Chamba	Zone-B, Solan
Sharabhai, Bhunter-2016	Ghumarwin	Zone-I, Kangra
Sanjauli-2016	Mehatpur D	Zone II, Kangra
Lalpani-2016	Barga, Chamba	Zone III, Kangra
North Disposal-2016	BhootNath, Kullu	Dehra
Dhalli-2016	Tanda Medical College	
Snowden-2016	Dharamsala	Zone-II, Paonta
Summer Hill-2016	Jawalamukhi	Zone-III, Paonta
Khaliar-2016	Bhagot Chamba	Suni
Ragunat ka Padhar-2016	Naina Devi	Narkanda
	STP NIIT Hamirpur	Nurpur
	Zone-I, Paonta	Zone-I , Sujanpur
		Zone-II Sujanpur
		Nadaun
		Zone-D,Una
		Zone-I,Santokhgarh
		Zone-II, Santokhgarh
		Zone- A, Una
		Zone- B, Una
		Zone-I, Kotkhai
		Zone-II, Kotkhai
		Bhagsunag
		Mehatpur ABC
18	**20**	**30**

5.8.3.2 Monitoring Status of Sewage Treatment Plants during 2012-13

127 number of water samples were collected from final outlets of Sewage Treatment Plants during the year 2012-13. Notices have been issued to I& PH Department to bring the effluent quality of the concerned STPs within the prescribed limits and to comply with all the provisions of Water (Prevention & Control of Pollution) Act, 1974. The district wise analysis results are detailed below in Table-5.5:

TABLE-5.5

Monitoring Status 2012-13									
S. No.	District	Name of the STP	Quarter and date of collection	Parameters					
				Ph 5.5-9.0	BOD 30 mg/I	COD 250 mg/I	TSS 100 mg/l	TDS 2100 mg/I	Oil & grease 10mg/ I
1	Kullu	STP Manali	Ist Quarter April,2012	7.85	2.8		14.0		Nil
			Ist Quarter May,2012	6.47	6.0		18.0		0.2
			June,2012	6.97	16.0	140.0	74.0		0.4
			July,2012	7.20	12.0	136.0	14.0		Nil
			August,2012	6.71	1.0	24.0	35.0		Nil
			September,2012	7.79	7.2	40.0	31.0		Nil
			3rd Quarter,Oct,2012	7.28	6.5	28.0	7.0		Nil
			3rd Quarter,Nov, 2012	7.28	6.0	36.0	8.0		Nil
			31.12.12	7.42	2.4	24.0	17.0		Nil
			4th Quarter 7.01.2013	7.63	8.8	72.0	21.0		Nil
			23.03.2013	7.63	10.0	68.0	67.0		Nil
		STP Bhoot Nath	Ist Quarter May,2012	7.46	3.6		26.0		Nil
			Ist,Quarter,June,2012	7.69	8.0	104.0	37.0		0.2
			3rd Quarter	7.22	23.0	112.0	52.0		Nil
			4th Quarter	7.74	24.0	128.0	59.0		1.0
		STP Badah (Kullu)	Ist Quarter May,2012	7.03	10.0		32.0		0.4
			Ist,Quarter,June,2012	7.78	12.0	100.0	64.0		Nil
			3rd Quarter,Oct,2012	7.76	72.0	160.0	60.0		Nil
			4th Quarter	7.09	110.	360.	72.0		2.8
		STP Lanka Baker	Ist,Quarter,June,2012	7.23	16.0	184.0	43.0		0.2
			3rd Quarter,Oct,2012	7.50	28.0	128.0	32.0		Nil
			4th Quarter	7.83	36.0	244.0	67.0		1.8
		STP Mela Ground	Ist Quarter, June,2012	6.83	2.0	36.0	28.0		Nil
			3rd Quarter,Oct,2012	7.87	26.0	192.0		92.0	1.4
			4th quarter 10.01.2013	7.60	26.0	152.0	59.0		0.8
		STP Sharabai	Ist Quarter May,2012	7.65	100.0		164.0		2.0
			Ist, Quarter,June, 2012	7.30	52.0	368.0	80.0		0.8
			3rd Quarter,Oct,2012	8.12	33.0	228.0	90.0		0.4
			4th Quaerter 7.01.2013	7.73	80.0	244.0	67.0		0.8

2	Mandi	STP Khaliar	Ist Quarter, June,2012	8.01	36.0	188.0	138.0	730.0	1.2
			3rd Quarter Dec,2013	7.85	24.0	120.0	65.0	251.0	0.40
			4th quarter 30.03.2013	8.16	8	60	22	223	Nil
		STP Raghu Nath Ka Padhar	Ist Quarter, June,2012	7.43	24.0	128.0	53.0	670.0	0.8
			2nd Quarter,Sep,2012	7.62	12.0	60.0	64.0	372.0	nil
			3rd Quarter Dec,2012	7.36	9.0	96.0	52.0	262.0	0.4
			18.03.20123	8.27	24.0	148	56	449	0.8
		STP Sunder Nagar	2nd Quarter,August,2012	7.46	5.6	60.0	94.0	394.0	Nil
			3rd Quarter Dec,2012	7.63	4.0	116.0	42.0	326.0	0.8
			18.03.2013	7.66	65	248	142	383	0.8
		Joginder nagar	Ist Quarter, June, 2012	6.95	10.0	48.0	53.0	266.0	0.4
			2nd Quarter,July,2012	7.68	3.0	24.0	29.0	166.0	Nil
			3rd Quarter Dec,2012	7.99	12.0	72.0	58.0	170.0	0.4
			30.03.2013 4th quarter	7.52	14.5	60.0	18.0	182	Nil
3	Bilaspur	STP Ghuamarwin	Ist Quarter, May, 2012	8.19	8.0	36.0	40.0	380.0	0.6
			2nd Quarter,July,2012	7.45	16.0	136.0	82.0	522.0	0.2
			2nd Quarter,July,2012	7.81	24.0	104.0	128.0	384.0	7.81
		STP Naina Devi Ji	3rd Quarter Nov,2012	7.79	22.0	216.0	95.0	512.0	0.8
4	Shimla	STP Sanjauli Malyana	Ist, Quarter, June,2012	7.45	46.0	196.0	86.0	482.0	1.96
			2nd Quarter,Sep,2012	9.15	15.0	80.0	25.0	412.0	2.88
			3rd Q Nov.	7.25	250.0	616.0	630.0	723.0	3.0
			24.02.2013	6.79	460.0	1000	615.0	570.0	12.4
			07.03.2013	7.58	22.0	180.0	47.0	442.0	2.20
		Dhalli	Ist,Quarter,15.6.2012 June,2012	7.19	28.0	104.0	43.0	311.0	1.88
			Ist,Quarter,19.6.2012	7.28	20.0	96.0	30.0	316.0	nil
			Ist,Quarter,19.6.2012	7.47	18.0	68.0	52.0	334.0	Nil
			Sep,2012 IInd Q	7.16	4.0	10.0	13.0	263.0	Nil

			03.Jan 13 IV Q	7.38	2.0	20.0	17.0	353.0	Nil
		STP North Disposal, Shimla	Ist,Quarter,June,2012	7.05	5.0	52.0	42.0	211.0	0.24
			2nd Q Sep,2012	7.58	3.0	24.0	11.0	191.0	Nil
			3rd Q Nov.2012	7.36	59.0	112.0	33.0	425.0	1.12
			3.01.2013	7.81	6.0	56.0	1.0	133.0	2.12
		STP Snowdon	Ist, Quarter, June,2012	7.33	1.4	8.0	4.0	216.0	Nil
			2nd Quarter,Sep, 2012	7.62	6.0	44.0	98.0	4.0	1.04
			3rd Q Nov.	7.44	4.0	28.0	11.0	310.0	Nil
			7.03.2013	7.02	3.0	28.0	1.0	211.0	Nil
		STP Lalpani	Ist,Quarter,June,2012	7.18	18.0	80.0	73.0	265.0	0.48
			Sep,2012	7.65	2.0	16.0	2.0	180.0	Nil
			3rd Q Nov.2012	7.41	5.5	36.0	15.0	314.0	Nil
			3.01.2013	7.36	5.0	32.0	11.0	313.0	Nil
		STP Summer Hill	Ist,Quarter, June,2012	7.17	42.0	148.0	66.0	420.0	2.0
			Sep,2012	7.14	6.0	44.0	17.0	270.0	Nil
			3rd Q Nov.	7.36	5.0	32.0	17.0	380.0	Nil
			3.01.2013	7.83	1.5	12.0	2.0	136.0	Nil
		STP Rohroo	Ist Quarter May,2012	6.68	135.0	392.0	192.0	280.0	3.52
			2nd Quarter,July, 2012	7.22	23.0	80.0	58.0	321.0	0.6
			3rd Quarter,Oct,2012	6.98	12.0	84.0	184.0	34.0	4.44
			3rd Q Nov.	7.81	68.0	184.0	84.0	291.0	1.6
			12.03.2013	7.21	19.0	112.0	57.0	215.0	1.6
			5.01.2013	7.84	15.0	76.0	158.0	208.0	2.48
		STP Jubbal	Ist Quarter May,2012	7.69	60.0	196.0	76.0	310.0	1.64
			2nd Quarter,Sep, 2012	7.13	24.0	120.0	221.0	3.6	
			3rd Q Nov.	8.83	4.0	128.0	39.0	346.0	1.08
			05.01.2013	7.09	4.0	36.0	18.0	148.0	Nil
		STP Rampur (Khopri)	Sep,2012	8.92	Interference highly chlorinated	12.0	65.0	388.0	Nil
			4th Feb 2013	8.06	63.0	184.0	60.0		1.4
			1.11.2012	7.42	10.0	48.0	3.0		Nil
			26.06.2012	6.94	10.0	52.0	34.0		Nil
		STP Rampur (Chuhabag)	Sep,2012	10.37	Interference highly chlorinated	12.0	90.0	498.0	Nil

			4th Feb 2013	7.85	180.0	452.0	64.0		1.2
			10.07.2012	11.40	4.0	24.0	16.0		Nil
			1.11.2012	7.54	6.0	42.0	5.0		Nil
5	Kangra	STP Jawalamukhi	April,2012	7.18	28.0	112.0	25.0	905	1.80
			Ist,Quarter,May,2012	7.64	75.0	204.0	88.0		4.36
		STP Dharamshala	May,2012	7.65	38.0	124.0	31.0		3.40
			16.03.2013	7.22	13.0	48.0	11.0		1.6
		STP Tanda Medical Collage	June,2012	6.78	11.0	44.0	15.0		BDL
6	Chamba								
7	Hamirpur								
8	Solan	STP Arki	12.04.2012	7.66	24.0	124.0	38.0		1.28
			29.08.2012	7.55	0.2	4.0	2.0		Nil
9	Kinnaur	STP Recong Peo	3rd Sep 2012	10.31	INTERFERENCE	32.0	155	682.0	Nil
			25.06.2012	6.99	10.0	80.0	48.0		Nil
10	Una	STP Zone III Hamirpur	24.04.2012	7.43	85.0	188.0	109.0		2.88
			28.06.2012	7.42	36.0	136.0	56.0		2.12
			21.08.2012	7.42	16.0	40.0	38.0		0.88
			31.10.2012	7.32	95.0	248.0	24.8		1.20
			15.02.2013	7.44	110.0	332.0	220.0		5.60
		STP Zone II Hamirpur	24.04.2012	6.84	30.0	84.0	32.0		1.64
			28.06.2012	7.51	18.0	72.0	23.0		1.08
			31.10.2012	7.58	65.0	136.0	11.6		1.20
			15.02.2013	7.58	100.0	304.0	151.0		5.44
		STP Zone I Hamirpur	24.04.2012	6.96	20.0	48.0	39.0		1.28
			28.06.2012	7.98	14.0	56.0	7.0		1.0
			21.08.2012	7.84	15.0	36.0	2.0		0.80
			31.10.2012	8.01	28.0	92.0	16.6		0.80
			15.02.2013	7.52	11.0	44.0	22.0		1.0
		NIIT Hamirpur	24.04.2012	6.62	210.0	428.0	101.0		7.0
			28.06.2012	7.67	4.0	20.0	5.0		BDL
			21.08.2012	7.25	45.0	152.0	228.0		1.60
			31.10.2012	7.49	140.0	396.0	16.8		1.30
			15.02.2013	7.28	190.0	532.0	106.0		6.60
11	Sirmour	STP Paonta	18.12.2012	6.25	1.2	8	19		Nil
			18.04.2012	7.57	2.4	24	7		Nil
			16.03.2013	6.84	1.04	23	23		Nil

5.8.3.3 Implementation Status of Recycled Plastics Manufacture and Usage Rules, 2011

The Recycled Plastic Manufacture and Usage Rules, 2003 have been revised on 2 July, 2011 and may be called the Plastic Waste (Management and Handling) Rules, 2011. 4, units have been registered under the revised Rules. The Annual Report was prepared and forwarded to Central Pollution Control Board.

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CHAPTER-6

PROSECUTIONS LAUNCHED AND CONVICITIONS SECURED FOR ENVIRONMENTAL POLLUTION CONTROL

The H.P. State Pollution Control Board has a Legal Wing comprising of one Law Officer, two Asstt-Law Officers and one Data Entry operator. In view of increasing environmental litigation it has been proposed to strengthen the in house staff of legal wing, in addition to the Standing Counsels engaged for High Court, District Courts, Supreme Court and NGT level. In the 60th Board meeting held on 06-01-2010 the State Board has approved the Counsel fee which are paid to the Counsels.

All type of assistance is rendered to Standing Counsels from time to time for preparing reply/written statement and to produce evidence/record as and when required in the cases. Where necessary in important matters, cases are also attended in the courts by Legal staff. Besides this, follow up action for taking information from field/labs or seeking compliance to Courts order is taken. Legal notices/directions are drafted and vetted under the Pollution Control Acts to facilitate the concerned branches. Legal opinion/advice is rendered to the Regional Officers on the clearance of cases/matters involving legal implications.

Compliance from Industry has been sought through persuasive and regulatory action under Water /Air Acts and consultative approach with encouraging results thereby, saving time, cost and efforts and legal compliance has increased significantly through these efforts jointly with the industries. However, with increasing awareness about environment and people's right to clean air and water, the total workload has increased on account of increasing incidence of public interest litigation and judicial activism.

Regular notices are issued to the offenders/regulatory action under pollution control laws is taken. Upon failure of samples or failure to comply to Board's direction or as and when violation is observed, power connection of offenders is got disconnected rather than immediate resort to filing of cases. For resolution of conflicts and enviro-legal action, the State Board has resorted to innovative approach, which includes opportunity of hearing through mediation of Board official and Appellate Authority to arrive at mutual agreed solution. The success rates of compliance have been phenomenal and resolutions have been possible in most of the cases.

Apart from this, the legal wing also gives information/ comments in Court cases involving environmental matters to the State Government. Statistical indicators of court cases are as listed below:-

Statistical Indicators of Court cases for the year-2012-2013 (upto 31-3-2013)

Courts	Pending as on 31-3-11	New cases initiated during the year 2011-12	Total cases till 31-03-2012	Decided during the year 2011-12 (1-4-11 to 31-3-2012)	Total/ Cumulative pending cases in the Year 2011-12
Supreme Court	6	13	19	2	17
National Green Tribunal	0	4	4	1	3
High Court Cases / PIL	103	47	150	49	101
District Courts	19	4	23	2	21
Service matters /cases in High Court (previously in Administrative Tribunal)	19	8	27	2	25

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CHAPTER –7

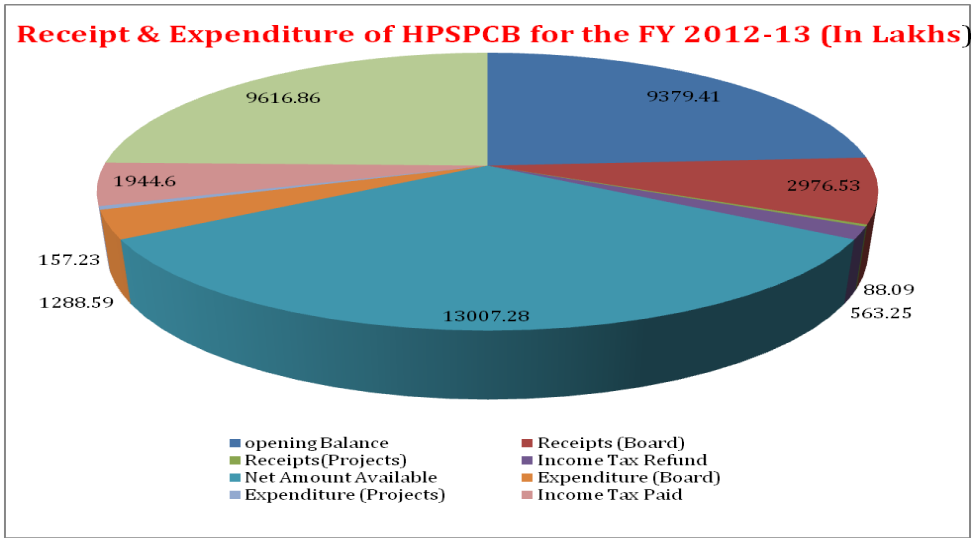
FINANCE AND ACCOUNT OF THE STATE BOARD FOR THE YEAR 2012-13

- The accounting structure of H. P. State Pollution Control Board is fully streamlined to the extent that the books of accounts shows position of cash, bank and short/long- term deposit, balance on day to day basis.

- The accounts for the financial year 2011-12 has been prepared and got audited by the Statutory Auditors and are being placed before the State Legislature in its monsoon session. The accounts for the F.Y. 2012-13 have also been compiled by the Internal Auditors and are being got audited by the Statutory Auditors.

- The total expenditure of the Board during 2012-2013 based upon un-audited accounts was Rs. 3390.42 Lakhs (Including Projects & Income Tax Paid) as against the receipts of Rs. 3627.87 Lakhs (Including Projects, Advance Receipts & Tax Refund) the details are given below:

	(Rs. In Lakhs)
Opening Balance	**9379.41**
Receipts (Board)	2976.53
Receipts (Projects)	88.09
Income Tax Refund	563.25
Net Amount Available	**13007.28**
Less Expenditure (Board) during this year	1288.59
Less Expenditure (Projects) during the year	157.23
Less Income Tax Paid	1944.60
Closing Balance	**9616.86**



The above figures have been worked out on the basis of un-audited accounts. Figures are provisional and are subject to change after audit.

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CHAPTER -8

ANY OTHER IMPORTANT MATTER DEALT WITH BY THE STATE BOARD

8.1 ENVIRONMENTAL TRAINING & CAPACITY BUILDING:

Training is an important component for Human Resource Development of any Organization. In the area of pollution control, which is an interdisciplinary subject, imparting training is an imperative activity. The following Board Officers/Officials participated in various trainings/workshops/conferences during 2012-13.

TABLE:8.1 Trainings/ Workshops Attended by the Officers/Officials of the Board during 2012-13

S. No.	Training Title	Duration	Training Institute	Trainee
1.	Remediation Technology and Modeling of Assessment of Ground Water Contamination.	5 Days	NGRI, Hyderabad	Sh. Chandan Kumar, AEE, HPSPCB, Regional Office, Paonta Sahib
2.	Green Chemistry and Clean Technology	3 Days	IIT-Guwahati	Sh. D K Sharma, SEE, HPSPCB, Head Office, Shimla
3.	Methodology/Techniques of Source Emission Monitoring and corrections to be Applied	3 Days	PCRI, Haridwar	Sh. A. K. Ravi, EE, HPSPCB, Regional Office, Rampur Smt Anju Negi, AEE, HPSPCB, HO Shimla
4.	Monitoring and Analysis of VOC's in Water and Waste Water, Ambient Air and Emissions	3 Days	IIT-Roorkee	Sh Sunil Rana, JSO HPSPCB, Regional Laboratory, Paonta Sahib
5.	EIA Studies & EMP of Contaminated Sites for Industrial Sector	3 Days	CSMCRI, Bhavnagar	Sh Chaman Thakur, JSO HPSPCB Regional Office, Baddi Sh. Pawan Chauhan, JEE, HPSPCB Regional Office, Kala Amb
6.	Zero Liquid Discharge (ZLD) in Agro Based Industries	5 Days	VSI ,Pune	Dr Sarwan Kumar, EE, HPSPCB, Regional Office, Paonta Sahib
7.	Effluent Treatment Technologies in Dairy Industries	3 Days	EPTRI, Hyderabad	Sh S K Dhiman AEE, HPSPCB Regional Office, Jassur
8.	Environmental Data Interpretation, compilation, Analysis, Presentation and Reporting	5 Days	ISI, Delhi	Sh Atul Parmar, AEE, HPSPCB Regional Office, Parwanoo Sh Deepak Dogra, HPSPCB, Regional Office, Bilaspur

S. No.	Training Title	Duration	Training Institute	Trainee
9.	Methodology of Assessment of Indoor Air Quality and Standards	3 Days	TERI Delhi	Sh. Lalit Kumar, AEE, HPSPCB, Regional Office, Rampur
10.	Waste Water Treatment and Reuse in Industrial Sector	3 Days	VSI, Pune	Sh Prakash Sharma, SO, HPSPCB, Regional Laboratory, Sunder Nagar
11.	Bacteriological Techniques for Water and Waste Water Analysis and Quality Assurance	5 Days	PGIMER, Chandigarh	Sh Sanjeev Rongta, JSA HPSPCB HO Shimla
12.	Environmental aspects & Mitigation Planning for Pharma and Chemical Sector	3 Days	ESCI, Hyderabad	Sh Pradeep Moudgil, AEE, HPSPCB, Regional Office, Kala Amb
13.	Fugitive emission measurement (VOC) from organic chemical sector.	2 Days	Kolkata	Sh Anup Vaidya, Scientific Officer, HPSPCB, Central Laboratory, Parwanoo
14.	Odour Monitoring and Measurement techniques	2 Days	PCB Vadodara, Gujrat	Sh Praveen Sharma, Jr. Scientific Officer, HPSPCB, Shimla Sh Anil Rao, Jr. Environmental Engineer, HPSPCB, Regional Office Baddi
15.	Managing information in digital age	1 week	CSE, New Delhi	Smt Bhavna Sharma Sr. Data Base Analyst, HPSPCB, Shimla Sh Balak Ram Dogra Sr Assistant, HPSPCB, Shimla
16.	River and Lake Pollution : Strategies for conservation	1 week	CSE, New Delhi	Dr Indu Bala Gupta, Scientific Officer, HPSPCB Paonta Sahib Miss Sarvinder Kaur Jr. Scientific Officer, HPSPCB Parwanoo
17.	Pollution monitoring techniques and instrumentation	1 week	CSE, New Delhi	Sh. Praveen Sharma, Jr. Scientific Officer, HPSPCB, Shimla Sh Sunil Rana, Jr. Scientific Officer, HPSPCB Paonta Sahib

8.2 ENVIRONMENTAL AWARENESS:

8.2.1 About Environment Campaign by the State Board:

Environmental campaign has become an important tool to achieve effective compliance of various pollution control norms. The following mechanisms can be fruitful to promote environmental awareness:

a) Generating public awareness and environmental education, particularly among targeted groups, about relevant laws and regulations and about their rights, interests, duties and responsibilities, as well as about the social, environmental and economic consequences of non compliance.

b) Promoting responsible action in the community through the media by involving key public players, decision-makers and opinion-builders in such campaigns.

c) Organizing campaigns for fostering environmental awareness among communities, non-government organizations, the private sector and industrial and trade associations.

d) Inclusion of awareness and environment education programmes in schools and other educational establishments as part of education.

In Himachal Pradesh, considering the facts above, the State Board with active cooperation of various departments of the state government has initiated various types of environmental awareness programmes targeting the people of all walks of life

In order to make the general masses aware of the environmental issues the following activities were carried out during the year:

a) World Environment Day 5th June, 2012: The State Board organized the World Environment Day 2012 to spread this message and create awareness among the public. World Environment Day or popularly known as Environmental Day is observed every year on June 5 to promote awareness on the importance of preserving our biodiversity. It also aims to identify issues related to environment and ways to take corrective action.

The theme for World Environment Day 2012 was **Green Economy: Does it include you?** In this theme, there are two parts: first, emphasizes the subject of the Green Economy to draw the attention of the people. But what does all this mean for you? Well, this essentially what the second part of the theme is all about. If the Green Economy is about social equity and inclusiveness then technically it is all about you! In its simplest expression, a green economy can be thought of as one which is low carbon, resource efficient and socially inclusive.

The State Board observed the day with great enthusiasm by organising scores of activities with the support of State Board's Regional Offices, schools and individuals. The programmes share the ideas to tackle environmental challenges that include natural disasters, global warming and toxic substances.

(i) School level declamation contests were organized at Regional Office level in different schools on 5th June 2012.

(ii) Vehicular monitoring in the major towns of the State.

(iii) Activities like drawing competition, slogan writing and debates were organized for the school students by the State Board.

(iv) Rallies were taken out by the school children carrying banners and signboards on environmental slogans at Regional Office level.

(v) Distribution of pamphlets on vehicular pollution, air pollution and noise pollution amongst general public and students.

b) Advertisement and Publicity: During the year 2012-13 the State Board intensified mass awareness campaign through publication of

matter in the leading national, local newspapers, weekly & quarterly magazines.

c) Control of Noise Pollution: Campaign against noise pollution due to firecrackers was also launched on the eve of Diwali festivals throughout the State by way of noise monitoring and advertisements in the newspapers.

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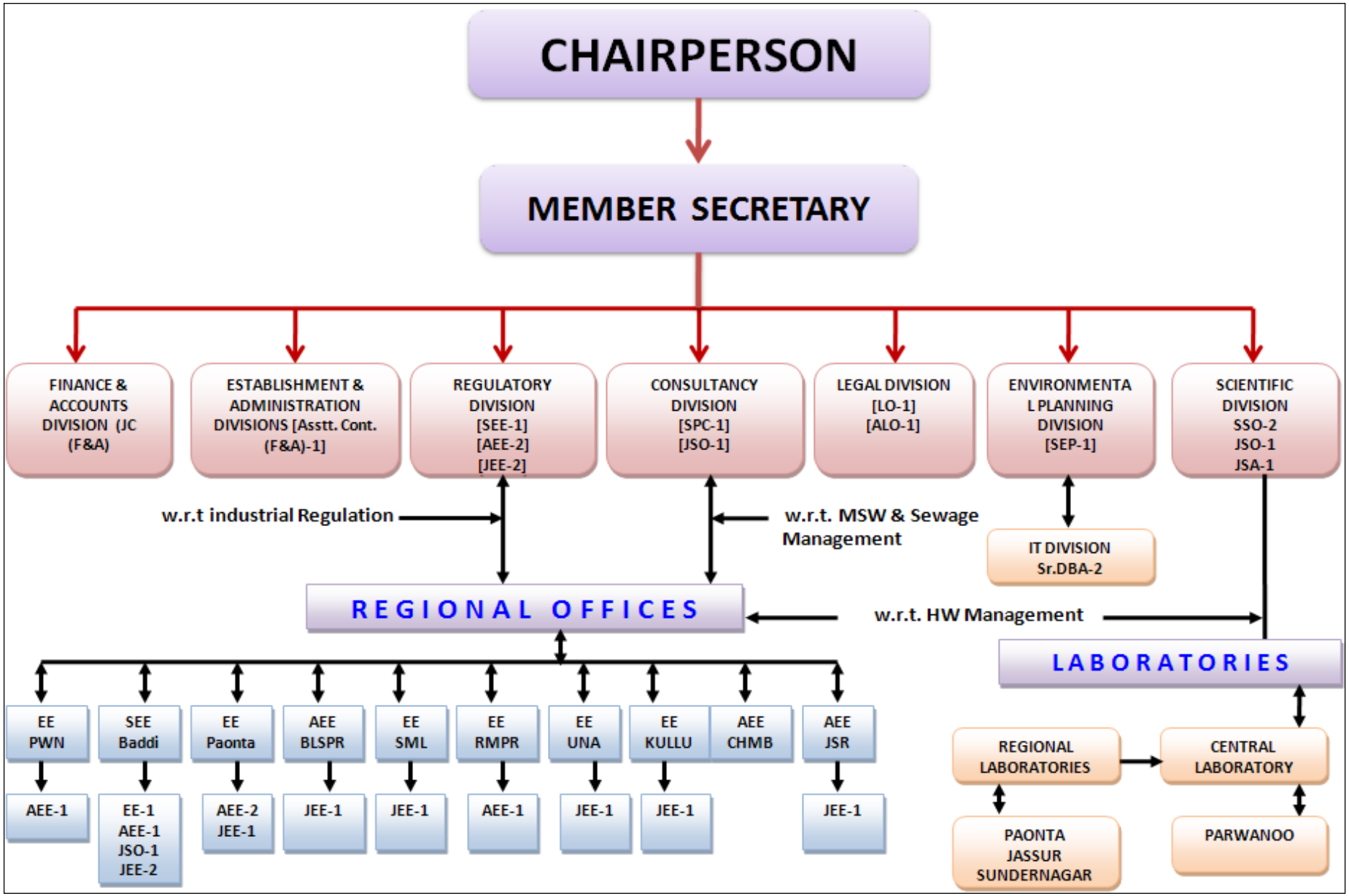
CHAIRPERSON
MEMBER SECRETARY
FINANCE & ACCOUNTS DIVISION (JC (F&A)
ESTABLISHMENT & ADMINISTRATION DIVISIONS [Asstt. Cont. (F&A)-1]
REGULATORY DIVISION [SEE-1] [AEE-2] [JEE-2]
CONSULTANCY DIVISION [SPC-1] [JSO-1]
LEGAL DIVISION [LO-1] [ALO-1]
ENVIRONMENTAL PLANNING DIVISION [SEP-1]
SCIENTIFIC DIVISION SSO-2 JSO-1 JSA-1
w.r.t industrial Regulation
w.r.t. MSW & Sewage Management
IT DIVISION Sr.DBA-2
REGIONAL OFFICES
w.r.t. HW Management
LABORATORIES
EE PWN
SEE Baddi
EE Paonta
AEE BLSPR
EE SML
EE RMPR
EE UNA
EE KULLU
AEE CHMB
AEE JSR
AEE-1
EE-1 AEE-1 JSO-1 JEE-2
AEE-2 JEE-1
JEE-1
JEE-1
AEE-1
JEE-1
JEE-1
JEE-1
REGIONAL LABORATORIES
CENTRAL LABORATORY
PAONTA JASSUR SUNDERNAGAR
PARWANOO