

Annual Report

2003-04



**H. P. STATE ENVIRONMENT PROTECTION
&
POLLUTION CONTROL BOARD**
“PARYAVARAN BHAWAN” NEW SHIMLA-171 009

CHAPTER – 1

INTRODUCTION

It was about three decades now that the foundation of the current direction on Environment Protection was laid and a legislative base initially formed at the national level to protect the environment from the adverse impacts of rapidly expanding industrial society. The legislative & technological bases have substantially expanded in the subsequent period primarily necessitated by the agglomeration and magnification of the problems resultant to the development for outpacing the capabilities to resolve them.

A beginning made in the mid-seventies encompassing and integrating environmental concerns in a comprehensive national policy proved quite useful with a tangible degree of success in the subsequent years with highly manifest forms of environmental pollution and other significant concerns of immediate nature. This prompted constant policy and legislative reviews and making suitable amendments wherever necessary to protect the nation from the lurking threat of environmental degradation. Over these years a continuous effort has been made by the Board to expand its activities to fulfill the demands of emerging ecological concerns, challenges and new statutes. The State Board had put considerable efforts to strengthen the regulatory, organizational and technical/ scientific aspects for prevention and control of pollution and environment protection. 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 Environment Protection & 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 legislation, the Union Government enacted another 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 Environment Protection & Pollution Control Board:

1. **Manufacture, Storage and Import of Hazardous Chemical Rules, 1989.**
2. **The Hazardous Waste (Management & Handling) Rules, 1989/2000.**
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, 1999.**
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.**

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 Environment Protection & 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.**

FUNCTIONS

The H. P. State Environment Protection & Pollution Control Board was initially constituted under the Water (Prevention & Control of Pollution) Act, 1974. The mandate of the State Board has increased manifold since their constitution. Salient legislative regulatory functions, which the State Boards are required to perform are as under: -

The Main Functions of the State Board are:

- ❖ 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 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.
- ❖ 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.

The State Board has eleven Regional Offices at Shimla, Parwanoo, Paonta Sahib, Nalagarh, Baddi, Barotiwala, Una, Rampur, Jassur, Chamba, Kullu and Bilaspur to perform regulatory functions such as consent management, surveillance and monitoring etc., as prescribed under various environmental legislations. There is a Central Laboratory at Parwanoo and three Regional Laboratories at Paonta Sahib, Jassur and Sunder Nagar for providing scientific support to the regulatory functions. Besides this, the scientific database helps in projecting and analyzing the trends etc. This administrative setup caters to the diverse environmental matters in Himachal Pradesh. Ambient air quality is being monitored at four locations with two stations each at Shimla, Parwanoo, Paonta Sahib and Damtal for SPM (Suspended Particulate Matter), SO₂ (Sulphur Dioxide) and No_x (Oxides of Nitrogen) to evaluate general air quality conditions and for the analysis of trends in the area of air pollution. Besides, the State Board has also established one automatic ambient air quality monitoring station at Barmana, Bilaspur. **The Organizational Structure of the State Board is shown in Annexure-I.**

CHAPTER – 2

CONSTITUTION OF THE STATE BOARD AND MAJOR DECISIONS TAKEN DURING 2003 - 2004

The H.P. State Environment Protection & Pollution Control Board was re-constituted by the State Government in November 2001. The State Government vide Notification No. STV (S&T) J (4)-1/89 dated 03.11.2001 constituted the State Board for a period of three years, comprising of:

I. Five Official Members:

- | | | |
|------|---|--------|
| i) | Secretary (Science & Technology) to the Govt. of H.P. | Member |
| ii) | Secretary (Urban Development) to the Govt. of H.P. | Member |
| iii) | Secretary (Industries) to the Govt. of H.P. | Member |
| iv) | Secretary (MPP & Power) to the Govt. of H.P. | Member |
| v) | Secretary (Health) to the Govt. of H.P. | Member |

II. Representatives of State owned Corporations/Companies:

- | | | |
|-----|---|--------|
| i) | Managing Director,
H. P. Road Transport Corporation Shimla. | Member |
| ii) | Managing Director,
H. P. Tourism Development Corporation Shimla. | Member |
| • | The Government of Himachal Pradesh vide Notification No. STE-A (1)-4/2001- Loose dated 17.01.2004, appointed Sh. J.P. Negi, IAS, Principal Secretary [Environment and Forest] to the Government of Himachal Pradesh as Chairman of H.P. State Environment Protection and Pollution Control Board. | |

III. Non-official Members: The Government of Himachal Pradesh vide Notification No. STE-A (1)-4/2001-Loose dated 31.07.2003, nominated the following representative of the Local Authorities as Non-official Members to the State Board.

- | | | |
|------|--|--------|
| i) | Smt. Mala Singh,
Municipal Corporation, Shimla. | Member |
| ii) | Sh. Daya Ram,
Nagar Panchayat, Ghumarwin, Bilaspur. | Member |
| iii) | Sh. Pushp Raj,
Municipal Council, Mandi. | Member |
| iv) | Sh. Rajiv Mahajan,
Municipal Council, Dharamshala. | Member |

IV. **Non-official Members** nominated by the Government of Himachal Pradesh vide Notification STE-A (1)-4/2001-Loose dated 31.07.2003.

- i) Sh. Arvind Gupta, Solan.
- ii) Sh. Vijay Pal Khachi, Kumarsain, Shimla.
- iii) Sh. Sunder Thakur, Kullu.

V. **Permanent Special Invitee Members:** The Government of Himachal Pradesh vide Notification No. STE-A (1)-4/2001-Loose dated 07.08.2003, nominated the following Non-Official Permanent Special Invitee Members to the State Board.

- i) Smt. Promila Kondilak, Shimla.
- ii) B. S. Malhan, Shimla.
- iii) Sh. Swaraaj Chauhan, New Delhi.

MAJOR DECISIONS TAKEN BY THE BOARD DURING 2003-2004

During 49th and 50th Board Meeting following major decisions were taken:

1. Delegation of Powers under the Environment Protection Act, 1986 for the implementation of Bio-Medical Waste (Management & Handling) Rules, 1998 to the Sr. Scientific Officers, Scientific Officers and Jr. Scientific Officers of the State Board.
2. Revision of consent fees schedule under the provisions of Water Act, 1974 and Air Act, 1981 for all the development projects with the view to perform effective legislative and statutory functions assigned to the State Board through various legislations besides additional mandate given by the State Government.

CHAPTER – 3

SALIENT ACHIEVEMENTS OF THE STATE BOARD

The State Board functioning under the original mandate of the Water (Prevention and Control of Pollution) Act, 1974 has made following significant achievements:

- ❖ State Board has been financially self-sufficient for the last more than nine years and this financial management is envisaged to be continued by internal financial management, readjustment and additional resource mobilization to meet the requirement of the organizational growth in future.
- ❖ Provision of pollution control systems in all the water polluting units requiring effluent treatment plants.
- ❖ Constant surveillance and monitoring of the major river systems including tributaries on quarterly basis at 93 locations in the State.
- ❖ Continuous monitoring of Ambient Air Quality at five locations viz., Shimla, Parwanoo, Paonta Sahib, Jassur and Barmana.
- ❖ Effective use of advancements in Information Technology for Surveillance & Monitoring activities, data processing and dissemination; public grievances redressal and decision support system.
- ❖ Regular inspection and monitoring of effluent treatment plants installed by industries;
- ❖ Establishment of laboratory network – advanced analytical techniques & quality control for water quality monitoring.
- ❖ With the intervention and constant persuasion with concerned authorities provision of Sewerage and Sewage Treatment Facilities have been got installed in 6 towns besides 2 rural schemes.
- ❖ District Zoning Atlases for siting of Industries prepared for all the 12 districts.
- ❖ Creation of Environment Protection Division in line with the additional mandate given by the State Government.
- ❖ Propagation of capacity building of other State Govt. agencies in GIS and Spatial Environmental Planning.
- ❖ Ambient noise monitoring of all major towns and industrial locations.
- ❖ Vehicular Monitoring: (1297 Diesel & 841 Petrol driven vehicles monitored during 2003-04).

❖ **IMPLEMENTATION OF MUNICIPAL SOLID WASTE (MANAGEMENT & HANDLING) RULES, 2000.**

In order to facilitate implementation of “Municipal Solid Waste (Management & Handling) Rules, 2000 the following steps have been taken:

- Inventorisation of local bodies to find out existing status of Solid Waste Management in Himachal Pradesh.
- To ensuring compliance with standards as per the provisions of the MSW Rules, prepared project entitled as “Equipment support for strengthening of monitoring capabilities to facilitate implementation of municipal solid waste (management & handling) rules 2000, in Himachal Pradesh” for an amount of Rs.25.05 lakhs and submitted to Ministry of Environment & Forests for financial assistance.

The matter of implementation of MSW Rules was taken up with the Local Self Govt. Department of the State followed by notices issued to all the municipal authorities under Municipal Solid Waste (Management & Handling) Rules, 2000/Environment (Protection) Act, 1986 in the month of September and December 2003 respectively.

To motivate concerned authorities/ local bodies for implementation of the aforesaid Rules, the State Board has taken up several initiatives. The actions include:

- Persuasion / interaction with Local Bodies.
- Undertaking field surveys relating to various aspects of waste management and drawing up further necessary action.

- ❖ The UNDP funded project on Sustainable Development of Industrial Estates of H.P. through Joint Industrial Planning & Management was completed. Through this project the State Board has made an effort for achieving sustainable development of industrial estates of Parwanoo, Mehatpur, Baddi-Barotiwala and Kala Amb by adopting an innovative approach i.e. Joint Industrial Planning and Management rather than exercising the regulatory power.

CHAPTER -4

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

4.1 AMBIENT AIR QUALITY MONITORING

The monitoring of Ambient Air Quality was started in 1986-87 under the **National Ambient Air Quality Monitoring Program (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 program are:

1. To evaluate the general air quality conditions in the city 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 program for the cities.

NATIONAL AMBIENT AIR QUALITY STANDARDS

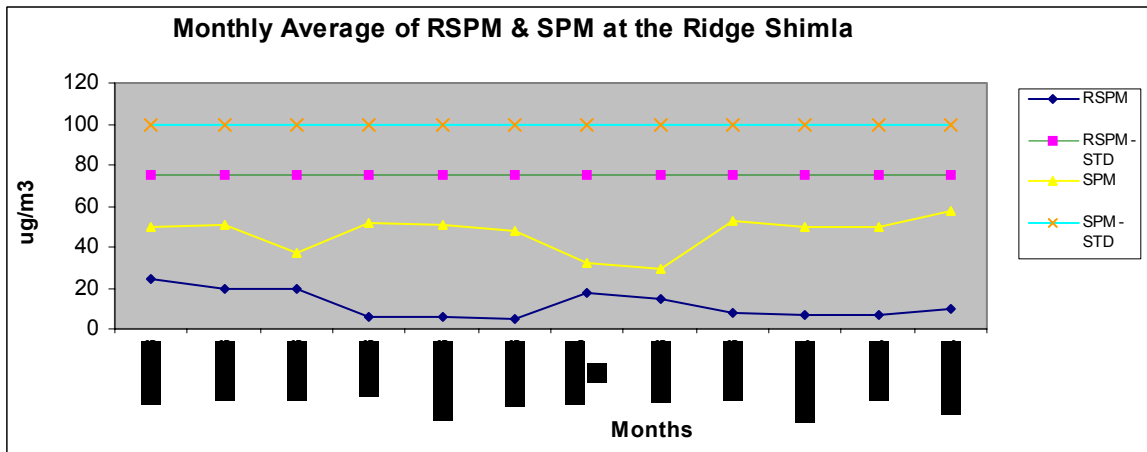
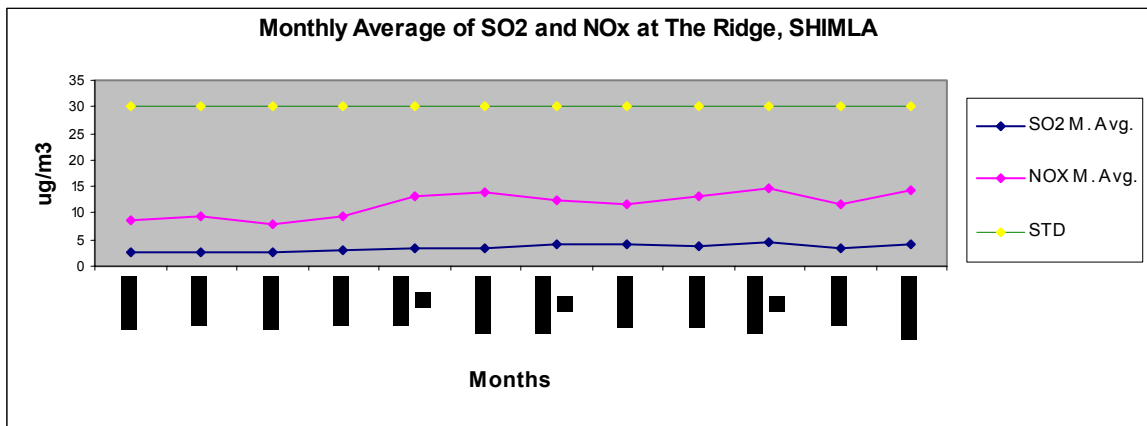
Pollutant	Time Weighted Average	Concentration in Ambient Air			
		Industrial Area	Residential, Rural & Other Area	Sensitive	Method of Measurement
(1)	(2)	(3)	(4)	(5)	(6)
Sulphur Dioxide (SO ₂)	Annual Average*	80 µg/ m ³	60 µg/ m ³	15 µg/ m ³	-Improved West and Geeks method
	24 hours**	120µg/ m ³	80µg/ m ³	30µg/ m ³	-Ultraviolet fluorescence
Oxides of Nitrogen (NO ₂)	Annual Average*	80 µg/ m ³	60 µg/ m ³	15 µg/ m ³	-Jacab and Hochhwiwer Modified (Na-Arsenite)
	24 hours**	120µg/ m ³	80µg/ m ³	30µg/ m ³	Method-Gas-Phase Chemilulence
Suspended Particulate Matter (SPM)	Annual Average*	360µg/ m ³	140 µg/ m ³	70 µg/ m ³	-High Volume Sampling [Average flow rate not less than 1.1 m ³ / minute]
	24 hours**	500µg/ m ³	200µg/ m ³	100µg/ m ³	
	Annual Average*	120µg/ m ³	60 µg/ m ³	50 µg/ m ³	
	24 hours**	150µg/ m ³	100µg/ m ³	75µg/ m ³	
Lead (Pb)	Annual Average*	1.0 µg/ m ³	0.75 µg/ m ³	0.50µg/m ³	-AAS method after sampling using EPM 2000 or equivalent filter paper
	24 hours**	1.5µg/ m ³	1.00µg/ m ³	0.75µg/m ³	
Carbon Monoxides	8 hours**	5.0 mg/ m ³	2.0mg/ m ³	1.0mg/ m ³	-Non disperse, infrared spectroscopy
	1 hour	10.0mg/ m ³	4.0mg/ m ³	2.0mg/ m ³	

1 µg (micro-gram) - .001 mg (milli gram)

4.1.1 AMBIENT AIR QUALITY SHIMLA:

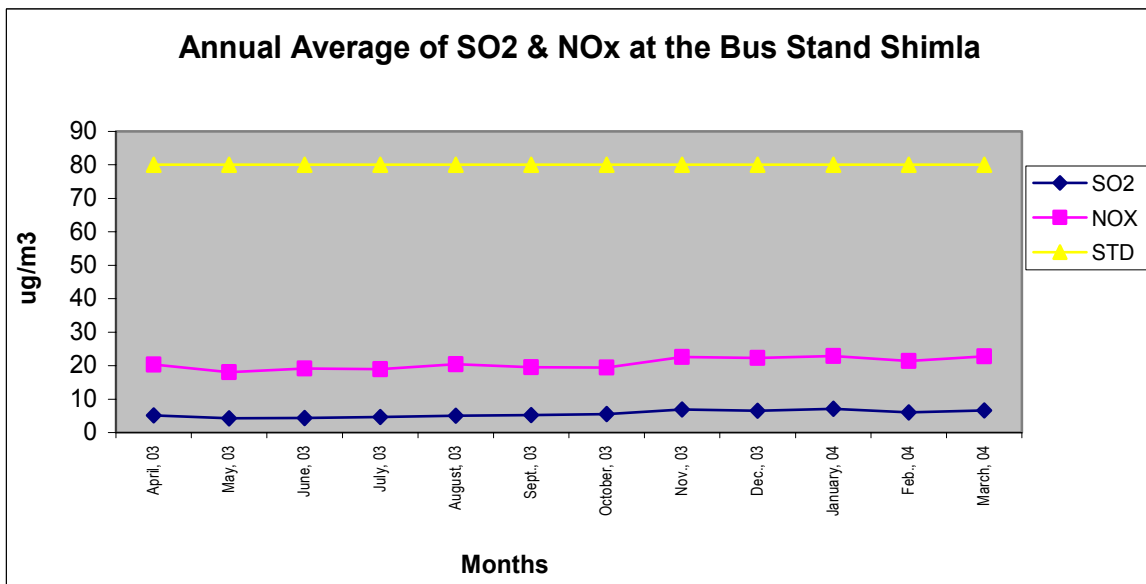
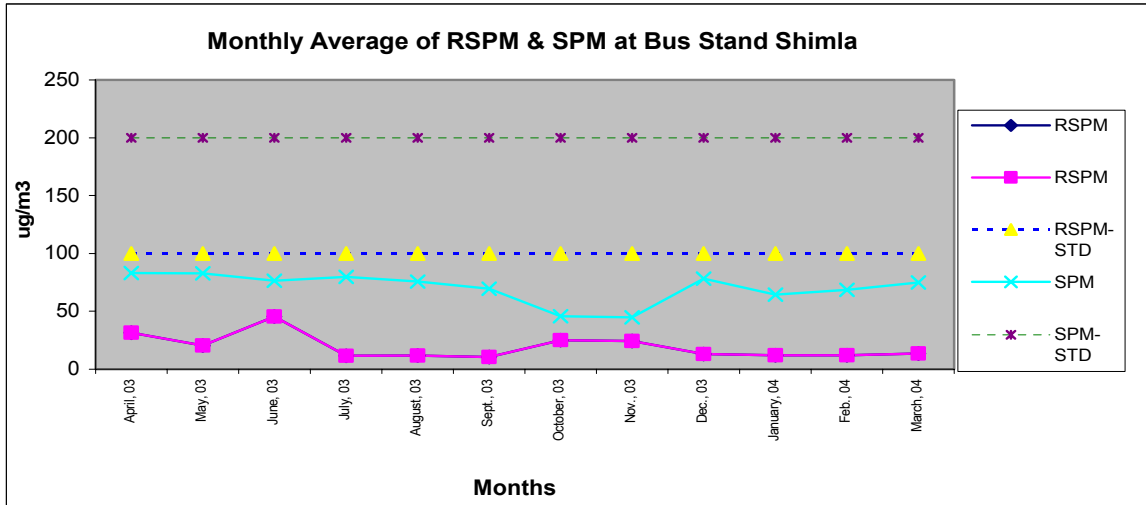
Shimla is an important hill station at an elevation of about 2000 meters from Mean Sea level. It has remained the summer capital of India during the British regime. In 1972 it became the capital of Himachal Pradesh. A large number of tourists visit the city in summer and during the Dussehra & Diwali holidays.

Station No. 1 is located at the Ridge which falls under **Sensitive Area Zone ‘S’** for which air quality standards fixed are $100 \mu\text{g}/\text{m}^3$ [$1 \mu\text{g}$ (micro-gram) = .001 mg (milli gram)] for SPM & $75 \mu\text{g}/\text{m}^3$ for RSPM and $30 \mu\text{g}/\text{m}^3$ for SO_2 & NO_x . The monitoring is being done on every Monday, Wednesday and Friday.



Station No. 2 is located on the top of the main building of Bus Stand. It falls under **Residential Area Zone ‘R’** for which standards are $200 \mu\text{g}/\text{m}^3$ for SPM and $100 \mu\text{g}/\text{m}^3$ RSPM, $80 \mu\text{g}/\text{m}^3$ for NO_x & SO_2 respectively. The monitoring is being done on every Tuesday, Thursday and Saturday.

The monitoring is being done with the help of the Respirable Particulate Matter Sampler on the basis of three days per station per week for 24 hours; the results thus obtained have been shown in the following graphs.



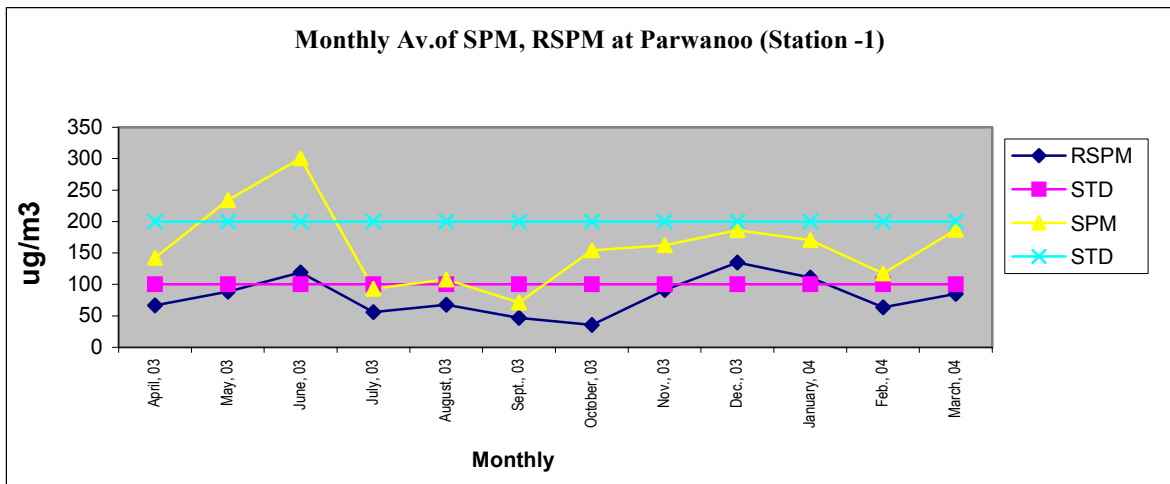
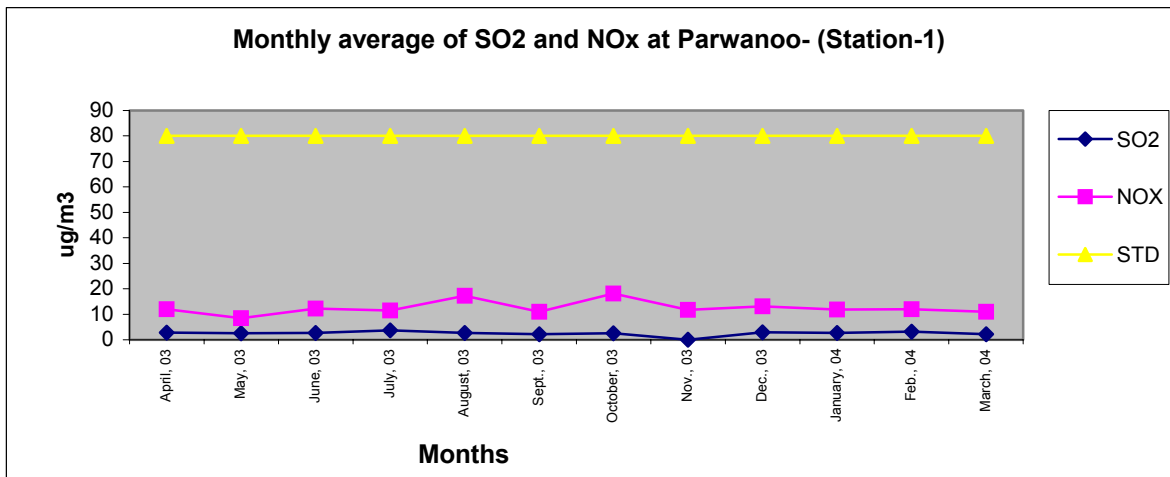
CONCLUSIONS

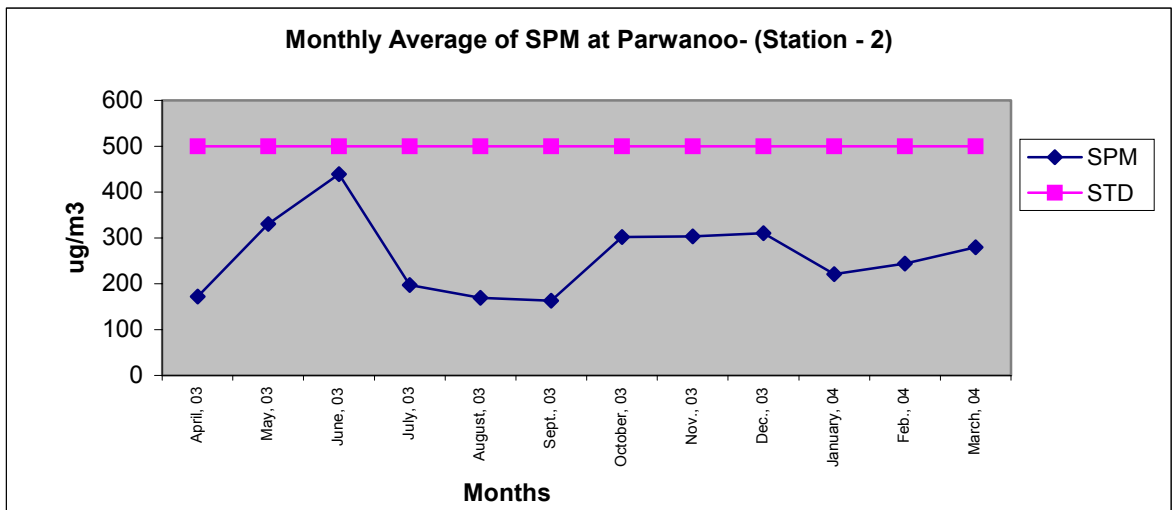
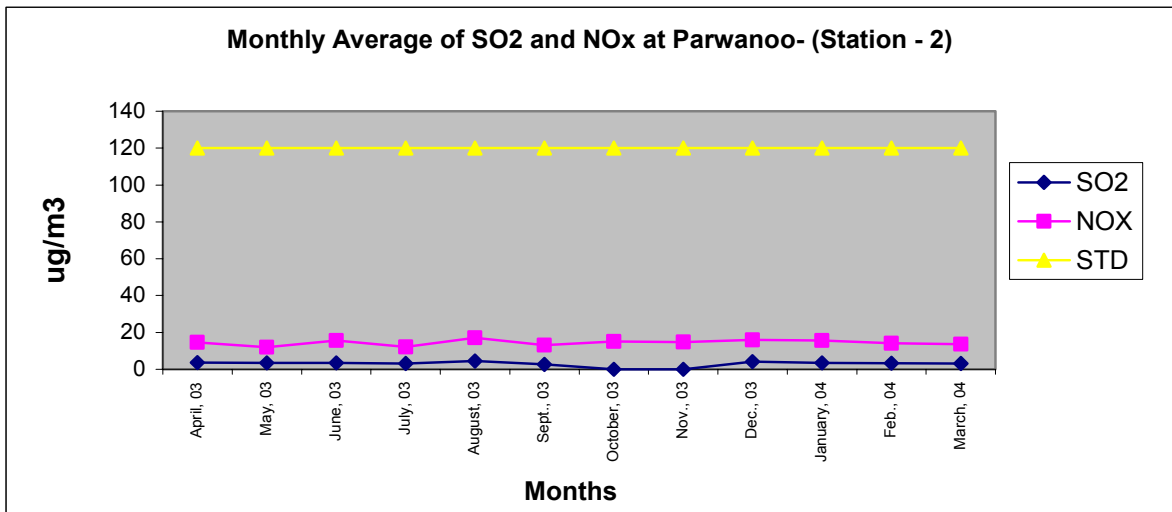
Average Monthly Mean Values of SO₂ and NO_x at both stations were observed below the maximum permissible limits. However, the peak values of SO₂ and NO_x were observed as high as 7.34 ug/m³ and 19.47 ug/m³ in the month of January and March 2004 respectively for Station No.1. The peak values of RSPM and SPM were observed as high as 41.80 ug/m³ in the month of October 2003 and 76.67 ug/m³ in the month of December 2003 respectively at Station No. 1. However, for Station No. 2 the peak values of SO₂ and NO_x were found to be 8.59 ug/m³ and 29.16 ug/m³ in the month of November, 2003 & March 2004 respectively. The peak values of RSPM and SPM for Station No. 2 were observed as high as 57.5 ug/m³ in the month of October 2003 and 144.74 ug/m³ in the

month of August 2003 respectively. Though the monthly mean average value ranged between $2.54 \mu\text{g}/\text{m}^3$ to $7.06 \mu\text{g}/\text{m}^3$ for SO_2 and $7.94 \mu\text{g}/\text{m}^3$ to $22.90 \mu\text{g}/\text{m}^3$ for NO_x for both the Stations. Yearly annual average values for RSPM & SPM at Station No. 1 observed as $11.91 \mu\text{g}/\text{m}^3$ and $46.66 \mu\text{g}/\text{m}^3$ respectively are below the permissible limit of $50 \mu\text{g}/\text{m}^3$ and $70 \mu\text{g}/\text{m}^3$ prescribed for Sensitive Area where as RSPM & SPM at Station No. 2 observed as $19.25 \mu\text{g}/\text{m}^3$ and $70.31 \mu\text{g}/\text{m}^3$ respectively are below the permissible limit of $60 \mu\text{g}/\text{m}^3$ and $140 \mu\text{g}/\text{m}^3$ for Residential Area. In comparison to previous year's data of yearly average values, there is a substantial fall in the level of RSPM at both the locations.

4.1.2 AMBIENT AIR QUALITY AT PARWANOO

Air quality of Parwanoo town is being monitored continuously at two different locations, one at Sector IV (Station No.1), which falls under **Residential Area Zone 'R'** for which standards are $200 \mu\text{g}/\text{m}^3$ for SPM and $80 \mu\text{g}/\text{m}^3$ for NO_x & SO_2 respectively. Other Station at Sector I (Station No. 2), which falls under **Industrial Area Zone 'I'** for which standards are $500 \mu\text{g}/\text{m}^3$ for SPM and $120 \mu\text{g}/\text{m}^3$ for NO_x & SO_2 respectively. The data collected for the year 2003-2004 has been scrutinized for monthly average peak values for these two locations (Stations) and is shown in the graphs.



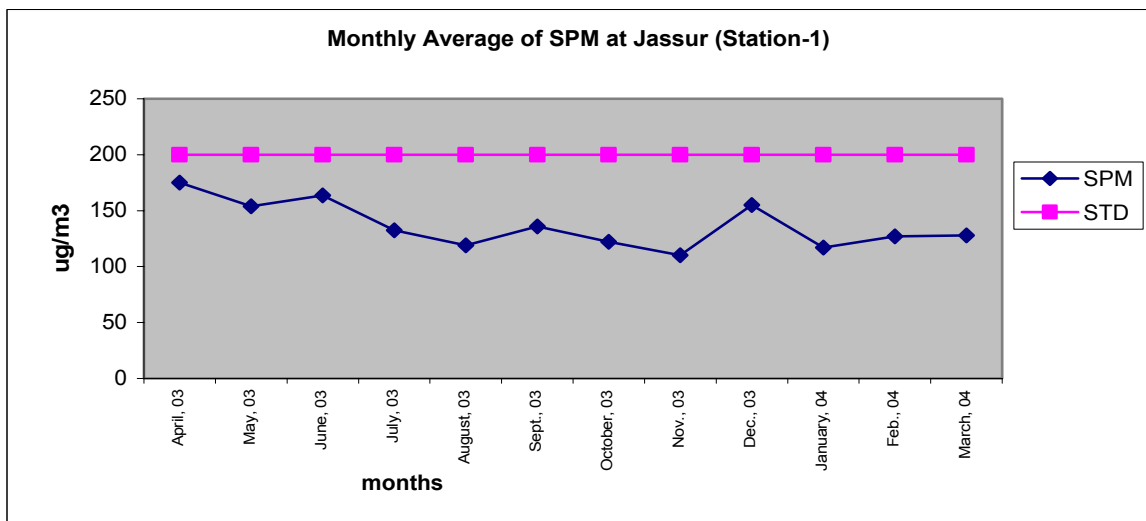
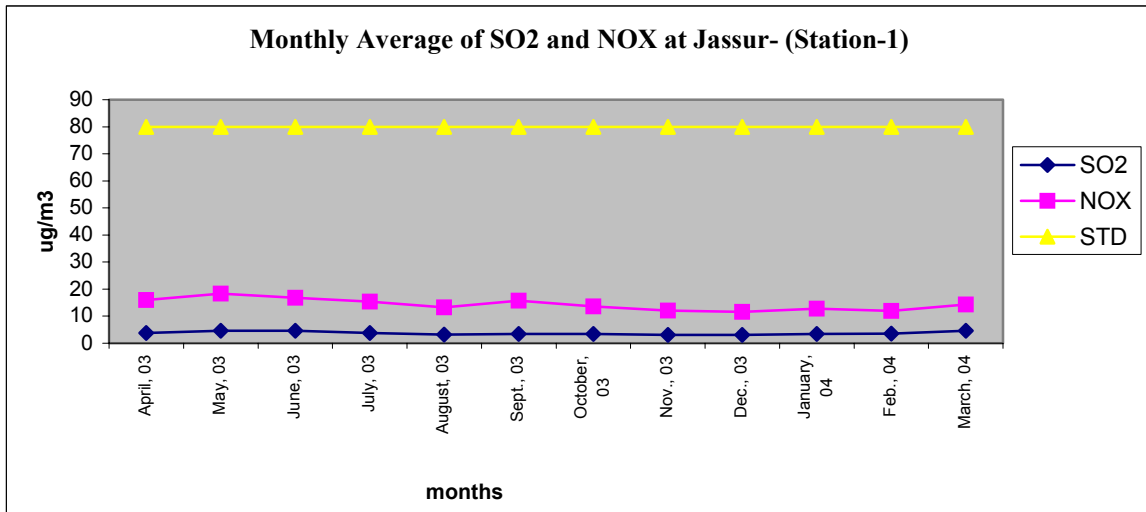


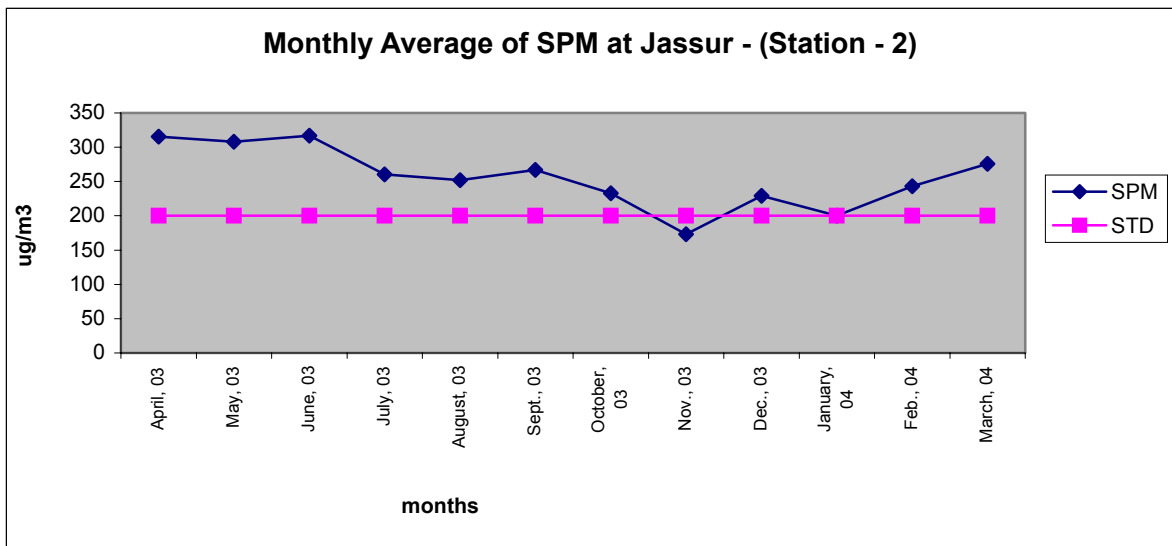
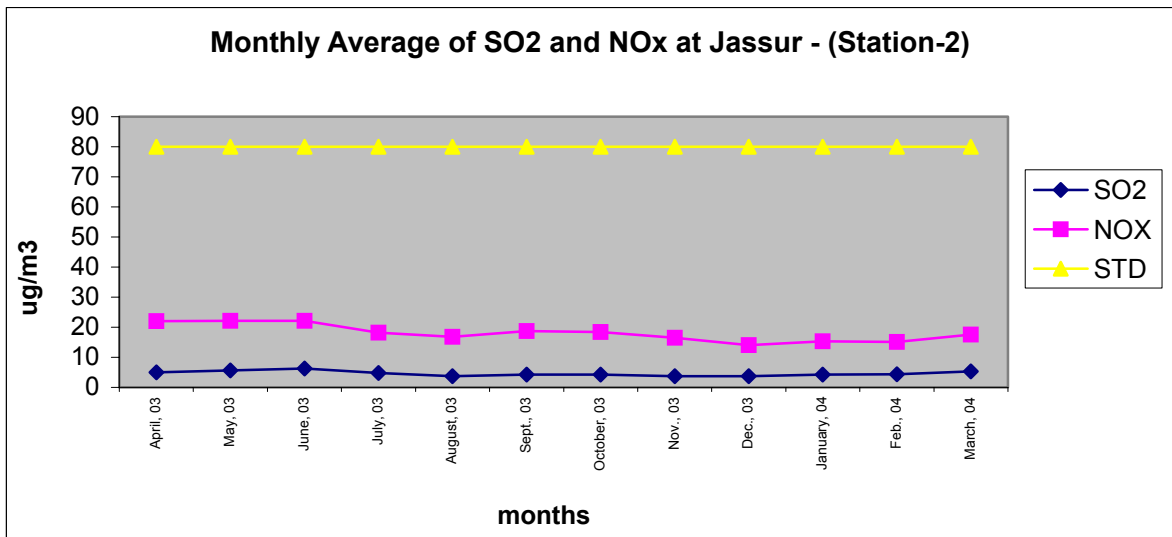
CONCLUSION

At Station No. 1 & 2 the monthly Average Mean Values of SO₂ were observed well below the prescribed standards. However, the peak values of SO₂ were observed as high as 10.08 µg/m³ and 13.6 µg/m³ respectively at both stations and for NO_x it was 61.5 µg/m³ at Station No. 1 and 72.19 µg/m³ at Station No. 2 in the month of October, 2003. The highest value of SPM was observed as high as 2409.98 µg/m³ and 1940.34 µg/m³ in the May, 2003 at both the Stations. However, the monthly mean average values ranged between 71.4 to 300.7 µg/m³ at Station No. 1 and 163 to 439 µg/m³ at Station No. 2. From these observations, it can be concluded that the air quality was lower at Station No. 2 in comparison to Station No.1, The annual average values of SPM shows slight increase during 2003-04 over the values of SPM in 2001-02 & 2002-03 at the both the stations. This can be attributed to variable meteorological conditions, industrial activities and increase in vehicular traffic movement.

4.1.3 AMBIENT AIR QUALITY AT JASSUR

Air quality of Damtal is being monitored at two different locations. One near PCB, office Damtal (Station No.1) and other at Old Road Damtal (Station No.2). Both these stations fall under **Residential Area Zone 'R'** for which air quality standards fixed are $200 \mu\text{g}/\text{m}^3$ for SPM and $80 \mu\text{g}/\text{m}^3$ for NO_x & SO_2 respectively. Both the stations have a large number of stone crushers in the vicinity. The data collected for the year 2003-2004 has been scrutinized for monthly average and peak values for both these locations and shown in the graphs.



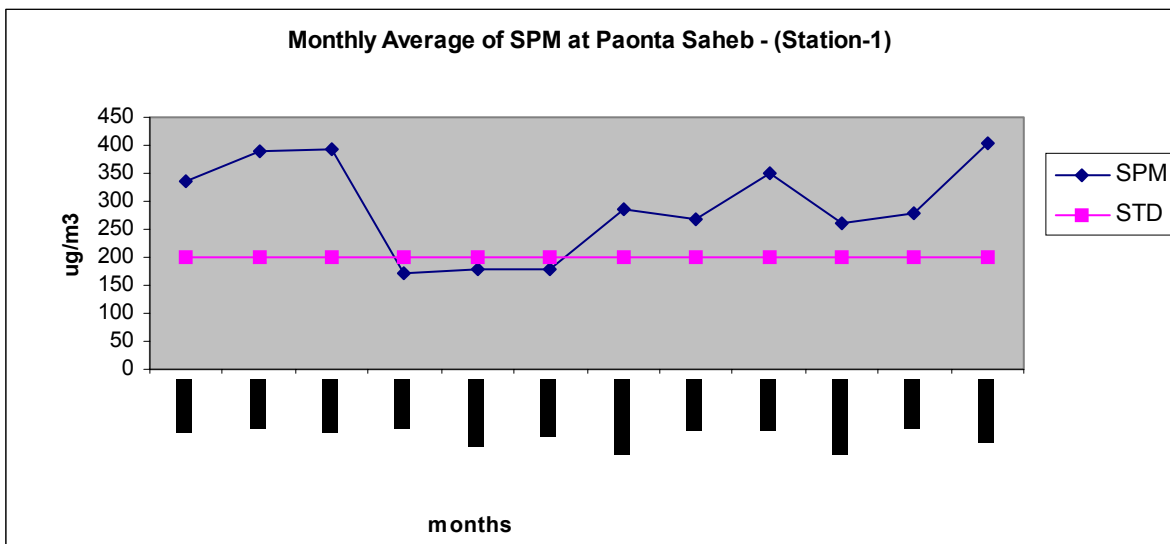
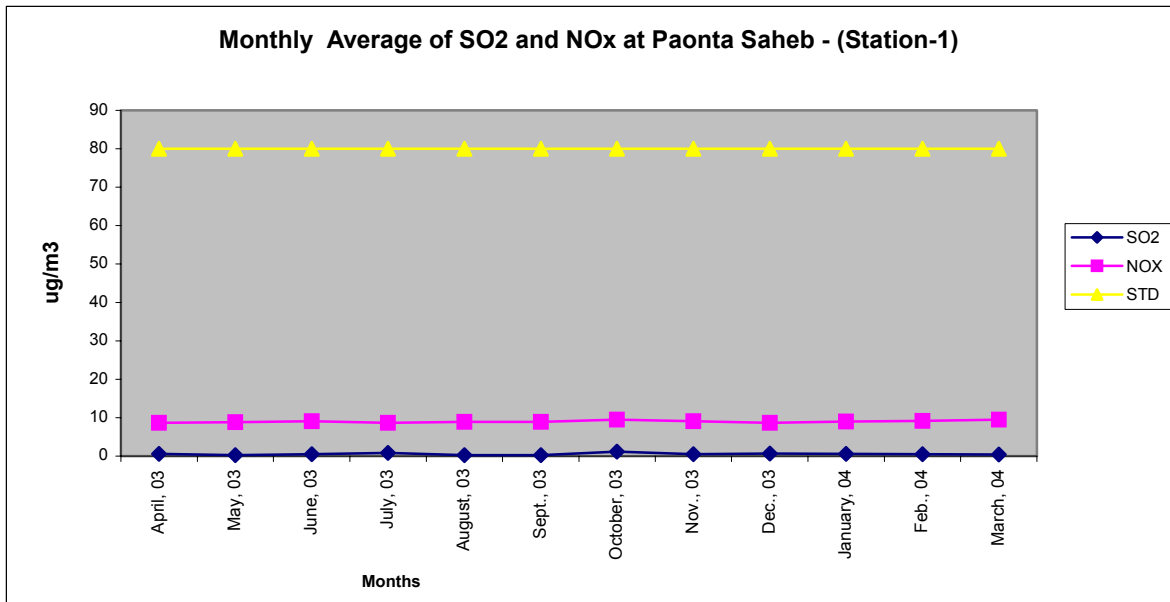


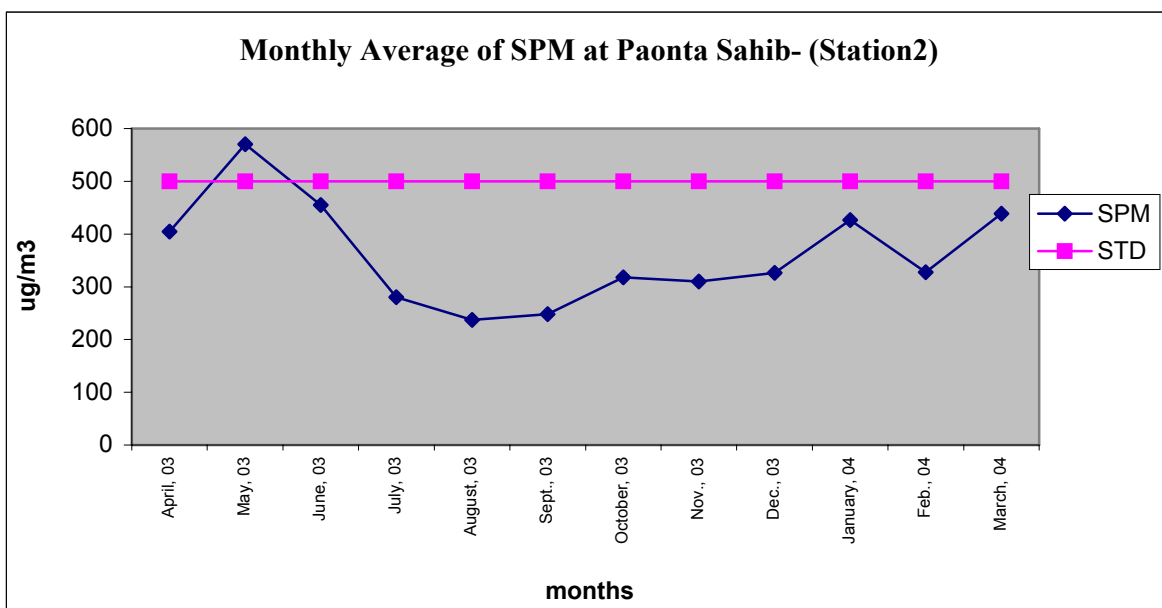
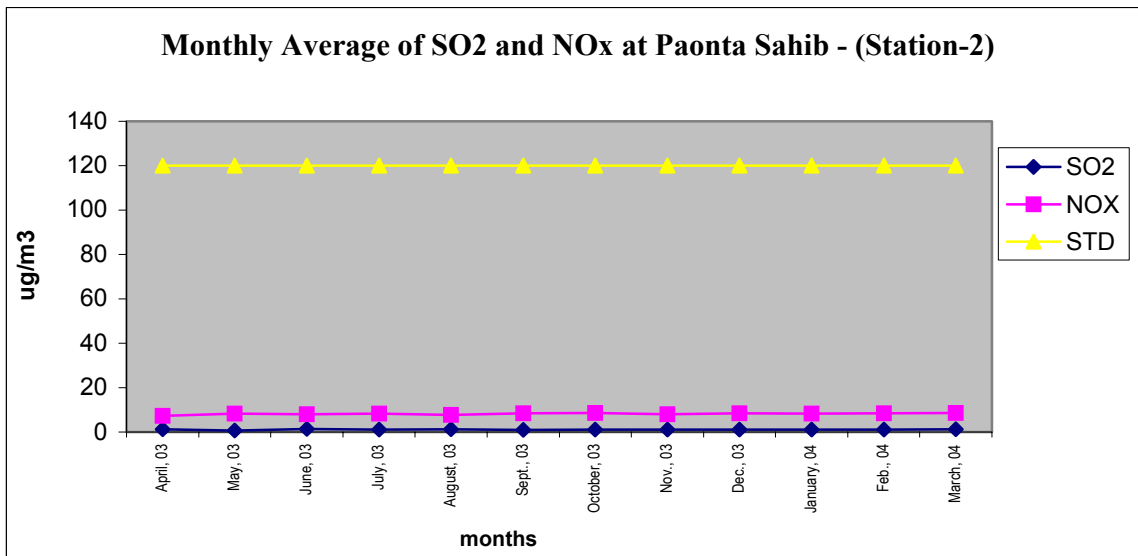
CONCLUSIONS

Although the monthly average values of are within the prescribed limit of 200 $\mu\text{g}/\text{m}^3$ for Station No. 1. The monthly mean average values of SPM range between 173 $\mu\text{g}/\text{m}^3$ to 316.69 $\mu\text{g}/\text{m}^3$ for Station No. 2. The maximum peak value was observed as 346.79 $\mu\text{g}/\text{m}^3$ at Station No. 1 and 465.5 $\mu\text{g}/\text{m}^3$ at station No. 2. The peak values are highest in the month of April & June, 2003 because of dry summer season. The values for SO_2 and NO_x are within the prescribed limit showing the good quality of air from gaseous point of view. The values were found showing very low concentration of these gases. **From the above observations it can be concluded that quality of air at Station No.2 is comparatively lower than Station No.1 with respect to the SPM values.** The comparison with previous three years data shows the downward trend in the levels of NO_x . However, the levels of SPM are variable especially in industrial area.

4.1.4 AMBIENT AIR QUALITY AT PAONTA SAHIB

Ambient air quality of Paonta Sahib is being monitored continuously at two different locations, one at Paonta Sahib town (Station No.1) and other at industrial area Gondpur (Station No. 2). These stations fall under **Residential Area Zone 'R'** and **Industrial Area Zone 'I'** for which air quality standards fixed are 200 & 500 $\mu\text{g}/\text{m}^3$ for SPM and 80 & 120 $\mu\text{g}/\text{m}^3$ for NO_x & SO_2 respectively. The data collected for the year 2003-2004 has been scrutinized, for monthly Average value & Peak value for these two locations are shown in graphs.





CONCLUSION

All the values of SO₂ and NO_x remained below the maximum permissible limits of 80 µg/m³ at Station No. 1 and 120 µg/m³ at Station No. 2. The mean average values of SPM crossed the limit of 200 µg/m³ except in the months of July to September 2003 at Station No. 1 while at Station No. 2 the mean average value of SPM was observed above the prescribed limit in the month of May, 2003 only (569.97µg/m³). The comparison of annual average values of SPM in the last three years shows that there is considerable increase in concentration of SPM at both these stations because of more industrial & vehicular activities in these areas.

AMBIENT AIR QUALITY DATA

SHIMLA

Station-I

Month	SO ₂		NO _x		RSPM		SPM	
	Max.	M. Avg.	Max.	M. Avg.	Max.	M. Avg.	Max.	M. Avg.
April, 03	4.02	2.68	14.23	8.82	27.41	24.76	59.18	50.06
May, 03	3.57	2.54	17.81	9.42	22.00	19.68	59.14	50.52
June, 03	3.74	2.67	10.41	7.94	24.48	19.98	47.31	37.51
July, 03	4.91	3.08	16.25	9.39	9.66	5.88	63.75	51.45
August, 03	4.80	3.50	15.83	13.30	8.14	5.49	73.64	50.91
Sept., 03	4.80	3.54	15.83	13.84	7.14	5.28	52.62	47.43
October, 03	6.10	4.20	15.83	12.57	41.80	17.12	66.9	31.85
Nov., 03	4.81	4.18	14.09	11.83	21.40	14.18	39.80	29.59
Dec., 03	4.80	3.90	15.83	13.24	12.91	7.34	76.67	52.97
January, 04	7.34	4.34	16.35	14.62	8.61	6.70	76.00	49.74
Feb., 04	4.80	3.40	16.97	11.61	13.13	6.76	63.59	50.02
March, 04	5.58	4.25	19.47	14.30	16.16	9.79	73.29	57.46

Station-II

Month	SO ₂		NO _x		RSPM		SPM	
	Max.	M. Avg.	Max.	M. Avg.	Max.	M. Avg.	Max.	M. Avg.
April, 03	6.19	5.16	26.39	20.31	34.79	31.47	92.86	83.20
May, 03	5.13	4.19	26.75	18.04	25.12	20.48	94.21	82.78
June, 03	5.24	4.33	25.00	19.16	54.62	45.41	92.16	76.43
July, 03	7.77	4.62	23.33	18.97	16.00	11.38	100.44	79.73
August, 03	7.14	5.07	23.54	20.38	23.11	11.78	144.74	75.56
Sept., 03	7.14	5.25	22.29	19.55	13.07	10.56	80.34	69.45
October, 03	7.14	5.50	25.83	19.42	57.50	25.04	72.90	45.68
Nov., 03	8.59	6.89	25.83	22.53	30.90	24.24	52.70	44.82
Dec., 03	7.87	6.49	26.67	22.25	16.71	13.04	102.44	78.18
January, 04	8.13	7.06	26.67	22.90	14.48	12.12	87.26	64.50
Feb., 04	7.87	6.03	25.83	21.39	15.52	11.92	80.83	68.43
March, 04	7.87	6.60	29.16	22.79	18.47	13.60	94.98	74.90

PARWANOO

Station-I

Month	SO ₂		NO _x		RSPM		SPM	
	Max.	M. Avg.	Max.	M. Avg.	Max.	M. Avg.	Max.	M. Avg.
April, 03	7.11	2.72	21.49	11.95	119.77	66.39	430.38	142.37
May, 03	10.08	2.51	19.66	8.48	517.72	88.28	2409.98	234.21
June, 03	13.6	2.63	45.8	12.2	532.5	118.8	1252.9	300.7
July, 03	13	3.68	23.5	11.5	114	56.06	239.6	93.1
August, 03	8.5	2.68	47.8	17.2	160	67.6	257	108
Sept., 03	6.8	2.18	20	11	170	46.73	194.4	71.4
October, 03	9.27	2.51	61.5	18.1	622	35.7	665.32	154
Nov., 03	5.1	BDL	22.3	11.74	262	91.02	407.2	162.1
Dec., 03	9.02	2.85	32.1	13.11	309	134.9	354.9	186.2
January, 04	5.29	2.68	18.2	11.82	303.8	111.08	437.39	170.5
Feb., 04	6.8	3.11	25.36	12.02	117.59	63.62	195.91	117.32
March, 04	4.53	2.16	18.21	10.99	173.61	85.11	352.45	186.93

Station-II

Month	SO ₂		NO _x		RSPM		SPM	
	Max.	M. Avg.	Max.	M. Avg.	Max.	M. Avg.	Max.	M. Avg.
April, 03	7.11	3.71	49.06	14.66	-	-	258.33	172.13
May, 03	12.20	3.42	34.30	11.94	-	-	1940.34	330.46
June, 03	7.37	3.46	55.02	15.66	-	-	1107.70	439.00
July, 03	10.50	3.22	36.00	12.20	-	-	556.20	197.00
August, 03	13.60	4.44	49.60	17.20	-	-	416.70	169.00
Sept., 03	10.90	2.67	44.30	13.10	-	-	285.50	163.00
October, 03	7.55	BDL	72.19	15.11	-	-	755.46	302.00
Nov., 03	9.95	BDL	28.30	14.84	-	-	754.80	303.10
Dec., 03	9.79	4.14	44.87	16.02	-	-	567.80	310.44
January, 04	7.20	3.56	28.23	15.68	-	-	443.63	220.83
Feb., 04	7.93	3.38	24.06	14.06	-	-	489.06	243.74
March, 04	5.67	3.17	24.58	13.66	-	-	528.10	279.50

PAONTA SAHIB

Station-I

Month	SO ₂		NO _x		SPM	
	Max.	M. Avg.	Max.	M. Avg.	Max.	M. Avg.
April, 03	1.25	0.55	11.68	8.63	597.12	336.25
May, 03	0.62	0.24	10.16	8.82	857.70	388.72
June, 03	0.75	0.53	10.67	9.09	937.60	394.09
July, 03	1.58	0.84	9.9	8.67	283.56	171.2
August, 03	0.75	0.25	13.21	8.89	317.87	179.79
Sept., 03	0.75	0.25	13.21	8.89	317.87	179.79
October, 03	1.7	1.17	14.98	9.48	542.57	284.71
Nov., 03	1.83	0.48	11.48	9.1	452.3	269.08
Dec., 03	1.25	0.67	12.05	8.67	654.82	351.71
January, 04	1.33	0.56	18.29	8.99	458.22	260.86
Feb., 04	1.42	0.54	16.26	9.2	626.36	280.06
March, 04	1.58	0.38	16.26	9.51	1053.58	403.06

Station-II

Month	SO ₂		NO _x		SPM	
	Max.	M. Avg.	Max.	M. Avg.	Max.	M. Avg.
April, 03	2.29	1.25	10.60	7.38	795.56	404.68
May, 03	2.92	0.71	16.66	8.29	795.56	569.97
June, 03	2.50	1.43	9.65	8.06	962.09	455.15
July, 03	2.08	1.16	23.37	8.36	575.10	280.00
August, 03	1.75	1.34	9.65	7.75	429.52	237.47
Sept., 03	1.58	1.05	10.66	8.50	620.16	247.89
October, 03	1.66	1.13	9.65	8.60	563.08	318.08
Nov., 03	1.58	1.17	9.45	8.11	558.05	310.05
Dec., 03	1.58	1.19	9.45	8.43	624.43	326.18
January, 04	2.29	1.14	16.26	8.29	692.02	426.62
Feb., 04	1.58	1.21	15.04	8.52	673.22	327.53
March, 04	2.29	1.31	9.75	8.60	884.55	438.57

JASSUR

Station-I

Month	SO ₂		NO _x		SPM	
	Max.	M. Avg.	Max.	M. Avg.	Max.	M. Avg.
April, 03	6.17	3.74	22.56	15.98	342.68	175.15
May, 03	6.68	4.64	24.39	18.38	295.86	153.98
June, 03	6.17	4.62	20.58	16.81	346.79	163.51
July, 03	6.03	3.78	22.41	15.34	270	132.56
August, 03	4.63	3.19	19.66	13.29	297	119
Sept., 03	5.74	3.39	21.44	15.69	289	136
October, 03	4.83	3.4	21.34	13.58	229	122
Nov., 03	4.11	3.12	16.92	12.02	253	110
Dec., 03	4.11	3.12	15.55	11.61	266	155
January, 04	5.33	3.41	21.89	12.78	241	117
Feb., 04	4.74	3.53	16.92	11.98	245	127
March, 04	7.7	4.59	20.17	14.31	242	128

Station-II

Month	SO ₂		NO _x		SPM	
	Max.	M. Avg.	Max.	M. Avg.	Max.	M. Avg.
April, 03	7.82	4.97	30.48	22.06	465.5	315.64
May, 03	8.22	5.61	28.74	22.13	460.13	307.88
June, 03	9.25	6.3	30.48	22.17	454.42	316.69
July, 03	6.85	4.78	26.82	18.2	349	260.56
August, 03	5.48	3.7	25.6	16.86	407	252
Sept., 03	5.76	4.29	24.14	18.74	394	267
October, 03	6.86	4.25	27.43	18.39	396	233
Nov., 03	5.55	3.72	23.17	16.47	266	173
Dec., 03	5.14	3.68	18.75	14.09	354	229
January, 04	5.93	4.23	22.39	15.29	277	200
Feb., 04	6.52	4.35	23.88	15.1	398	243
March, 04	8.69	5.36	37.7	17.56	406	276

4.2 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 H.P. State Environment Protection & Pollution Control Board. Water quality data not only helps to ascertain the nature and extent of the requirement for pollution control measures but also indicates its impact on water the aquatic ecosystem. The Central Pollution Control Board under the National Program: **MONITORING OF NATIONAL AQUATIC RESOURCES (MINARS)** is sponsoring the water quality monitoring of major rivers of the State. The samples are collected quarterly i.e. in the months of March, June, September and December. In all 23 points have been selected on major rivers Satluj, Beas, Ravi & Parvati and samples are being analyzed for 22 parameters which includes the physico-chemical and bacteriological contents. **The results are shown in Table-A.**

However, in addition to this, the State Board is also monitoring the water quality of different tributaries of rivers, nallahs and lakes in the State. 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 river falls under 'A' category of water with respect to pH, DO and BOD in general. The critical parameters observed is Total Coliform based to which the category of river water is placed in 'C' category in general.
- Urban waste affects water quality near towns and hence the water resources are required to be treated and disinfected before it is used for drinking purposes.
- The past four years relative data in terms of BOD does not show any specific trend & water quality has shown a decreasing trend. Similarly, there is increasing trend w.r.t. Coliform Organisms at D/S of major towns due to the problem of domestic sewage.

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 banks of the above rivers be provided the planned sewage treatment works and should not be allowed to discharge the urban waste without treatment into or on the bank of the river.
- (3) A number of Hotels & Tourists Resorts coming up on the banks of the rivers must have proper sewage treatment plants.
- (4) All industrial units should not be allowed to discharge untreated effluent into rivers/khads/ nallahs.

TABLE -A

WATER QUALITY OF MAJOR RIVERS IN HIMACHAL PRADESH DURING 2003-2004				
June, 2003				
Location/ Station Code	pH	DO (mg/l)	BOD (mg/l)	TC (MPN)
Tatapani U/S, 1013-R-SAT-A	8.50	9.3	0.2	389.0
Slapper U/S, 1014-R-SAT-A	8.62	9.4	0.3	274.0
Slapper D/S, 1015-R-SAT-A	8.68	9.5	0.5	350.0
Bhakhra D/S, 1016-R-SAT-A	8.33	8.3	0.1	3.0
Rampur U/S, 1086-R-SAT-A	7.90	8.9	0.2	684.0
Rampur D/S, 1087-R-SAT-A	8.44	9.2	0.2	776.0
Bilaspur D/S, 1291-L-GOL-A	8.77	9.2	0.5	240.0
Wangtu Bridge, 1389-R-SAT-A	8.60	9.0	0.1	36.0
Manali U/S, 1001-R-BEA-A	8.57	9.4	0.1	540.0
Kullu D/S, 1002-R-BEA-A	8.38	9.4	0.4	540.0
Aut D/S, 1003-R-BEA-A	8.27	9.2	0.7	2400.0
Pardon Dam U/S, 1004-R-BEA-A	8.39	9.2	0.3	1600.0
Dehar Power House, 1005-R-BEA-A	8.43	9.8	0.6	170.0
Mandi D/S, 1006-R-BEA-A	8.37	8.8	1.1	2400.0
Sujanpur D/S, 1007-R-BEA-A	7.68	7.7	1.0	40.0
Dehra D/S, 1008-R-BEA-A	7.76	7.8	0.9	180.0
Pong Dam D/S, 1009-R-BEA-A	8.12	8.1	0.3	22.0
Pong Dam U/S, 1292-L-PDL-A	8.88	7.9	0.7	33.0
Largi D/S, 1090-R-LAR-A	8.28	9.8	0.5	1600.0
Bhunter Parvati, 1290-R-PAR-A	8.29	10.4	0.5	1600.0
Madhopur H/W, 1088-R-RAV-A	8.08	8.7	0.9	21.0
Chamba U/S, 1089-R-RAV-A	8.57	9.3	0.4	79.0

September, 2003				
Location/ Station Code	pH	DO (mg/l)	BOD (mg/l)	TC (MPN)
Tatapani U/S, 1013-R-SAT-A	8.24	8.6	0.2	278
Slapper U/S, 1014-R-SAT-A	7.95	10.2	0.4	110
Slapper D/S, 1015-R-SAT-A	7.89	10.8	0.4	70
Bhakhra D/S, 1016-R-SAT-A	8.34	8.6	0.3	10
Rampur U/S, 1086-R-SAT-A	8.17	9.5	0.1	421
Rampur D/S, 1087-R-SAT-A	8.19	9.5	0.3	465
Bilaspur D/S, 1291-L-GOL-A	8.24	10	0.1	49
Wangtu Bridge, 1389-R-SAT-A	8.16	9.5	0.1	30
Manali U/S, 1001-R-BEA-A	7.78	9.8	0.4	540
Kullu D/S, 1002-R-BEA-A	7.85	8.2	0.4	540
Aut D/S, 1003-R-BEA-A	7.52	11.6	0.8	33
Pandoh Dam U/S, 1004-R-BEA-A	7.62	11.4	0.8	17
Dehar Power House, 1005-R-BEA-A	7.49	11.8	0.6	17
Mandi D/S, 1006-R-BEA-A	7.65	8.2	0.7	>=2400
Sujanpur D/S, 1007-R-BEA-A	8.4	8.2	1.0	240
Dehra D/S, 1008-R-BEA-A	8.53	7.8	1.3	540
Pong Dam D/S, 1009-R-BEA-A	8.57	7.9	0.8	17
Pong Dam U/S, 1292-L-PDL-A	8.64	7.9	0.9	17
Largi D/S, 1090-R-LAR-A	7.15	11.8	0.6	22
Bhunter Parvati, 1290-R-PAR-A	7.24	9.1	0.1	220
Madhopur H/W, 1088-R-RAV-A	7.96	7.9	0.8	22
Chamba U/S, 1089-R-RAV-A	8.21	9.5	0.8	14

December, 2003				
Location/ Station Code	pH	DO (mg/l)	BOD (mg/l)	TC (MPN)
Tatapani U/S, 1013-R-SAT-A	7.8	9.6	0.2	110.0
Slapper U/S, 1014-R-SAT-A	7.97	8.4	0.5	14
Slapper D/S, 1015-R-SAT-A	7.99	8.8	1.1	14
Bhakhra D/S, 1016-R-SAT-A	8.08	10.9	1.2	3
Rampur U/S, 1086-R-SAT-A	8	9.1	0.1	78
Rampur D/S, 1087-R-SAT-A	8.06	9.1	0.1	110
Bilaspur D/S, 1291-L-GOL-A	7.95	8.2	0.8	34
Wangtu Bridge, 1389-R-SAT-A	8.04	10.9	0.1	7
Manali U/S, 1001-R-BEA-A	7.77	9.8	0.5	17.0
Kullu D/S, 1002-R-BEA-A	7.72	8.7	1.1	12.0
Aut D/S, 1003-R-BEA-A	8.2	9.2	0.8	2.0
Pandoh Dam U/S, 1004-R-BEA-A	8.12	9	0.5	7.0
Dehar Power House, 1005-R-BEA-A	7.87	9.4	0.9	14.0
Mandi D/S, 1006-R-BEA-A	7.56	7.9	1.6	1600.0
Sujanpur D/S, 1007-R-BEA-A	8.03	7.9	0.6	540.0
Dehra D/S, 1008-R-BEA-A	7.69	9.1	1.1	>2400
Pong Dam D/S, 1009-R-BEA-A	7.79	7.8	1.2	27.0
Pong Dam U/S, 1292-L-PDL-A	7.82	7.8	1.4	23
Largi D/S, 1090-R-LAR-A	7.87	9.8	0.6	5
Bhunter Parvati, 1290-R-PAR-A	7.6	9.1	1.0	9
Madhopur H/W, 1088-R-RAV-A	7.42	7.4	1.1	26
Chamba U/S, 1089-R-RAV-A	7.76	8.6	1.0	27

March, 2004				
Location/ Station Code	pH	DO (mg/l)	BOD (mg/l)	TC (MPN)
Tatapani U/S, 1013-R-SAT-A	8.13	9.2	0.4	180
Slapper U/S, 1014-R-SAT-A	7.88	9.8	0.2	35
Slapper D/S, 1015-R-SAT-A	7.85	10.4	0.1	26
Bhakhra D/S, 1016-R-SAT-A	7.96	10.8	0.3	3
Rampur U/S, 1086-R-SAT-A	8.08	9.6	0.1	156
Rampur D/S, 1087-R-SAT-A	8.05	9.5	0.2	168
Bilaspur D/S, 1291-L-GOL-A	7.98	9.5	0.2	1600
Wangtu Bridge, 1389-R-SAT-A	8.16	9.2	0.2	6
Manali U/S, 1001-R-BEA-A	7.76	10.6	0.3	12
Kullu D/S, 1002-R-BEA-A	7.59	9.8	0.2	26
Aut D/S, 1003-R-BEA-A	7.89	10.2	0.2	6
Pandoh Dam U/S, 1004-R-BEA-A	7.85	9.8	0.5	17
Dehar Power House, 1005-R-BEA-A	7.79	10.9	0.6	21
Mandi D/S, 1006-R-BEA-A	7.72	9.2	0.5	2400
Sujanpur D/S, 1007-R-BEA-A	8.04	10.8	0.4	110
Dehra D/S, 1008-R-BEA-A	7.99	9.2	1.2	350
Pong Dam D/S, 1009-R-BEA-A	7.58	7.3	0.3	34
Pong Dam U/S, 1292-L-PDL-A	8.12	10.2	0.4	38
Largi D/S, 1090-R-LAR-A	7.84	10.4	0.1	17
Bhunter Parvati, 1290-R-PAR-A	7.68	10.2	0.1	34
Madhopur H/W, 1088-R-RAV-A	7.69	7.9	0.4	19
Chamba U/S, 1089-R-RAV-A	7.91	9.7	0.2	17

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

WATER QUALITY STANDARDS - PRIMARY WATER QUALITY CRITERIA

Designated Base Use	Class of Water	Criteria
Drinking water source without conventional treatment but after disinfections.	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°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°C 3 mg/l or less.
Drinking Water Sources after conventional treatment	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°C 3 mg/l or less.
Propagation of Wild Life Fisheries.	D	1. pH between 6.5 and 9.5. 2. Dissolved Oxygen 4 mg/l or less. 3. Free Ammonia (as N) 1.2 mg/l or less.
Irrigation, Industrial Cooling Controlled Waste.	E	1. pH between 6.5 and 9.5. 2. Electrical Conductivity at 25 mg/cm max. 2250. 3. Sodium absorption ratio Max. 26. 4. Boron Max 2 mg/l.

4.3 VEHICULAR MONITORING IN HIMACHAL PRADESH

The State Board is doing vehicular monitoring during Mass Awareness Camps in the State. A total number of 2138 vehicles were monitored/checked during the year 2003-2004. Out of these vehicles 1297 were diesel driven and 841 Petrol driven. Vehicles checked for smoke density and CO-HC concentration respectively, only 46.57% of diesel driven and 78.48% of petrol driven vehicles were found meeting the prescribed standards.

From the checking it has been concluded that 693 number of diesel driven vehicles i.e. 53.43% of the total number of diesel driven vehicles checked and 181 number of petrol driven vehicles i.e. 21.52% of the total number of petrol driven vehicles were not meeting the laid down standards. The percentage of diesel driven vehicles causing Air Pollution was higher than that of the petrol driven vehicles.

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

Till March 2004 in all 582 Govt. & 95 private health institutions have been identified. Out of these 677 health institutions 108 have been exempted from seeking authorization under Rule-8, of the Bio-medical Waste (Management & Handling) Rules, 1998. 360 health institutions have applied for authorization and 63 defaulting institutions have been served with notices under the Bio-medical Waste (Management & Handling) Rules, 1998. Ten Incinerators have been installed by these health institutions that includes 2 by MC, Shimla and MC, Kullu being used as a Common Waste Treatment Facility.

4.5 HAZARDOUS WASTE (MANGEMENT & HANDLING) RULES, 1989 AND AMENDMENT RULES, 2000

Till the year 2003-04 the Board has identified about 576 units responsible for generating waste falling in to the various categories of hazardous wastes listed in Schedule-I under Hazardous Waste (Management & Handling) Rules, 1989 and amendment Rules, 2000 & 2003. All such units have been directed to obtain the authorization for onsite and secured storage of wastes. Out of the total 576 units, 401 units were in operation and the State Board has granted authorization to 349 units till 31st March 2004.

CHAPTER -5

POLLUTION CONTROL, SURVEILLANCE & MONITORING NETWORK

The State Board, in the pursuit of discharge of its functions bestowed on it under the provisions of the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) Act, 1981 ensures sustainable development with due regard to the environmental considerations.

This is achieved through a strong field network 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 MANAGEMENT

According to the provisions of the aforesaid Acts, Consent/ NOC of the State Board is required by all the development projects, the industrial units, tourism projects, mining units, local bodies, hospitals etc. as provided in the provisions of the Acts stated in the preceding paragraph.

The consent mechanism encompasses permission to establish and/or operate any development project which is governed by the 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 the development project under consideration. 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 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. The status of consents dealt with and fees realised during the year is given hereunder:

Table: 5.1
CONSENT & CESS MANAGEMENT AT A GLANCE (2003-04)

S. NO.	PARTICULARS	GRANTED DURING THE YEAR 2003-04		REFUSED DURING THE YEAR 2003-04		CUMULATIVE AS ON 31.03.04	
		At HQ	At ROS	At HQ	At ROS	At HQ	At ROS
1.	Consent to Establish (a) Water Act, 1974 (b) Air Act, 1981 (c) Non- Polluting	177 176 -	311 279 69	1 - -	- - -	1791 1671 50	1356 1005 565
2.	Consent to Operate (a) Water Act, 1974 (b) Air Act, 1981 (c) Non-Polluting	99 101 -	168 122 16	- - -	- - -	1339 1178 -	799 612 28
3.	Renewal of Consent (a) Water Act, 1974 (b) Air Act, 1981	430 416	496 312	- -	- -	NA NA	NA NA
4.	Consent Fees (in Rs.)	2,56,24,195/-					
5.	Cess under Water Cess Act, 1977 (in Rs.)	Assessment		Realization			
		33,11,248.00		24,08,048.77			
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	
		1289		504		151	
7.	Surveillance and Inspections under Water & Air Acts & Hazardous Wastes (Management & Handling) Rules, 1998/2003.	Number of Industries			Actual Inspections done		
		6132			11904		
8.	Public complaints/ representations	Received			Attended		
		122			117		
9.	Notices & Injunctions	Issued			Implemented		
	(i) Number of Notices issued	490			402		
	(ii) Number of injunctions issued U/S 33-A and 31 A of Water & Air Acts respectively.	98			98		

The State Board in its pursuit to introduce transparency and accountability in its functioning has delegated powers to the Environmental Engineers and Assistant Environmental Engineers in the Regional Offices of the Board. This step has not only led to the prompt disposal of the cases of the existing and prospective entrepreneurs but also increased the efficiency of the routine surveillance and monitoring of the State Board.

5.2 SURVEILLANCE & MONITORING

The 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.

This activity is presently being conducted by a network of 11 Regional Offices of the Board headed by Environmental Engineers and Assistant Environmental Engineers. During the year 2003-04, 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):	1115
(ii)	Number of Air Pollution Control System (Cumulative):	1078
(iii)	Number of Inspections conducted in 2003-04:	11904
(iv)	Number of Samples of Water, Waste Water and emission including ambient air in 2003-04 :	1990

5.3 POLLUTION CONTROL

As a result of surveillance & monitoring activities, constant pressure is maintained on the polluting industries for operation and maintenance of the pollution control equipment. During the year 187 new pollution control systems were got installed in the new industries to whom consents to operate were granted during the year. Similarly improvements in the already existing control systems in respect of 233 industries were got incorporated including those, which were ordered closure for 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.

5.4 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 2003-04 are as under:

Table: 5.2

Number of Assesses (Cumulative)		
(i)	Industrial	164
(ii)	Local Bodies	57
(iii)	Total	221
AMOUNT OF CESS (IN LAKHS RS. FROM 01.04.2003 TO 31.3.2004)		
(i)	Assessed	33,11,248.00
(ii)	Collected	24,08,048.77
(iii)	Reimbursed from Govt. of India	9,41,609.00

5.5 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 30 categories of projects. During the year, the State Board granted 1515 Consents Water and Air Acts to Establish/ Operate new units after due examination of environmental impacts and management plans under Water and Air Acts. Similarly one new proposal of a 1500 MW hydel project was examined with reference to the EIA notification under Environment (Protection) Act, 1986 during the year and referred to State Govt.

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 2003-04, the State Board took remedial action on 122 public complaints/representations that were received during the year.

CHAPTER – 6

SPATIAL ENVIRONMENTAL PLANNING

The Center for Spatial Environmental Planning was established in the State Board with an objective to initiate statewide program on spatial environmental planning for the purpose of protecting and improving the quality of environment, prevention and control of pollution. A brief summary of activities undertaken by the Center during the year 2003-04 are as listed below.

1. ZONING ATLAS FOR SITING OF INDUSTRIES

During the year 2003-04 the Center for Spatial Environmental Planning has undertaken/completed the atlases for the remaining three Districts under Zoning Atlas for Siting of Industries viz., Mandi, Hamirpur, Lahaul & Spiti. The Ministry of Defense, Govt. of India has accorded necessary clearance for publication of the three Atlases of Districts Shimla, Kullu and Kangra.

2. DISTRICT SPECIFIC INDUSTRIAL SITING GUIDELINES

Based upon the recommendation and outcome of the Zoning Atlas studies the State Board has prepared draft District-specific industrial siting guidelines for Solan, Sirmour, Una and Bilaspur Districts of Himachal Pradesh. However, in view of the revised criteria devised by the Central Pollution Control Board these guidelines would be modified accordingly by involving different stakeholders, development agencies and user institutions of the State. The State Board has constituted three tier Committees viz., Block Level, District Level and State Level Committees whereby input from different agencies would be taken in to account before finalization of these guidelines

3. INDUSTRIAL ESTATE PLANNING

The State Board has completed the Industrial Estate Planning study for Paonta Sahib - Dhaula Kuan region of District Sirmour. The final report of the study has been submitted to the Central Pollution Control Board Delhi for its technical evaluation after incorporation of latest remote sensing input.

4. TRAINING AND HUMAN RESOURCE DEVELOPMENT

- Conducted Basic Training on GIS and its application in Forests Planning & Management to officers of the Department of Forests, GOHP;
- Conducted Advanced/ Hands-on Training on GIS and its application in Forests Planning & Management to officers of the Department of Forests, GOHP.

5. STRENGTHENING ENVIRONMENTAL INFORMATION DATABASE – District & State level

- ZASI Envis for Shimla, Kullu, Kangra, Solan, Sirmour, Una & Bilaspur;
- Urban Envis for Shimla;
- State Level digital Environmental Data base on Arc View & Arc Info;

6. OTHER ACTIVITIES

- SUSTAINABLE TOURISM DEVELOPMENT PLAN FOR DHARAMSHALA – MC LEODGANJ: The final report of the study were submitted to the Central Pollution Control Board and German Agency for Technical Cooperation (GTZ) for technical evaluation. In addition this State Board has also prepared the priority action plan under the same component with a view to implement out come of the study.
- ENVIRONMENTAL ATLAS OF HIMACHAL PRADESH in 1: 15,00,000 scale: The first draft of the Atlas was submitted to the Central Pollution Control Board Delhi for technical evaluation. The Atlas comprises a large number of thematic maps presenting environmental status and natural resources of the State.
- Proposal submitted to the Integrated Institute of Himalayan Studies (UGC Center of Excellence) for undertaking research studies under the domain of Environment & Pollution Control and providing trainings on GIS;
- A concept paper on providing DIGITAL DATA/MAP ON THE LAND USE AND LAND CAPABILITY for the District and Composite Map of State of HP submitted to the State Land Use Board, Department of Forests, GoHP;
- INTEGRATION OF ENVIRONMENTAL ASPECTS IN TO DEVELOPMENT PLANNING: Proposals for undertaking a study on “Environmental Carrying Capacity and Alternative Development Options for Sustainable growth of Shimla City” submitted to the Department of Town and Country Planning, GOHP. In follow-up of the same the Department has requested this Board to provide the environmental inputs to the Development Plan of Shimla – 2021.
- Proposal submitted to the MOEF for establishment of ENVIS Center in Himachal Pradesh in subject area of pollution control, ecological and environmental resource management vis-à-vis spatial database linkages;
- Proposal submitted to the Central Pollution Control Board Delhi for ACCREDITATION OF THE CENTRE FOR SPATIAL ENVIRONMENTAL PLANNING of the State Board as Nodal Training Institute (NTI) of the northern region for extending necessary technical support to various departments of the region in GIS and Spatial Planning.

CHAPTER – 7

ENVIRONMENTAL TRAINING, AWARENESS & CAPACITY BUILDING

7.1.1 ENVIRONMENTAL TRAININGS & CAPACITY BUILDING:

The following Board Officers/ Officials participated in various Seminars/ Symposium/ Conference/ Workshop/ Conventions during 2003-04.

S. No	Name of Participant	Designation	Name of Training Course	Place	Duration of Training
1.	Er Parveen Gupta	Asst. Env. Engineer	Review Plans for air pollution control devices	IIT, Bombay	7-11/4/2003
2.	Sh Ravinder Kumar Sharma	Jr. Research Fellow	Sampling & analysis methods of ambient air pollutants and source emission and statistical analysis and interpretation of air quality data	ETI, TNPCB, Chennai	12-23/5/2003
3.	Sh. Anil Sharma	Scientific Officer	Continuous (automatic) and manual sampling of ambient air	NPC, Chennai	21-25/4/2003
4.	Er S.K. Shandil	Asst. Env. Engineer	Preparation of air quality management plan	IIT, Bombay	21-25/4/2003
5.	Er. V.D. Sharma	Asst. Env. Engineer	Review of EIA reports	NEERI, Nagpur	26-30/5/2003
6.	Dr. S.C. Attri	Project Consultant	Environmental orientation to school education	Shimla	1-3/6/2003
7.	Er. Chetan Joshi	Env. Engineer	Air pollution meteorology and air quality modeling	IIT Kanpur	9-13/6/2003
8	Er. A.K. Sharda	Asst. Env. Engineer	Characterization of hazardous waste, its pretreatment and methodology for assimilatory capacity of the hazardous waste disposal site	NEERI, Nagpur	15-18/7/2003
9.	Er. Brij Bhushan	Asst. Env. Engineer	Hazard identification and risk assessment in chemical industries	DMI, Bhopal	15-19/12/2003
10.	Er. Sarwan Kumar	Env. Engineer	Cleaner production in electroplating	I.I.C., New Delhi	27/2/ 2004
11.	Smt Daksha Gupta	Sr.Scientific Officer	Bio-medical waste management – Status analysis and planning for the future	SGPGIMS, Lucknow	10-11/2/2004
12.	Dr. S.S.Negi	Member Secretary	Environmentally sound technologies for used rerefining / recycling industry	I.H.C. New Delhi	17/3/2004
13.	Dr. S.S.Negi	Member Secretary	National Consultation Workshop “Biomedical Waste Management-Status Analysis and Planning for the Future”	I.H.C. New Delhi	18/3/2004

7.2 ENVIRONMENTAL AWARENESS

In its unending crusade to combat the menace of pollution, the State Board focused its attention to the priority areas of water, air and soil quality. The State Board has channelised its energy and resources to ensure sustainable development in this eco-fragile State.

The State Board over the years has undergone a transient shift in its functioning from merely being a regulatory body to an interactive and participatory organization for attaining the objectives enshrined in the environmental legislation. In order to inculcate environmental sensitization in masses the following activities were carried out:

(a) World Environment Day: 5th June 2003

On the occasion of the World Environment Day, 5th June 2003 the Board organized the following activities:

- (i) Vehicular Monitoring Camps in major towns in the State.
- (ii) Activities like Poster, Quiz Competitions and Debates were organized for the school children by the Regional Offices.
- (iii) Rallies were taken out by the school children carrying banners & placards on environmental slogans in the major towns of the State.
- (iv) Distribution of pamphlets and literature on vehicular pollution, air pollutants and noise pollution were distributed to the public and school students.

(b) Advertisement and Publicity

During the year 2003-2004, the H.P. State Environment Protection & Pollution Control Board intensified Mass Awareness Campaign through mass awareness and publicity. The advertisements and articles highlighting the activities and achievements of the State Board were published in the leading national and local newspapers, weekly and quarterly magazines. The Board also encouraged leading entrepreneurs to put-up catchy and colorful hoardings at prime spots for encouraging the people on need to protect the environment.

The State Board during the year actively associated with non-governmental organizations (NGO's), local educational institutions, mela committees etc., for undertaking environmental awareness programs.

(c) Control of Noise Pollution

Campaign against noise pollution due to firecrackers was launched on the eve of Diwali Festival throughout the State by way of noise monitoring posters and advertisements in the newspapers.

(d) Workshop Organized

A two days workshop on” Sustainable Development of Industrial estates of Himachal Pradesh through Joint Industrial Planning & Management” was organized on 27th-28th August 2003.

The objective was to create awareness amongst the stakeholders about environmental degradation due to various activities in the industrial estates, evolve action plan and finalize institutional mechanism / fix up responsibilities of the stakeholders for successful implementation of the plan as well as the further course of action required.

The two days workshop comprised four technical sessions covering Parwanoo, Baddi Barotiwala, Kala Amb and Mehatpur Industrial areas respectively. The regional officers presented the water quality status / remedial action plan (based on the analysis results / inference drawn from survey/monitoring conducted under SGF (UNDP) project) to the stakeholders. In addition to this presentation on “Integration of Environmental Aspects into Development Plans / Activities - A Case Study in Industrial Estate Planning” was also made. The officers of the state board in association with the stakeholders chalked out the strategy to successfully implement the action plan.



CHAPTER- 8

PROSECUTIONS LAUNCHED AND CONVICTIONS SECURED FOR ENVIRONMENTAL POLLUTION CONTROL

The legal wing of the State Board has been managing/looking after cases on behalf of and against the State Environment Protection & Pollution Control Board pending in the different Courts in the State of H.P. and outside the State. All kinds of assistance is being extended to the standing counsels of the Board from time to time for preparing replies/written statements and to produce evidence/record as and when required in the cases. Besides this, legal notices/directions drafted under the Pollution Control Acts are vetted 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/consultative approach with encouraging results thereby, saving time, cost and efforts and legal compliance has increase significantly through these co-operative efforts. 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 litigations and judicial activism.

For resolution of conflicts and enviro-legal action, the Board has resorted to innovative approaches, which include opportunity of hearing through mediation of Board officials to arrive at mutual agreed solutions. Regular notices are issued to the violators and the hearings/opportunities are afforded to them by the Board, rather than immediate resort to filing of cases. The success rates of hearings have been considerable and resolutions made possible in many of the cases.

Apart from this, the legal wing prepares draft replies/offers comments to the State in cases involving environmental matters. In pursuance to decision taken in the 47th & 48th Board Meetings the process of launching prosecution against defaulting local bodies/hospital authorities/other industrial units, which do not conform to pollution control norms has been initiated. Some of the statistical indicators pertaining to the legal wing for the year 2003-2004 is below: -

Sr. No.	Name of the Courts	No. of New Cases Defended/ Represented in the year 2003-04
1.	Supreme Court	Nil
2.	High Court Cases/ PIL	38
3.	Human Rights Commission	02
4.	Prosecution at District Courts, Mandi (2), Bilaspur (2), Una (1) and Chamba (1).	6
5.	Administrative Tribunal	6

CHAPTER- 9

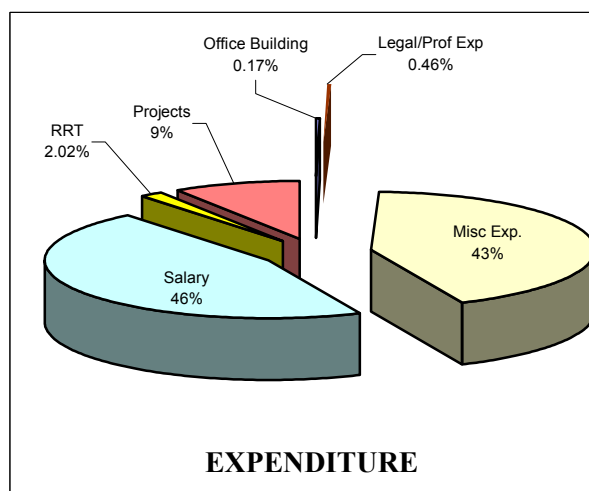
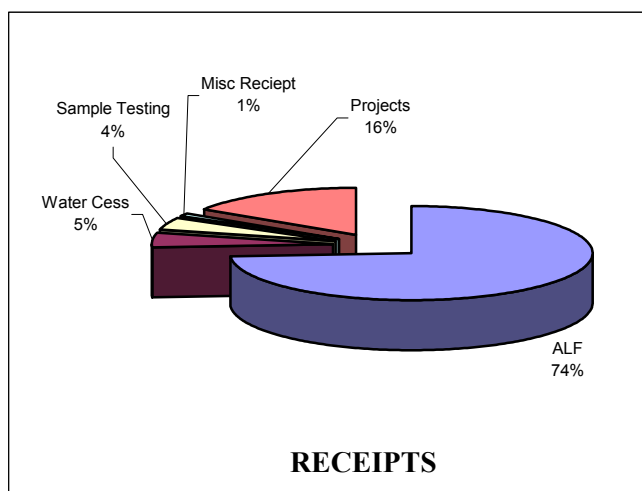
FINANCE AND ACCOUNTS OF THE BOARD FOR THE YEAR 2003-2004

- The accounting structure of H.P. State Environment Protection & Pollution Control Board was stream-lined and brought back on proper track to the extent that the books of accounts now reveal position of cash, bank and short term deposit, balance on day to day basis.
- The accounts for the year 2000-2001 was got audited and final accounts (Balance Sheet, Income & Expenditure Account and Receipt & Payment Account) was prepared and also placed before the State Legislature during 2004-2005. The accounts for the year 2001-2002 are being finalized by the Statutory Auditors.
- The total expenditure of the Board during 2003-2004 based upon un-audited accounts was 273.80 Lakhs against the receipts of Rs.482.39 Lakhs, the details are given below:

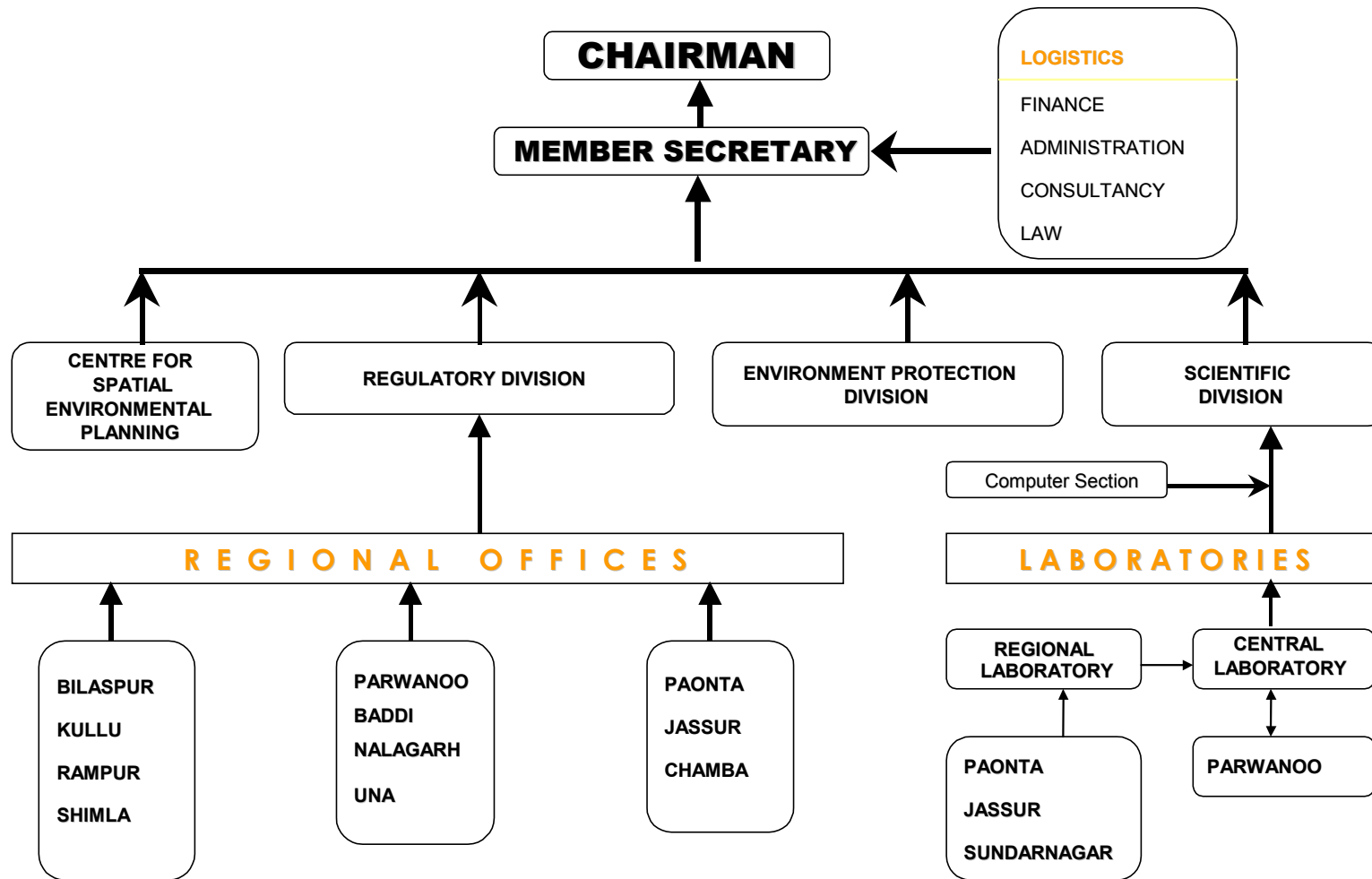
	Rs. in Lakhs
Opening Balance	115.72
Receipts	482.39
Net Amount Available	598.11
Less Expenditure during this year	273.80
Closing Balance	324.31

- **Financial Instruments in Hand Rs.450.55 Lakhs.**

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



ORGANISATIONAL STRUCTURE





**Himachal Pradesh State Environment Protection &
Pollution Control Board**
Paryavaran Bhawan, New Shimla –171009 Ph.: 0177 2673032, Fax: 0177 2673018

Subject: Annual Report for the Year 2003-2004

Annual Report of the State Board for the year 2003-2004 has been prepared on the basis of information supplied/ provided by the different Division/section In-charge. We may get the details of activities included in the report rechecked before the same is submitted for approval of Hon'ble Chairman. Draft copy of the Annual Report 2003-2004 is placed below for perusal and approval please.

Env. Engineer (HQ)