ENVIRONMENTAL STATUS REPORT

OF

AURANGABAD REGION

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INTRODUCTION

The history of Marathwada can be traced as far back as to the days of the Satvahanas who ruled during the second and third centuries A.D. with their capital at Pratishthanapura, the present day Paithan. Pratishthanapura on the banks of the Godavari, referred to by Greek historians of the second century A.D. as Paithan, was a great commercial centre and was the capital of the Satavahans.

Aurangabad, now Divisional Head – Quarters of the Marathwada region. The Aurangabad city was founded in 1610 A.D. by Malik Ambar, the Prime Minister of Murtaza Nizam Shah of Ahmednagar on the sight of village called Khirki. Malik Ambar was succeeded by his son Fateh Khan, who changed the name of Khirki to Fatehnagar. With the capture of Daulatabad by the imperial troops in 1633, the Nizam Shahi dominions including Fatehnagar came under the possession of the Moghals.

In 1653, when Aurangzeb was appointed the viceroy of the Deccan, he made Fatehnagar his capital and called it Aurangabad. Since then the city came to be known as Aurangabad.

New Aurangabad divisional Head Quarters of the Marathwada occupies a place of pride in the history of India. Lying at the crossroads of ancient trade routes and nestled centrally in the Deccan plateau, Aurangabad has naturally been the scene on which a great many "Cunning Passages" of history have been enacted and unfolded. Endowed with a rich cultural past and a capacity for absorbing the shocks and transformations of historical change into its own characteristic personality, the city occupies an important place on the tourist map of the world. The city is festooned all around with an amazing variety of monuments, such as rock-cut temples in the mountain ravines of Ellora and Ajanta, strategic forts such as the one at Daulatabad and mosques and mausoleums with their minarets and domes such as Bibi-ka-Maqbara.

Aurangabad, through its monuments thus reveals the exuberant vitality of historical India and thus stands as a link between the past and the present. Aurangabad city typifies the landscape and the climatic conditions of the entire Marathwada region.

A] TOPOGRAPHY

Marathwada region comprising of eight districts, viz. Aurangabad, Beed, Hingoli, Jalna, Latur, Nanded, Osmanabad and Parbhani. The location of Marathwada is on 70 5' – 78 5' E longitude and 17 5' – 20 5' N latitude forms the part of the vast Deccan plateau all of India and is one of the six divisions of Maharashtra State.

The total area of Marathwada region is of 64,813 km. and is bounded by the Vidarbha region on the North, by Andhra Pradesh on the East and Southeast, by Karnataka on the South and by Western Maharashtra on the West. The entire region is situated at an average height of about 300-650 m. above Mean Sea Level gradually sloping from West to East, and is traversed by hill ranges origination from the Sahyadris in the West and the Satpudas in the North. Different ranges derive their names from local sources, the northern being Ajanta-Satmala ranges and the Southern the Balaghat ranges. In addition to these there are scattered hillocks of varying heights throughout the region, the highest peak, Surpal Nath (960 m. above MSL) being situated near Kannad in Aurangabad district.

B] GEOLOGY AND SOIL

The geological formations of the regions are characterized by the Deccan traps (Upper cretaceous to lower Eocene). The granitic rocks have given rise to red as well as black cotton soils. Major part of the region has deep black soil derived from the trap rock. Certain variations occur due to exposure and protection. A mixture of late rite and black soil, for example, is encountered in the eastern parts together with sandy soil along river banks. Most of the hill tops are bare or covered by coarse gravel while the low lying area accumulates clay and loam.

C] AGRICULTURE AND LAND USE

Out of the total 64,30,371 hectare geographical land, about 22,32,279 hectare is under forest, 6,22,838 hectare is not available for cultivation comprising of non agricultural, barren and pasture land. About 23,182 hectare is a fallow land and about 27,92,072 hectare land is net sown area. On the basis of fertility status, the entire land of Marathwada can be classified into 5 zones, the most fertile zone being in the southern parts of Osmanabad, the medium fertile zone scattered in Beed, Nanded and Osmanabad districts and most unfertile zone being situated in the south western parts of Aurangabad district.

Chemically the soils are below normal and alkaline in reaction. The pH range from 6.5 to 8.5 soluble salts as measured in terms of electrical conductivity are in normal range with an average E. C. of 0.3-0.67 mm hos/cm. Organic carbon content of most of the soils mostly low to medium. The phosphorus is within the medium range. Zinc available to the crops varies from 0.8 to 6.4 ppm. Thus, the soils in general, are rich in calcium and Magnesium carbonates and are deficient in nitrogen and phosphorus. This chemical composition is mainly responsible for cracking of the soil during summer.

D] CLIMATE AND RAINFALL

The weather, in general, can be said to be dry and moderately extreme. The average day temperature ranges from 27.7° C to 38.0° C while it falls from 26.9° to 20.0° C during night. Similarly summer and winter temperature also varies greatly. The highest during summer day being about 43.3° C while the lowest during winter nights about 6.0° C. Relative humidity is extremely low for major part of the year (between 35 to 50%) while it is highest (85%) during monsoon.

The rainy season is considered from middle of June to the end of September which is followed by a sultry period from about the end of September to the middle of November. The winter season commences from the middle of November and ends by the end of the January followed by a dry hot summer from February to middle of June. Summers are in general full of gusty winds.

The normal average rainfall is about 90 cm but is rather variable form year to year. It has decreased considerable in the recent years. The major amount of South West Monsoon precipitation is received on the West Coast of India due to the Sahyadris and only a small amount escapes through high hills which is received by the Deccan Plateau. The region thus falls in the rain shadow of the Sahyadris.

E] FLORA AND FAUNA

The climate of Marathwada region is generally hot and dry. It receives low rainfall. Some part of Marathwada having good fertile land with climate, so this particular region shows ample bio-diversity. Other part of the region also shows its importance by producing medicinal and other useful plants. Due to the lack of adequate rainfall, vegetation cover shows its diversified nature.

Aurangabad and Nanded districts covers more forest area than the others. There are *Teak, Sandalwood, Anjan, Moh, Tembhurni, Ai*n and other kinds of trees in these forests. In Aurangabad district, Gautala is a well known sanctuary, Jayakwadi is also famous for bird sanctuary. Thorny scrub forests are having major trees like *Bor, Babul, Aloe-voera* etc. A variety of wild animals can be seen in the above said forests like wild boars, Foxes, Hares etc. Leopards are seen but rarely. There are many monkeys and Baboons in the Marathwada area. The animals like Buffalos, Cows, Sheeps, Goats, poultry animals, fishes and prawns are cultivated in this region. The *famous variety of goat* from *Osmanabad district* and *'Devni Walu'* in Oxen family from *Latur district* are famous varieties and these are on of the assets of Marathwada region.

The major agricultural crops of the Marathwada region are Cotton, Oil seeds, Bajra, Jowar, Groundnut, Wheat, Safflower and irrigated crops like Sugarcane which is one of the important irrigated crop. The other irrigated crops like Grapes, Bananas, Sweet Limes and Oranges etc. are also grown in the soil of the Marathwada. In the soil of Marathwada region variety of vegetables like Brinjals, Tomatoes, Onions, Potatoes and Leafy vegetables are grown.

The Marathwada region is spread over 64,813 Sq.Km having population of 1,56,29,248 souls with population density 241 souls/ Sq. Km (as per 2001 census). The Godavari is the main river in the Marathwada region. The region is divided into Upper Godavari basin, Lower Godavari basin, Bindusara, Manjra, Manad, Terna, Teru and Lendi are tributaries of Godavari and Sukhna rivers.

In 1976, Maharashtra Pollution Control Board was established Regional Office at Aurangabad. This Regional Office encompassing eight districts of Marathwada region. The details of the Districts with area covers, population and forest cover is tabulated in Table no. 1.

Sr.no Name of the Area in (Sq. Population (in **Forest Cover** District Km) souls) (%) 1. Aurangabad 10107 2897013 7.6 07718 1612980 2. Jalna 1.3 3. 06517 1.53 Parbhani 1527715 4. Hingoli 04524 987160 5.99 5. Beed 10693 2161250 1.7 2876259 6. Nanded 10528 12.25 7. Osmanabad 07569 1486586 1.20 8. 2080285 0.54 Latur 07157

Table no. 1.

The process of population explosion, heavy industrialization and growing urbanization has succeeded in creating acute problems and environmental pollution. Maharashtra Pollution Control Board is the prescribed authority for implementing various environmental legislations to minimize the problems of environmental pollution. To achieve these goals, the organizational structure of Maharashtra Pollution Control Board in Aurangabad region is as shown in Table no. 2.

Table no. 2.

Regional Office-Aurangabad

| Sr.no. | Sub-Regional Offices AT. | Names of the Jurisdiction area |
|--------|--------------------------|--------------------------------|
| 1. | Aurangabad (SRO-I) | Aurangabad |
| 2. | Aurangabad (SRO-II) | Jalna, Beed Excluding Parli |
| | | Taluka |
| 3. | Latur | Latur, Osmanabad |
| 4. | Nanded | Nanded |
| 5. | Parbhani | Parbhani, Hingoli, and Parli |
| | | Taluka |

Note: Regional laboratory of this region is at Aurangabad.

1. POLLUTING AND WASTE GENERATING UNITS

Maharashtra Pollution Control Board has enforcing to implement various environmental enactments for the protection of Environment. Due to rapid population growth, urbanization and industrialization all our valuable natural resources are depleting at an alarming rate. Apart from the above sources there are many waste generating sources which ultimately lead to pollution.

Maharashtra Pollution Control Board at their different Regional and Subregional level grants consents/authorizations for prevention and Control of pollution. The rule and regulations i.e. Legislations and notifications which is implementing by the Board is as follows:

- 1) Water (Prevention & Control of Pollution) Act, 1974
- 2) Air (Prevention & Control of Pollution) Act, 1981
- 3) Water (Prevention & Control of Pollution) Cess Act, 1977
- 4) Environmental (Protection) Act, 1986
- 5) Hazardous Wastes (Management & Handling) Rules, 1989 and amendments thereto
- 6) Bio-medical Waste (Management & Handling) Rules, 1998 and amendments thereto
- 7) Recycling Plastic (Manufacture & Uses) Rules, 1999
- 8) Municipal Solid Waste (Management & Handling) Rules, 2000.

Although the Board has a wide range of functions to perform, the priority areas are identifying the polluting sources, ensuring quick disposal of applications for consent to establish/operate and for authorization for hazardous waste disposal under the three relevant acts, monitoring sources of pollution and environmental quality, checking compliance to standards by polluters and taking legal action against defaulters.

2. CLASSIFICATION OF INDUSTRIES

Ministry of Environment and Forests, Government of India, New Delhi vide its office memorandum dated 27-9-1988 has classified the industries into 'RED', 'ORANGE' and 'GREEN' categories on the basis of pollution load. This has been done for the purpose of consent management, frequency of monitoring (sampling) and inspection.

District wise categorically classification of the industries on the basis of their scale in the Aurangabad region is tabulated in the Table no.3

Table no. 3

| District | Category | Large | Medium | Small | Total |
|-------------|----------|-------|--------|-------|-------|
| Aurangabad | RED | 49 | 56 | 84 | 189 |
| | ORANGE | 8 | 19 | 258 | 285 |
| | GREEN | 3 | 6 | 1964 | 1973 |
| Total | | 60 | 81 | 2306 | 2447 |
| | RED | 7 | 7 | 57 | 71 |
| Jalna | ORANGE | 1 | | 50 | 51 |
| | GREEN | | | 408 | 408 |
| Total | | 8 | 7 | 515 | 530 |
| Beed (incl. | RED | 4 | | 6 | 10 |
| Tal:-Parli) | ORANGE | 1 | | 13 | 14 |
| | GREEN | | | 36 | 36 |
| Total | | 5 | | 55 | 60 |
| NANDED | RED | 12 | 9 | 57 | 78 |
| Nanded | ORANGE | | | 270 | 270 |
| | GREEN | | | 496 | 496 |
| Total | | 12 | 9 | 823 | 844 |
| | RED | 9 | 1 | 13 | 23 |
| Parbhani | ORANGE | 2 | | 85 | 87 |
| | GREEN | | | 233 | 233 |
| Total | | 11 | 1 | 331 | 343 |
| | RED | 6 | 1 | 7 | 14 |
| Hingoli | ORANGE | | | 41 | 41 |
| | GREEN | | | 90 | 90 |
| Total | | 6 | 1 | 138 | 145 |
| | RED | 13 | 5 | 40 | 58 |
| Latur | ORANGE | 1 | 1 | 223 | 225 |
| | GREEN | | | 453 | 453 |
| Total | | 14 | 6 | 515 | 736 |
| | RED | 14 | 6 | 26 | 46 |
| Osmanabad | ORANGE | 1 | 2 | 109 | 112 |
| | GREEN | | | 135 | 135 |
| Total | | 15 | 8 | 270 | 293 |

The industries mentioned above are spread all over in the Marathwada region. The details of polluting and non-polluting industries are given district wise and in concern with air, water and hazardous waste as below.

Table No.4

| District | Total I | No. of | polluting | Total no. of Non polluting industries |
|------------|---------|--------|-----------|---------------------------------------|
| | Water | Air | Haz.w. | |
| Latur | 66 | 220 | 13 | 453 |
| Osmanabad | 52 | 106 | 16 | 135 |
| Aurangabad | 242 | 199 | 138 | 1998 |
| Nanded | 52 | 226 | 19 | 520 |
| Jalna | 17 | 99 | 11 | 403 |
| Beed | 23 | 54 | 6 | 377 |
| Parbhani | 3 | 44 | 3 | 300 |
| Tq.Parli & | 5 | 15 | 3 | 45 |
| Beed | | | | |
| Hingoli | 5 | 34 | 3 | 112 |

INDUSTRIAL EXPANSION

Regional Office, Aurangabad encompassing 19 MIDC areas. Out of these Sub-Regional Office, Aurangabad-I includes Chikalthana, Waluj and Paithan MIDC area. These areas are industrially well developed and situated nearby Aurangabad. In Aurangabad city, MIDC – Shendra is emerging as Five Star industrial estates. The industries are rapidly developing and occupying private lands including Aurangabad – Paithan high-way. These industries produces medicines, beverages, cold-drinks, chemicals etc. other places occupied by sugar industries.

In the area of Sub-Regional Office, Aurangabad-II, major industrial estates are situated mainly in Jalna, prominently Iron (Steel), engineering, oil, ginning and pressing and sugar industries. In addition to these some places in Bhokardan & Beed also having some industrial estates. Regional Office, Aurangabad also covers 8 to 9 industrial estates on the co-operative basis.

Sub-Regional Office, Latur comprises Latur and Osmanabad districts. Mainly found oil, engineering units and other small industries with Sugar Industries and Stone Crushers.

Sub-Regional Office, Nanded covers mainly two MIDC estates sequentially MIDC – Nanded and MIDC Krushnur. Degloor area is also having small industrial estate. In Nanded and Dharmabad is having their industrial estates working on the co-operative basis. No. of Agro-production based seasonal industries occurred in the Nanded district.

There are industrial estates existing in the area of Parbhani, Hingoli, Wasmat, Gangakhed, Jintur, Selu and Parli area in the jurisdiction of Sub-Region Office, Parbhani. There are less pollution generating industries like ginning and pressing which is the specialty of this area. In this area a Thermal Power Station is also in working condition which is only one in the Marathwada.

Maharashtra Pollution Control Board issued 4937 consents to the industries. The details are as follows:

Large Scale Industries - 125
Medium Scale Industries - 140
Small Scale Industries - 4672

3. BIO-MEDICAL WASTE

Maharashtra Pollution Control Board, Aurangabad has implementing Bio-Medical Waste (Management & Handling) Rules as per the guidance of HQ as well as the rule itself. As per the record at Regional Office level at Aurangabad there are **1348 nos**. of hospitals existing in all over Marathwada which includes the hospitals above 100 beds. The total no. of 732 applications was received by this office for grant of BMW authorization out of which 728 hospitals have been issued Authorization. These hospitals generate near about 5040-kg/day of bio-medical waste of all types. Bio-medical waste is treated and disposed off by two ways, one is by installing separate treatment and disposal facility and other is by sending the waste to common facility of BMW. Near about 2300 kgs of Bio-medical waste is treated and disposed off by Common Facility of BMW. In this region, there are 567 hospitals have become members of Common facility.

Show cause notices were issued to the hospitals those which have not applied for authorization. Total no. of 579 hospitals were served with Show cause notice for the reason stated above by the Regional Officer, Aurangabad.

To treat and dispose the bio-medical waste generated from the hospitals, clinics and laboratories, there are 4 nos. of common facilities installed and some hospitals are adopted this technology at their own. They treat and dispose the bio-medical waste generated by their hospitals in their own facility.

A brief note on Common Facilities is as below.

- 1) M/s. Water Grace Products, Plot No. 122, Georai Patoda, Aurangabad.: This project is started and working in co-oporation with Aurangabad Municipal Corporation. There are 402 hospitals have become members of this project. The treatment facility treats near about 1000 kg of bio-medical waste within.
- 2) M/s. Akshay Industries, having address at C-8 MIDC Latur: The projects is treating near about 700 kg of bio-medical waste and have 114 nos. of hospitals as member of the facility.
- 3) Govt. Medical College and Shri Guru Govind Singh Hospital Nanded.: The 156 nos. of hospitals have become members of this common facility of the bio-medical waste. This project is treating near about 570 kg of bio-medical waste on daily basis.
- 4) M/s. Swami Ramanand Teerth Hospital Ambejogai: In this treatment facility Swami Ramanand Teerth Hospitals alongwith 2 other hospitals send their bio-medical waste for proper treatment and disposal purpose.

The following hospitals have adopted the technology for treatment and disposal of BMW at their own in their premises.

- 1) Dhoot Hospital, Aurangabad.
- 2) Govt. Hospital (Ghati) Aurangabad.
- 3) Cantonment Hospital, Chawani, Aurangabad.
- 4) M.I.T. Hospital, Latur.
- 5) General Hospital, Latur.
- 6) District Hospital, Beed.
- 7) Vithai Hospital, Beed.
- 8) District Hospital, Jalna.
- 9) Ganpati Netralay, Jalna
- 10) District Hospital, Parbhani.
- 11) District Hospital, Hingoli.12) General Hospital, Osmanabad
- 13) Mission Hospital, Jalna.

In addition to this all taluka and rural hospitals and primary health care centres adopted deep burial system to treat and dispose the generated bio-medical waste.

The district-wise details of healthcare facilities as well as no. of beds are tabulated in Table no. 5 as below.

Table no. 5

| | DISTRICT WISE HEALTH FACILITIES | | | | | | | | | | | |
|-----|---------------------------------|------------|-------------|---------------|--|--|--|--|--|--|--|--|
| | Name of the District | No. of | No. of beds | No. of | | | | | | | | |
| Sr. | | Health | | authorization | | | | | | | | |
| no. | | Facilities | | granted | | | | | | | | |
| 1. | Aurangabad | 977 | 4075 | 584 | | | | | | | | |
| 2. | Jalna | 74 | 1538 | 68 | | | | | | | | |
| 3. | Beed | 92 | 2157 | 82 | | | | | | | | |
| 4. | Parbhani | 127 | 1452 | 53 | | | | | | | | |
| 5. | Hingoli | 47 | 508 | 20 | | | | | | | | |
| 6. | Nanded | 262 | 3000 | 124 | | | | | | | | |

Note: Healthcare facilities identified in Latur and Osmanabad are with 756 nos. of beds.

4. MUNICIPAL SOLID WASTE

Now a days, Municipal Solid Waste and Domestic Waste Water is burning issue all over in India. Discharge of untreated/ partially treated sewage is a major source of water pollution. It contributes 80% of the pollution load. Demand of water supply, electricity and other basic amenities are stressing to the municipal authorities in Aurangabad region. This stress is due to the increasing population day to day. We need to seriously consider about treatment of waste water generated because the same is going to be used by the down stream population as water source.

Solid Waste Management is another burning issue in all over Maharashtra. Due to the mismanagement i.e. improper collection, transportation and disposal methods which leads to many environmental problems. In Aurangabad region there are 53 No. of District wise Local Bodies as shown in Table No.6.

Sr. No. Municipal District Councils Aurangabad 7 2. Jalna 4 Parbhani 8 3. 3 4. Hinaoli 5. Beed 6 6. Nanded 12 7. 7 Osmanabad 8. Latur 6 Total 53

Table No.6

The classification of Corporations/councils are as given below in Table No.7

Sr. No. Class of Corporations Numbers Council 1. Corporations 02 2. A-Class Council 05 **B-Class Council** 3. 07 4. C-Class Council 39

Table No.7

A summary statement of all local bodies indicating class, populations, quantum of MSW generations, status of authorization and Form – II submission by the local bodies has been prepared. The district wise abstract along with summary statement is enclosed herewith. MPC Board has issued authorizations to all 53 ULBs of Aurangabad region for setting up waste processing and land fill disposal facility after 31/12/2002.

The Board has extended financial assistance to two local bodies of Aurangabad region for setting up model / demo projects of MSW from Cess Funds of the Boards viz.

- 1. Ambad Municipal Council
- 2. Sonpeth Municipal Council

The details of Ambad Municipal Council and Sonpeth Municipal Council is given as below:

A. MUNICIPAL SOLID WASTE TREATMENT AND DISPOSAL IN RESPECT OF AMBAD MUNICIPAL COUNCIL, AMBAD, DIST: JALNA.

It is decided by the Board Office to have a Model Facility for the collection, treatment and disposal of municipal solid waste. To implement the Municipal Solid Waste (Management & Handling) Rules, 2000, Board has chosen M/s. Ambad Municipal Council, Ambad, Dist: Jalna for the development of model facility with the financial assistance of the Board As per the project proponent, the total cost of the project of Municipal Solid Waste is Rs. 82.5 Lacs. The total population of Ambad Municipal Council as per the Census, 2001is 26,096 and the generation of municipal solid waste is 7.5 MT/day.

The Memorandum of Understanding is made on 1st June, 2004 between the Maharashtra Pollution Control Board represented by the Member Secretary and Municipal Council, Ambad represented by the Chief Officer to undertake improvement in the Solid Waste Management Activities as defined in the application.

As per Clause 11 of the Memorandum of Understanding (MOU), a meeting was called by the Chief Officer of Municipal Council, Ambad on 8/7/2004. Regional Officer, MPCB, Aurangabad and Sub-Regional Officer, MPCB, Aurangabad-II were present during the said meeting. During the meeting, President of Local Body has nominated. Shri Sk. Makbul Sk. Chand as a Chairman for the monitoring committee. The Chief Officer of Municipal Council, Ambad has submitted the progress report to Regional Officer, MPCB, Aurangabad vide their letter dated 01/10/2004. The Sub-Regional Officer, MPCB, Aurangabad-II alongwith the Field Officer visited the site of Municipal Solid Waste located at S.No. 407 on 01/10/2004 to see the progress. The Regional Officer, MPCB, Aurangabad has issued letter to M/s. Ambad Municipal Council vide No. MPC/ROA/167 dated 24/01/2005 for completion of the project before 31/03/2005. Further, the Sub-Regional Officer, MPCB, Aurangabad-II and Chief Officer of Municipal Council, Ambad jointly visited the said site on 21/06/2005 and 06/08/2005 and observed the work in progress of model facility of MSW, which is given as below:

- 1. Approach road from the Ambad City to the MSW site has been constructed upto Pachod Road only and from Pachod Road to the site is under progress.
- 2. Compound wall having the height near about 5' with wire fencing on top has been completed.
- 3. 10 Nos. of pits of two rows for the vermin-composting have been completed and in operation.
- 4. Civil work of the Plat-form for receiving the municipal solid waste has been completed.
- 5. Plat-form for bio-composting vessel has been completed.
- 6. Out of five vessels, 4 Nos. of vessels are received at site and kept on the Plat-form. Received Sieve, compressor at site, however, shredder, conveyor belt, sand carts, tools, etc. are yet to receive at the site.
- 7. As per the CPCB norms, the work for the disposal of inorganic waste and other waste material is required to be completed, however, same is not started so far. Office building has been completed.
- 8. Construction and installation of the weigh bridge main gate at front side as well as at back side of the proposed site is not yet started.
- 9. The construction work of internal roads has been started and completed upto 30%.
- 10. The shed for receiving Plat-form of the municipal solid waste and vessel is not yet constructed and erected.
- 11. Municipal Authority has approached to the MSEB for power supply and follow-up from them.

During the visit to Municipal Council, it has been instructed to complete the work at the earliest and follow-up for getting the power connection so as to start the Model Facility of Vessel Technology. At present the Municipal Council are collecting the municipal solid waste and segregating manually and disposing by the vermi composting process at site.

B. MUNICIPAL SOLID WASTE TREATMENT AND DISPOSAL IN RESPECT OF SONPET MUNICIPAL COUNCIL, SONPET, DIST: PARBHANI.

The MPC Board has decided to install a model facility for the collection, treatment & disposal of municipal solid waste in Maharashtra State. To implement the Municipal solid Waste (Management & Handling)Rules, 2000, Board has decided to install a model facility at Sonpeth, Dist: Parbhani with the financial assistance from the Board. As per the Census, 2001, total population of Sonpeth Municipal Council is 13,022. Municipal solid waste generated from the Sonpeth Municipal Council is 2 MT/day.

As per the project proponent, the total cost of the project of Municipal solid waste is Rs.73.196 Lakhs. MPC Board has given Rs. 35 Lakhs to Sonpeth Municipal Council as its first installment. Sonpeth Municipal Council should bear at list 10% of the project cost.

The work of Municipal solid waste at Sonpeth is in progress. The present status of the project is as under.

- **1.** Leveling of land is completed.
- The compound of the MSW site is covered with barbed Wire.
- **3.** Bore well is taken for the water supply.
- **4.** The work of internal WBM road is completed.
- 5. The construction of two rooms, i.e. one for office and one for Watchman is completed.
- **6.** Foundation work of composting vessel is in progress.
- Two numbers of composting vessels are brought at site.
- 8. One compressor has been received at site.
- 9. One sieve has been received at site.
- 10. One shredder has been received at site.
- 11. Installation of electrical poles and lighting connection is completed.

In the monitoring committee meeting held on 20-06-2005, it was agreed by Municipal Council, Sonpeth to complete the foundation and other work from their 10 % share. They have started the foundation work. The work is under progress.

The status of Municipal Solid waste with water supply, domestic effluent, treatment and disposal facility is given district wise in Table no. 8 as below.

Table No.8

Municipal Corporation / Council (Aurangabad Region)

Aurangabad District

| Sr. No. | Name of Municipal Corp./Council | Population | Source of Water | Qty. of Water consumpti on MLD | Qty. of domestic waste water MLD | Total facility provided whether Adequate / inadequat e | Mode of effluents disposal | Qty. of Solid waste generati on MT/D | Treat facility for solid waste generat ed | Mode of solid waste disposal |
|------------|---------------------------------------|------------|--|---|--|--|----------------------------------|--|--|---|
| Α | В | С | D | Е | F | G | Н | l | J | K |
| 1. | Aurangabad Corporation | 872667 | Jaikwad Dam & Harsul Lake | 110 | 70 to 80 | STP Provided inadequat e | Kham & Sukhana River | 330 | No. treatme nt | Dumping on open ground & Vermi composting |
| 2. | Vaijapur Council | 37064 | Godavari Dava-Tat Kalwa Kopergeo n | 3.2 | 3.2 | STP not Provided | Narangi Saraga River | 8 | -//- | Composting & Open dumping |
| 3. | Kanad | 35000 | Ambadi Dam | 2.25 | 1.30 | _//_ | Nala | 8 | -//- | Composting & Disposal to farmer |
| 4. | Khultabad | 25794 | Girja river | 0.8 | 0.6 | -//- | Sultanpur River | 1.5 | -//- | Vermi- composting & Open dumping |
| 5. | Silod | 43867 | Khelna Dam | 30 | 20 | -//- | Purna River | 10 | -//- | Open land at selected site |

| 6. | Gangapur | 22360 | Jaikwadi | 1.6 | 1.2 | -//- | Nala at | 4.5 | -//- | Composting & |
|----|----------|-------|-----------|-----|-----|------|----------|-----|------|--------------|
| | | | Backwater | | | | Ganeshwa | | | Open |
| | | | Amalner | | | | d | | | dumping |
| 7. | Paithan | 34518 | Jaikwadi | 2.3 | 0.5 | -//- | Godavari | 2.0 | -//- | Vermi- |
| | | | Dam | | | | River | | | composting & |
| | | | | | | | | | | open dumping |
| | | | | | | | | | | |

Jalna District

| Sr. No. | Name Municipal Corp./Council | of | Population | Source of Water | of | Qty. Water consum on MLD | • | Qty. domesti waste water MLD | of c | Total facility provided whether Adequate / inadequat e | Mode of effluents disposal | Qty. of Solid waste generati on MT/D | Treat facility for solid waste generat ed | Mode of solid waste disposal |
|------------|------------------------------------|----|------------|---|----|-----------------------------------|---|--|---------|--|----------------------------|--|--|---|
| 1. | Jalna | | 235695 | Godawari river, Shahagad & Ganeshwa di | t | 19 | | 15.2 | | STP Not Provided | Open gutters | 50 | No. treatme nt | Vermi- composting & Open dumping |
| 2. | Ambad | | 26096 | Godavari River | | 3.5 | | 2.09 | | -//- | Jangi | 7.5 | Work under progress | -//- |
| 3. | Partur | | 29012 | Dudhana River | | 1.8 | | 1.12 | | -//- | Nala | 10 | -//- | -//- |
| 4. | Bhokardan | | 16950 | Kelna River | | 0.8 | | 0.2 | | -//- | Kelna river | 2.5 | -//- | -//- |

| | Hingoli District | | | | | | | | | | | |
|----|------------------|-------|---|-------|-----|------|------------|----|---------------------|--|--|--|
| 1. | Hingoli | 69642 | Kayadhu river, Siddheshw ari dam | 5.5 | 3.3 | -//- | Kayadhu | 20 | No treatme nt | Vermi- composting , Sanitary land filling & Open dumping | | |
| 2. | Kalamnuri | 20627 | Esapur Dam, Painganga river | 1.5 | 1.2 | -//- | Local Nala | 5 | -//- | -//- | | |
| 3. | Vasmat | 57360 | Purna river | 2.868 | 1.5 | -//- | Lendi nala | 8 | -//- | -//- | | |

Beed District

| Sr. No. | Name Municipal Corp./Council | of | Population | Source of Water | Qty. of Water consumpti on MLD | Qty. of domestic waste water MLD | Total facility provided whether Adequate / inadequat | Mode of effluents disposal | Qty. of Solid waste generati on MT/D | Treat facility for solid waste generat ed | Mode of solid waste disposal |
|------------|------------------------------------|----|------------|--------------------|---|--|---|----------------------------|--|--|--|
| 1. | Beed | | 138149 | Bindusara River | 16 | 12 | STP not Provided | Bindusara river | 29 | Work under progress | Sanitary land fill & open dumping |
| 2. | Ambajogai | | 69277 | Manjara river | 7 | 5 | -//- | Manjara river | 13 | _//_ | Composting, Vermi- composting, Sanitary land fill & Open dumping |
| 3. | Majalgaon | | 36665 | Sindfana | - | - | -//- | Open | 12 | -//- | Open |

| | | | river | | | | drain & outside village nala | | | dumping |
|----|--------|-------|------------------------------------|-------|-------|------|----------------------------------|----|------|---|
| 4. | Dharur | 18350 | Manjara dam at Dhanegao n | - | 1.3 | -//- | Dabdabi river & Ksar talab | 2 | -//- | Vermi- composting & Sanitary land filling |
| 5. | Georai | 28492 | Godawari river | 3.014 | 0.230 | -// | Godavari river | 6 | -//- | Composting & open dumping |
| 6. | Parli | 88510 | Godavari Basin | 7.5 | 6 | -//- | Saraswati river | 22 | -//- | Composting, Vermi- composting, Sanitary land fill |

Parbhani District

| Sr. No. | Name Municipal Corp./Council | of Population | Source of Water | Qty. of Water consumpti on MLD | Qty. of domestic waste water MLD | Total facility provided whether Adequate / inadequat e | Mode of effluents disposal | Qty. of Solid waste generati on MT/D | Treat facility for solid waste generat ed | Mode of solid waste disposal |
|------------|------------------------------------|---------------|-------------------------------|---|--|--|------------------------------|--|--|--|
| 1. | Parbhani | 259392 | Purna river | 18 | 10 | STP not Provided | Pisalsadru nala | 54 | No treatme nt | Vermi- composting, Sanitary land fill & Open dumping |
| 2. | Gangakhed | 40428 | Godavari river & Masoli | 5 | 3.5 | -//- | Bank of Godavari river | 12 | -//- | Sanitary land fill & Open dumping |

| | | | Dam | | | | | | | |
|----|---------|-------|------------------------------|-------|------|------|----------------|----|------------------|--|
| 3. | Manvat | 29218 | Zari Dam Dudhana river | 2.2 | 1.8 | -// | Local Nala | 12 | -//- | Vermi- composting, Sanitary land fill & Open dumping |
| 4. | Purna | 33231 | Purna river | 4.5 | 1.08 | -//- | Purna river | 7 | -//- | -//- |
| 5. | Selu | 39854 | Dhudhna river | 4.5 | 3.6 | -//- | Local Nala | 10 | -//- | -//- |
| 6. | Jintur | 38112 | Yeldari Dam | 2.5 | 2 | -//- | Local Nala | 10 | -//- | -//- |
| 7. | Pathri | 31997 | Godavari river | 1.685 | 1.08 | -//- | -//- | 7 | -//- | -//- |
| 8. | Sonpeth | 13022 | Godavari river | 0.4 | 0.35 | -//- | -//- | 2 | Work in progress | Vermi- composting, & Open dumping |

Nanded District

| Sr. | Name | of | Population | Source of | Qty. of | Qty. of | Total | Mode of | Qty. of | Treat | Mode of solid |
|-----|---------------|----|------------|-----------|---------|----------|------------|-------------|---------|--------------|---------------|
| No. | Municipal | | - | Water | Water | domestic | facility | effluents | Solid | facility for | waste |
| | Corp./Council | | | | consu | waste | provided | disposal | waste | solid | disposal |
| | | | | | mption | water | whether | • | genera | waste | |
| | | | | | MLD | MLD | Adequate / | | tion | generated | |
| | | | | | | | inadequat | | MT/D | | |
| | | | | | | | е | | | | |
| 1. | Nanded | | 430598 | Lower | 44.8 | 35.84 | STP not | Godavari | 10 | No | Open |
| | Corporation | | | Godavari | | | Provided | river | | treatment | dumping |
| 2. | Degloor | | 48024 | Lower | 4 | 3.2 | -//- | Lendi river | 10 | -//- | Vermi- |
| | | | | Godavari | | | | | | | composting & |
| | | | | Kardkhed | | | | | | | Open |

| | | | Project | | | | | | | dumping |
|-----|------------|--------|--------------------------------------|------|-------|------|---|-----|------|--|
| 3. | Loha | 20135 | Lower Godavari Sunegaon Dam | 1.3 | 1.04 | -//- | Local Nala | 8 | -//- | -//- |
| 4. | Kandhar | 206768 | Manar river | 1.4 | 1.12 | -//- | Manar river | 8 | -//- | -//- |
| 5. | Mukhed | 25936 | Lower Godavari Kundrala Dam | 1.5 | 1.2 | -//- | Mohnavati Nala meels to Manar river | 6 | -//- | _//_ |
| 6. | Mudkhed | 25936 | LG, Sita River & Pipalkawtha | 1.0 | 0.8 | -//- | Local Nala | 5.6 | -//- | -//- |
| 7. | Umari | 11151 | Lower Godavari | 0.55 | 0.44 | -//- | -//- | 3 | -//- | -//- |
| 8. | Kundalwadi | 14355 | LG Elegaon River | 1.2 | 0.96 | -//- | -//- | 3 | -//- | -//- |
| 9. | Kinwat | 24868 | Paingaon river | 1.0 | 0.8 | -//- | -//- | 5 | -//- | -//- |
| 10. | Hadgaon | 23328 | LG river | 2.0 | 1.6 | -//- | -//- | 7 | -//- | Open dumping |
| 11. | Dharmabad | 29942 | Manjra river | 1.0 | 0.8 | -//- | Rameshw ar talaw | 5 | -//- | vermi composting & Open dumping |
| 12. | Biloli | 13430 | | 0.28 | 0.225 | -//- | Manjara talaw | 2.6 | -//- | -//- |

Osmanabad District

| | | | | | US | manabad Dis | SUICU | | | | |
|------------|------------------------------------|----|------------|----------------------------------|--|--|--|----------------------------|---|--|--|
| Sr. No. | Name Municipal Corp./Council | of | Population | Source of Water | Qty. of Water consu mption MLD | Qty. of domestic waste water MLD | Total facility provided whether Adequate / inadequat e | Mode of effluents disposal | Qty. of Solid waste genera tion MT/D | Treat facility for solid waste generated | Mode of solid waste disposal |
| 1. | Osmanabad | | 80616 | Lower Godavari River Basin | 3.44 | 2.75 | STP Not Provided | Bhagvati river | 15 | No treatment | Composting & Sanitary land filling |
| 2. | Bhoom | | 17509 | Banganga Lake | 0.7 | 0.56 | -//- | Banganga lake | 2 | Work in progress | Composting & land filling |
| 3. | Paranda | | 16987 | Sinha River | 0.3 | 0.24 | -//- | Sinha river | 3 | No treatment | Open dumping |
| 4. | Tuljapur | | 31714 | Lower Bhima River | 0.715 | 0.655 | -//- | Bori Nala | 20 | -//- | Open dumping |
| 5. | Naldurg | | 15993 | Lower Bhima River | 0.65 | 0.52 | -//- | -//- | 2 | -//- | Vermi- composting & land filling |
| 6. | Kallam | | 23016 | Lower Godavari Basin | 0.432 | 0.4 | -//- | Manjara river | 2 | -//- | Open dumping |
| 7. | Murum | | 17232 | -//- | 0.35 | 0.3 | -//- | Benitara river | 5 | -//- | Segrigation & composting |

Latur District

| | | | | | | Latur Distric | | | | | |
|------------|------------------------------------|----|------------|--------------------------------|--|--|--|----------------------------------|---|--|--|
| Sr. No. | Name Municipal Corp./Council | of | Population | Source of Water | Qty. of Water consu mption MLD | Qty. of domestic waste water MLD | Total facility provided whether Adequate / inadequat e | Mode of effluents disposal | Qty. of Solid waste genera tion MT/D | Treat facility for solid waste generated | Mode of solid waste disposal |
| 1. | Latur | | 299985 | Manjara Dam at Dhanegaon | 3 | 3 | STP not provided | Disposal on land | 81 | No treatment | Composting Vermi- composting & Sanitary land filling |
| 2. | Udgir | | 100000 | Banshlki Dam Bhopni Dam | 1.86 | 1.8 | -//- | River Basin | 30 | -//- | Composting & Sanitary land filling |
| 3. | Ausa | | 23876 | Tawerja Dam | 0.36 | 0.3 | -//- | Tawerja Dam | 1.5 | -//- | Open Dumping |
| 4. | Umarga | | 25130 | Ashhta Medium Project | 2.2 | 1.575 | -//- | Benitara river | 15 | -//- | Composting & Sanitary land filling |
| 5. | Ahmedpur | | 35786 | Nandura Dam & Thodga Dam | 1.4 | 1.3 | -//- | Wavi river | 5 | -//- | Composting & Sanitary land filling |
| 6. | Nilanga | | 31660 | Dhanora, Terna River | 0.773 | 0.618 | -//- | Terna river | 1.5 | -//- | Composting |

5. **SURVEILLANCE AND MONITORING:**

Regional Office Aurangabad under the guideline of the Board and for checking compliance collects water, air, hazardous waste samples from various industries, rivers, lakes, nallas etc. In this respect during the year 2004-2005 this office has collected 2221 nos. of samples from all Marathwada region excluding Latur and Osmanabad districts. Details of the samples collected are given as below in Table no. 9.

Table no. 9

| Types of sample/ Name of Office | Joint vigilance sample | Haz. Wast e | Stack emission | Ambient air | Nois e | Envi. Sampl e (water | Total |
|--|------------------------|-------------------|-------------------|----------------|-----------|-------------------------------|-------|
| A'Bad – SRO- I | 780 | 186 | 4 | 201 | 1 | 84 | 1261 |
| A'Bad – SRO- II | 137 | 26 | 38 | 55 | 2 | 18 | 276 |
| SRO- Latur | | 1 | 1 | | 1 | | |
| SRO - Nanded | 144 | 16 | 05 | 24 | 04 | 109 | 302 |
| SRO - Parbhan i | 187 | 04 | 75 | 94 | - | 22 | 382 |
| Total 2221 | | | | | | | |

6. **ENVIRONMENTAL QUALITY:**

River Regulation Zones (RRZ): Godavari, Purna, Karpura, Dudhana, Yelganga, Dhord, Kundlika, Sindhaphana, Manjra, Terna, Manar, Tiru, all above mentioned rivers comes under Aurangabad Region. Classification of these rivers is as per RRZ policy adopted by the State Govt. All these river stretches come under A – II class.

RIVER BASIN / SUB-BASIN

| Sr. | Name of Bivor | rna — State Broader Origin to confluence Godavari River. | | | | | |
|-----|---------------|---|---|--|--|--|--|
| No. | Name of River | A-I Class | A-II Class | | | | |
| 1. | Godavari | _ | D/S of Jaikwadi dam to State Broader | | | | |
| 2. | Purna | _ | Origin to confluence with Godavari River. | | | | |
| 3. | Dhudhna | _ | -//- | | | | |
| 4. | Kundlika | _ | -//- | | | | |
| 5. | Karpura | _ | -//- | | | | |
| 6. | Yalganga | _ | -//- | | | | |
| 7. | Dhora | _ | -//- | | | | |
| 8. | Sindhaphana | _ | -//- | | | | |
| 9. | Manjara | _ | -//- | | | | |

| 10. | Terna | _ | -//- |
|-----|-------|---|-------------|
| 11. | Manar | _ | -//- |
| 12. | Tiru | _ | -//- |

Regional Office, Aurangabad alongwith industrial water samples collected environmental samples i.e. samples from the river to check the quality of river water which comes in this region during the year 2004-2005. Details of the same is given as below in Table no. 10.

Table No.10

River water quality in Aurangabad Region during the year 2004-05.

| Name of | Sampling | | рН | | | DO | | | BOD | | | COD | |
|--------------------------------|----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| River | station | Min. | Max. | Avg. |
| Goadawar i River (Upper) | Kaigaon Toka | 7.34 | 8.52 | 7.93 | 6.20 | 7.60 | 6.9 | 1.8 | 4.2 | 3.0 | 16.0 | 18.0 | 17.0 |
| Godawari River (Lower) | U/S of Paithan Town | 7.1 | 8.55 | 7.82 | 6.20 | 7.11 | 6.65 | 1.20 | 4.20 | 2.7 | 4.0 | 20.0 | 12.0 |
| | D/S of Paithan Town | 7.03 | 8.51 | 7.77 | 6.30 | 7.27 | 6.78 | 1.98 | 4.8 | 3.39 | 8.0 | 16.0 | 12.0 |
| | Wadwali Village | 7.65 | 8.26 | 7.95 | 6.60 | 6.90 | 6.75 | 4.0 | 12.0 | 8.0 | 8.0 | 20.0 | 14.0 |
| | Shahgad Bridge | 7.1 | 8.04 | 7.57 | 3.6 | 7.66 | 5.63 | 2.6 | 12.0 | 7.3 | 8.0 | 32.0 | 20.0 |
| | U/S of Gangkhad Town | 7.5 | 8.1 | 7.8 | 6.8 | 7.7 | 7.25 | 2.0 | 2.4 | 2.2 | 12.0 | 16.0 | 14.0 |
| | D/S of Gangkhad Town | 7.1 | 7.60 | 7.35 | 6.80 | 7.34 | 7.07 | 1.4 | 4.6 | 3.0 | 8.0 | 36.0 | 22.0 |
| | U/S of Nanded Town | 4.72 | 8.65 | 6.68 | 4.4 | 4.68 | 6.04 | 2.0 | 2.5 | 5.75 | 8.0 | 40.0 | 24 |

| Name of | Sampling | рН | | | | DO | | | BOD | | | COD | |
|-------------------|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| River | station | Min. | Max. | Avg. |
| | D/S of Nanded Town | 7.02 | 8.62 | 7.82 | 1.86 | 7.04 | 4.45 | 4.0 | 22.0 | 13.0 | 22.0 | 80.0 | 46.0 |
| Dudhana River | Golapangir Village | 6.95 | 7.20 | 7.07 | 6.15 | 6.98 | 6.56 | 2.4 | 12.0 | 7.2 | 8.0 | 24.0 | 16.0 |
| | Rohina Village | 7.12 | 8.07 | 7.59 | 6.50 | 7.02 | 6.76 | 4.0 | 6.0 | 5.0 | 12.0 | 20.0 | 16.0 |
| | Moregaon Village | 7.60 | 8.2 | 7.9 | 7.1 | 7.6 | 7.35 | 1.4 | 1.5 | 1.45 | 12.0 | 20.0 | 16.0 |
| | Zari Village | 6.80 | 7.3 | 7.05 | 6.6 | 7.1 | 6.85 | 2.2 | 4.0 | 3.1 | 20.0 | 36.0 | 28.0 |
| Purna River | Jafrabad Town | 8.30 | 8.37 | 8.33 | 6.23 | 6.52 | 6.37 | 2.0 | 4.0 | 3.0 | 12.0 | 16.0 | 14.0 |
| | Raher Village | 6.90 | 7.25 | 7.07 | 6.00 | 6.92 | 6.46 | 3.4 | 7.0 | 5.2 | 12.0 | 40.0 | 26.0 |
| | Yeldari Dam | 6.90 | 7.49 | 7.19 | 7.1 | 7.4 | 7.25 | 2.6 | 4.2 | 3.4 | 12.0 | 32.0 | 22.0 |
| | Matha Village | 6.82 | 7.63 | 7.22 | 4.9 | 7.3 | 6.1 | 2.8 | 7.5 | 5.15 | 12.0 | 20.0 | 16.0 |
| | Rahati Village | 7.12 | 9.43 | 8.27 | 4.85 | 5.2 | 5.02 | 4.0 | 6.5 | 5.25 | 20.0 | 32.0 | 26.0 |
| Sindafan River | D/S of Majalgaon | 6.92 | 8.39 | 7.65 | 6.87 | 7.1 | 6.98 | 4.0 | 12.0 | 8.0 | 1.6 | 20.0 | 10.8 |
| Manar Rivier | Sangvi Village | 6.75 | 7.71 | 7.23 | 6.94 | 7.23 | 7.08 | 3.0 | 4.0 | 3.5 | 8.0 | 12.0 | 10.0 |

| Name of | Sampling | рН | | | | DO | | | BOD | | | COD | | |
|------------------|----------------------|------|------|------|------|------|------|------|------|-------|------|-------|-------|--|
| River | station | Min. | Max. | Avg. | Min. | Max. | Avg. | Min. | Max. | Avg. | Min. | Max. | Avg. | |
| Manjara River | D/S of Kalamb | 6.80 | 7.38 | 7.09 | 6.45 | 7.35 | 6.9 | 2.2 | 3.0 | 2.6 | 12.0 | 24.0 | 18.0 | |
| | Bhatkheda Village | 6.59 | 7.73 | 7.16 | 6.15 | 6.91 | 6.53 | 2.4 | 4.0 | 3.2 | 8.0 | 12.0 | 10.0 | |
| Sukhana River | Chiklathan a Bridge | 7.36 | 7.82 | 7.59 | 0.52 | 1.32 | 0.92 | 22.0 | 47.5 | 34.75 | 80.0 | 208.0 | 144.0 | |
| | Sukhana Project | 7.54 | 8.59 | 8.06 | 6.70 | 6.78 | 6.74 | 2.50 | 3.36 | 2.93 | 8.0 | 20.0 | 14.0 | |

A. GEMS & MINARS PROJECTS:

Global Environmental Monitoring Scheme & Monitoring of India National Aquatic Resources i.e. GEMS & MINARS these two projects are assigned by the central pollution control Board to Maharastra Pollution Control Board for the assessment of River water quality. Under the MINARS programme the water samples from major river are to be collected & analysed. The list of the sampling stations in Aurangabad-Region is given below.

River: Godavari:

- i) Jaikwadi Dam at Paithan.
- ii) Godavari-River at Dhangar Takli.
- iii) Godavari-River at Raher.

As well as GEMS project is assigned to MPCB by World Health Organization as per the guidelines & control of CPCB. Under this programme the station of Godavari River at Dhalegaon is given for water quality assessment which is already gauging – Station of flood control Dept.

During the year 2004-2005 48 samples were collected & analyzed under GEMS & MINARS PROJECT. Details are presented below in Table No. 11.

<u>Table no. 11</u>

<u>GEMS & MINARS SAMPLES COLLECTED DURING THE YEAR 2004-2005</u>.

| Sr. | Sampling station | pH | | | DO | | | BOD | | | |
|-----|---------------------------------|------|------|------|------|------|------|------|-----|------|--|
| No. | | Min. | Max | Avg. | Min. | Max | Avg. | Min. | Max | Avg. | |
| 1 | Godavari River at Dhangar Takli | 7.1 | 8.53 | 7.81 | 4.86 | 7.32 | 6.09 | 1.6 | 4.2 | 2.9 | |
| 2 | Godavari River at Raher | 7.0 | 8.28 | 7.64 | 4.53 | 7.69 | 6.11 | 2.0 | 4.7 | 3.35 | |
| 3 | Godavari River at Dhalegaon | 7.1 | 8.5 | 7.8 | 5.68 | 7.12 | 6.4 | 1.8 | 4.2 | 3.0 | |
| 4 | Godavari River at Dhalegaon | 7.1 | 8.5 | 7.8 | 5.68 | 7.12 | 6.4 | 1.8 | 4.2 | 3.0 | |

Table no. 12

Details of Ambient Air Quality in Aurangabad Region during the year 2004-2005

| District Name of Location | | SOx | | NOx | | SPM | | | Со | | | | |
|---------------------------|---|-------|--------|--------|-------|-------|-------|--------|--------|---------|------|------|------|
| | | Min. | Max | Avg. | Min. | Max | Avg. | Min. | Max | Avg. | Min. | Max | Avg. |
| Aurangabad | Govt. Milk Scheme | 14.40 | 25.81 | 18.76 | 15.30 | 22.00 | 18.88 | 120.20 | 230.0 | 170.20 | 1.79 | 3.17 | 2.37 |
| | Dr. Pargaonkar Hospital | 13.61 | 17.09 | 14.31 | 14.43 | 21.92 | 16.95 | 253.0 | 353.78 | 303.78 | 1.49 | 2.75 | 1.76 |
| | Seven Hill Fly-Over | 13.50 | 15.00 | 13.97 | 13.23 | 21.58 | 16.25 | 290.0 | 390.42 | 340.52 | 1.44 | 2.86 | 1.90 |
| | MIDC Chikalthana Near Wockhardt Ltd. | 13.45 | 16.38 | 13.99 | 18.11 | 27.42 | 21.21 | 100.15 | 150.75 | 120.95 | 1.29 | 2.78 | 1.69 |
| | MIDC Waluj Near M/s.Endurance System | 23.05 | 23.54 | 23.27 | 17.79 | 23.65 | 20.18 | 270.10 | 340.50 | 301.50 | 0.93 | 1.59 | 1.12 |
| Jalna | M.I.D.C. Jalna, Near N.R.B. Bearing Ltd. | 2.0 | 22.07 | 12.19 | 3.00 | 12.5 | 8.223 | 71.03 | 693.85 | 330.71 | | | |
| | M.I.D.C. Jalna Near Priyanka Steel Ind. D-68/2, Addl. MIDC Jalna | 27.0 | 171.63 | 99.315 | 4.00 | 23.74 | 13.87 | 532.2 | 582.01 | 552.105 | | | |

B. Performance Report of the Regional Laboratory

Regional Office, Aurangabad after collection of the samples from all over the Marathwada region were submitted to Regional Laboratory. The detailed status of the samples received and analyzed are given as below in Table No.12

Table No.13

| Month | Sample | Samples | Total | Total | Samples |
|-------|-------------|----------|----------|----------|-------------|
| | Previous | Received | samples | samples | pending for |
| | pending for | | for | analyzed | analysis |
| | analysis | | analysis | | |
| Apr- | Nil | 139 | 139 | 112 | 15 |
| 2004 | | | | | |
| May- | 15 | 66 | 81 | 37 | 22 |
| 2004 | | | | | |
| June- | 22 | 161 | 183 | 82 | 58 |
| 2004 | | | | | |
| July- | 58 | 179 | 237 | 114 | 42 |
| 2004 | | | | | |
| Aug- | 42 | 214 | 256 | 177 | 33 |
| 2004 | | | | | |
| Sep- | 33 | 154 | 187 | 157 | 13 |
| 2004 | | | | | |
| Oct- | 13 | 231 | 244 | 201 | 19 |
| 2004 | | | | | |
| Nov- | 19 | 191 | 210 | 166 | 10 |
| 2004 | | | | | |
| Dec- | 10 | 179 | 189 | 137 | 28 |
| 2004 | | | | | |
| Jan- | 28 | 266 | 294 | 207 | 50 |
| 2005 | | | | | |
| Feb- | 50 | 220 | 270 | 189 | 67 |
| 2005 | | | | | |
| Mar- | 67 | 223 | 290 | 175 | 93 |
| 2005 | | | | | |
| Total | 357 | 2223 | 2580 | 1754 | 450 |

7. POLLUTION CONTROL IMPLEMENTATION

Aurangabad Regional Office is covered by Godavari River and its turbutories. These rivers are affected by the pollution problem due to nearby situated industries like pulp and paper industries, sugar industries, distilleries etc.

To avoid the pollution of these rivers some control measures are undertaken to enforce, which are $\,-\,$

- 1. Efforts are taking to alternative discharging facility for the domestic waste water of the local bodies.
- 2. Use of waste water for gardening and agricultural purpose.

- 3. Godavari River at Nanded is covered in National River Action Plan and work is in progress. Domestic waste water facility is also proposed for Nanded.
- 4. Samples are collected form various sampling stations like Jayakwadi dam on Godavari river, Dhalegaon, Dhangar Takli and Raher etc. for testing water quality. The analysis reports are send to Central Pollution Control Board.

A. Complaints received & investigated during the year 2004-05

The complaints received from all over Marathawada region of air, water, noise and solid waste district wise is given as below in Table no. 14.

Table no. 14

| 10.010 1.01 1. | | | | | | | | |
|-----------------------------------|-----|-------|-------|----------------|--|--|--|--|
| Complaints received to the Office | Air | Water | Noise | Solid Waste | | | | |
| Aurangabad SRO – | 14 | 4 | 7 | 2 | | | | |
| Aurangabad SRO – II | 2 | 1 | 1 | | | | | |
| Nanded | 6 | 7 | 1 | 1 | | | | |
| Parbhani | 1 | | | | | | | |
| Latur | 9 | | | | | | | |

B. <u>Details of Legal Action taken</u>

The Board has empowered the Regional Officer to take action against the defaulter industries under Water (P & CP) Act, 1974, and Air (P & CP) Act, 1981. The details of action taken by Regional Office, Aurangabad are as below.

| Particulars | Final Directions | | | Proposed Directions | | | Show Cause |
|-----------------------------|------------------|-----|-----------------|------------------------|-----|-----------------|---------------|
| | 33A | 31A | 33A & 33A | 33A | 31A | 33A & 33A | Notices |
| Issued to the industries | 05 | 33 | 80 | 26 | 23 | 51 | 210 |
| Issued to Health facilities | | | | | | | 579 |
| Issued to Brick Kilns | | 697 | | | | | |

C. PUBLIC HEARING:

In Aurangabad region 5 public hearing were conducted successfully during the year 2004-2005. Within these five public hearings 3 were from Aurangabad Sub-Region and remaining 2 were from Latur Sub-Region.

8. BRIEF DESCRIPTION ABOUT THE MAJOR INDUSTRIES IN MARATHWADA REGION

In recent years there has been perceptible change in the implementation and enforcement in environmental acts, rules and regulations. Number of major industries located in Marathwada region have installed pollution control system for compliance of rules and regulations and this is due to steps and follow up action taken by Maharashtra Pollution Control Board. In Marathwada region, there are sugar and distillery units, steel plants, pharmaceuticals, electroplating, engineering, pulp and paper mills, chemicals, thermal power plants, breweries, etc. The brief description of all these major industries is as follows:

1. Sugar & Distilleries:

Most of the sugar and distilleries are concentrated and located in Beed, Latur and Parbhani districts of the Marathwada region, viz.

- a) M/s. Vaidyanath Sahakari Sakhar Karkhana Ltd., Parli, Dist: Beed.
- b) M/s. Majalgaon Sahakari Sakhar Karkhana Ltd., Majalgaon, Dist: Beed.
- c) M/s. Manjra Shetkari Sahakari Sakhar Karkhana Ltd., Dist: Latur.
- d) M/s. Purna Sahakari Sakhar Karkhana Ltd., Purna, Dist: Parbhani.
- e) M/s. Samarth Sahakari Sakhar Karkhana Ltd., Ankushnagar, Dist: Jalna.

Most of the sugar industries in Marathwada region have installed effluent treatment plant and air pollution control system. From last 2 – 3 years about 70% sugar industries were not in operation due to lack of sugar cane.

One major distillery, M/s. Shaw Wallace Ltd., located in MIDC Area, Chikalthana, Dist: Aurangabad has installed Reverse Osmosis and Composting System for treatment of spent wash generated from their process and this is due to directions and regular follow-up action taken by the Board from time to time.

M/s. Pioneer Distilleries Ltd., Balapur, Tq. Dharmabad, Dist: Nanded has installed Bio-digester as a primary treatment followed by secondary treatment consists of anaerobic filter, spray basis, aeration tank and secondary clarifier for treatment of spent wash.

2. Steel Plants

Most of the steel plants are located in Jalna MIDC of Marathwada egion viz.

- a) M/s. SRJ Peety Steel Alloys Pvt. Ltd.
- b) M/s. Matsyodari Steel Alloys Pvt. Ltd.
- c) M/s. Mauli Steel Alloys Pvt. Ltd.,

All these steel plants have installed air pollution control system, but it is necessary to upgrade the existing air pollution control system so as to avoid

damage of environment and all these steel plants agreed to install upgraded air pollution control system as per the suggestions and guidelines of National Metallurgical Laboratory, Jamshedpur within one year and it will be helpful to avoid air pollution in Jalna MIDC Area. For control of air pollution due to these steel plants, the Board has taken lot of steps in last two years in the form of legal actions against these steel plants and regular follow-up for installation of adequate air pollution control system.

3. Thermal Power Plant

There is only one Thermal Power Plant in Marathwada region, which is located at Parli, Dist: Beed. The electricity generation capacity of said Thermal Power Plant is 690 MW. The daily coal consumption of the said plant is 12000 MT. The said plant has provided effluent treatment plant comprising of neutralization and settling for industrial effluent and for domestic effluent sewage treatment plant is provided. Most of the treated industrial effluent is being recycled in the process. For control of air pollution electrostatic precipitator to all boilers is provided. Presently, 23% of fly ash generated from the said plant is being utilized by brick manufacturers.

3. Breweries

There are five numbers of breweries in Marathwada region, viz.

- a) M/s. Fosters India Ltd., MIDC Waluj, Dist: Aurangabad.
- b) M/s. Aurangabad Breweries Ltd.,, MIDC, Waluj, Dist: Aurangabad.
- c) M/s. Pals Distilleries Ltd., MIDC, Waluj, Dist: Aurangabad.
- d) M/s. Lilasons Industries Ltd., MIDC, Waluj, Dist: Aurangabad.
- e) M/s. Inertia Breweries Ltd., MIDC, Waluj, Dist: Aurangabad.

All these breweries have installed primary, secondary and tertiary treatment system for the industrial effluent generated from their processes. The treated effluent is being utilized on land for gardening.

4. Bulk Drugs & Pharmaceuticals

Most of the Bulk Drugs and Pharmaceutical Industries are concentrated and located in Aurangabad district viz.

- a) M/s. Orchid Chemicals & Pharmaceuticals Ltd., MIDC Waluj, Aurangabad.
- b) M/s. Innotech Pharma Ltd., MIDC Waluj, Aurangabad.
- c) M/s. Paschim Chemicals Pvt. Ltd., MIDC Waluj, Aurangabad.
- d) M/s. Ariane Orgachem Pvt. Ltd., MIDC Waluj, Aurangabad.
- e) M/s. Godavari Drugs Ltd., MIDC, Nanded.
- f) M/s. Wockhardt Ltd., MIDC, Chikalthana, Aurangabad.

M/s. Orchid Chemicals & Pharmaceuticals Ltd. has installed Primary, secondary and tertiary treatment system followed by Reverse Osmosis System and Mechanical type of multi-stage evaporator for treatment of effluent generated from their process. All the Bulk Drugs manufacturing industries have installed primary, secondary and tertiary treatment system for treatment of industrial effluent as well as scrubbing system for extraction of process emission. All the Bulk Drugs manufacturing industries have obtained the membership of CHWTSDF and sending their hazardous waste to said facility for treatment and disposal.

In Aurangabad district there are number of pharmaceutical formulation industries, viz.

- a) M/s. Ajanta Pharma Pvt. Ltd., MIDC, Paithan, Dist: Aurangabad.
- b) M/s. Ajanta Pharma Pvt. Ltd., MIDC Chikalthana, Dist: Aurangabad.
- c) M/s. Workhardt Ltd., MIDC, Waluj, Dist: Aurangabad.
- d) M/s. Baxter India Ltd., MIDC, Waluj, Dist: Aurangabad.
- e) M/s. Shreya Life Sciences Pvt. Ltd., MIDC, Waluj, Dist: Aurangabad.
- f) M/s. Lupin Laboratories Ltd., MIDC Chikalthana, Aurangabad.
- g) M/s. Savera Pharmaceuticals Pvt. Ltd., MIDC Waluj, Dist: Aurangabad.
- h) M/s. Atra Pharmaceuticals Pvt. Ltd., MIDC Waluj, Dist: Aurangabad.
- i) M/s. Concept Pharmaceuticals Ltd., MIDC Chikalthana, Aurangabad.

All these pharmaceutical formulation plants have installed primary, secondary and tertiary treatment system for the treatment of industrial effluent generated from their processes.

5. Electroplating Plants

Most of the major electroplating plants are located in MIDC Waluj Area, Aurangabad viz.

- a) M/s. Bajaj Auto Ltd., MIDC Waluj, Dist: Aurangabad.
- b) M/s. Endurance Systems (I) Pvt. Ltd., MIDC Waluj, Dist: Aurangabad.
- c) M/s. Endurance Transmission Systems (I) Pvt. Ltd., MIDC Waluj, Dist: Aurangabad.
- d) M/s. Aurangabad Electricals Pvt. Ltd., MIDC Area, Waluj, Dist: Aurangabad.
- e) M/s. Badve Engineering Pvt. Ltd., Naigavan, Tq. Paithan, Dist: Aurangabad.

All the major electroplating plants have installed chrome and nickel recovery system as well as primary, secondary and tertiary treatment system for treatment of industrial effluent generated from their processes. For air pollution control, they have installed scrubbing system for control of process emission. All the major electroplating plants have obtained the membership of CHWTSDF and sending their hazardous waste to the said facility for treatment and disposal.

6. Pulp & Paper Mill

Large Pulp & Paper industries existing in Marathwada region are

- a) M/s. Nath Pulp & Paper Mills Ltd., Paithan, Dist: Aurangabad.
- b) M/s. Kaygaon Paper Mill Pvt. Ltd., Kaygaon, Tq. Gangapur, Dist: Aurangabad.
- c) M/s. Rawasa Laminates Ltd., Tq. Gangapur, Dist: Aurangabad.

Recently, M/s. Nath Pulp & Paper Mills Ltd., Paithan, Dist: Aurangabad has stopped the bagasse based pulping activity and only waste paper based pulping activity is in process. Remaining all the paper mills are waste paper based units.

Most of the waste paper based unit have installed the effluent treatment plant and are recycling the effluent to the maximum extent. M/s. Nath Pulp & Paper Mills Ltd. has installed caustic recovery plant for the effluent generated from bagasse pulping activity. All the paper industries have installed air pollution control system to the coal fired boiler.

9. THRUST AREAS - ACTION TAKEN

- 1) Fly Ash Utilization: In Marathwada region there is only one Thermal Power Plant located at Parli (V), Dist: Beed. Maharashtra Pollution Control Board is prescribed authority for the implementation of Fly Ash Utilization Regulations. Presently, only 23% fly ash is being utilized by the brick manufacturers within the periphery of 100 km. of the said plant. The utilization of fly ash needs to be attended on priority basis. The Board has taken action against the brick manufacturing units for non-utilization of fly ash. The Board has also made regular correspondence and follow-up with the District Collector & Tahsildar for utilization of fly ash by brick kilns within a periphery of 100 km.
- M/s. Nath Pulp & Paper Mills Ltd. & M/s. Aurangabad Paper Mills Ltd. and problems faced by the local residents: Previously, M/s. Nath Pulp & Paper Mills Ltd. and Aurangabad Paper Mills Ltd. were fully bagasse based pulping activity and at that time, the problem of surface water and ground water pollution were raised. At that time, the Board had taken legal action against these industries and also prosecuted both these industries in the court of law. Presently, M/s. Aurangabad Paper Mills Ltd. has stopped their production since last 4 5 years and M/s. Nath Pulp & Paper Mills Ltd. has installed caustic recovery plant for treatment of effluent generated from bagasse pulping section and recently the said industry has stopped bagasse pulping since one year. The said industry is in operation by using waste paper as a raw material and the problem of pollution is minimized upto some extent and no complaint received by this office since last two years.
- 3) M/s. Shaw Wallace Distilleries Ltd. & Problems faced by nearby residents: The industry is located in MIDC Chikalthana, Aurangabad and there were complaints of ground water pollution of nearby residents and farmers. The Maharashtra Pollution Control Board has taken stringent action against the said industry. Now, M/s. Shaw Wallace Distilleries Ltd. has installed Bio-digester as a primary treatment followed by Reverse Osmosis and composting system for the treatment of spent wash generated from the process and as such there is no any complaint against the said industry at present.
- MIDC Waluj Area & Problems faced by the residents of Ranjangaon (Shenpunji): MIDC Waluj is one of the major industrial belt at Aurangabad in Marathwada region. In the said industrial area there are number of major bulk drugs, electroplating and breweries plants as well as there are number of small scale electroplating and surface treatment units. Most of the major industries have installed full-fledged treatment system for treatment of their industrial effluent, but some of the small scale industries have not their own treatment plant and they are discharging their effluent on land without fullfledged treatment. Though the most of the industries are having the full-fledged treatment plant, but the disposal of effluent on land is not in a scientific manner. The MIDC authority has neither provided the Common Effluent Treatment Plant not provided any drainage system for carrying the effluent generated from various industries. There is a complaint of ground water pollution in Ranjangaon (Shenpunji), Itawa village areas. The Board has issued directions under Section 33A of the Water (Prevention & Control of Pollution) Act, 1974 to MIDC authority as well as defaulting units in the MIDC area.

To sort out the problems, the Board has given a project to National Environmental & Engineering Research Institute (NEERI), Nagpur. NEERI has carried out survey of the said area and collected water and soil samples. The said project is in progress and hopes to get the solution to sort out such types of pollution problems.

5) Jaina MIDC Area & Problems faced by the nearby residents:

Major steel plants are concentrated and located in the Jalna MIDC Area. All the steel plants have installed air pollution control devices, but due to inadequacy of system there is problem of air pollution. The Board has taken stringent action against these steel plants. Now, all these steel plants are agreed to commission the upgraded air pollution control system as per the suggestions and guidelines of National Metallurgical Laboratory, Jamshedpur within one year.

10. <u>ENVIRONMENTAL ISSUES AND PROBLEMS</u>

There are number of environmental issues and problems at the time of implementing the above said enactments.

- a) Common Effluent Treatment Plant (CETP): MIDC Waluj is one of the major industrial area of Marathwada region. In Waluj MIDC area, there are number of small scale effluent generating industries. Most of them are surface treatment and electroplating plants. It is necessary to install full-fledged treatment plant for treatment of effluent generated from these units. But, as all these units are very small and not having their financial capacity to install full-fledged treatment plant, they are discharging their substandard effluent on land and due to that the problems ground water pollution in the said area are created. It is necessary to install Common Effluent Treatment Plant for treatment of the effluent generated from such type of small scale industries. It is necessary to take steps for installation of CETP by MIDC authority.
- b) Common Hazardous Waste Treatment, Storage & Disposal Facility: In Marathwada Region there are number of large, medium and small scale industries generating hazardous waste. Most of the industries have obtained the membership of CHWTSDF, Taloja and also sending their hazardous waste at the said facility, but the said facility is at about 400 km. away and due to that there is problem of regular collection and transportation of hazardous waste and it is costly to industry to dispose their hazardous waste at the said facility. The most of the small scale industries can not dispose their hazardous waste at the said facility in a time bound manner. In view of above, it is necessary to provide one Common Hazardous Waste Treatment, Storage and disposal Facility at Aurangabad so that the effective implementation of Hazardous Waste (Management & Handling) Rules, 1989 and amendments thereto will be achieved.
- d) Compliance of Water Act and Municipal Solid Waste Rules at Local Bodies: It is necessary to install the sewage treatment plant for treatment of domestic effluent generated from urban area and it is also mandatory on the part of local bodies to install sewage treatment plant, but the local bodies of Marathwada region have not installed sewage treatment plant, except CIDCO Area, Aurangabad and Nanded-Waghala Municipal Corporation. Most of the local bodies are discharging the domestic effluent in

nearby river/local nalla without any treatment and it is a major source of surface water pollution. Most of the local bodies informed that they are not having sufficient funds for the installation of sewage treatment plant.

It is necessary to install municipal solid waste treatment and disposal facility for the solid waste generated from residential area. In Marathwada region, the work of pilot project regarding municipal solid waste treatment and disposal at Ambad, Dist: Jalna and Sonpeth, Dist: Parbhani is in progress with the financial assistance from the MPCB. The process of proposed project at Jalna with financial assistance from CPCB & MPCB is in progress. All other Municipal Councils have installed vermi-culture composting for the municipal solid waste at a very small scale, but they could not provide full-fledged municipal solid waste treatment and disposal facility till date and it is informed by most of the local bodies that they are not having sufficient funds for the installation of Municipal Solid Waste Treatment and Disposal Facility.

e) **Brick Kilns**: Permissions for operation of brick kilns is being issued by the Revenue Department and it is necessary to confirm compliance of the guidelines issued for installation of brick kilns prior to give the permission. The brick kilns located in Marathwada region adopted the old technology for production of bricks and due to that number of complaints of air pollution due to the said activity are being received by the Board. It is necessary to take the action against such type of brick kilns by Revenue Department.

11. <u>NEERI PROJECT & BIO-MONITORING</u>

11.1 NEERI PROJECT

Review of Standards for Land Disposal of Treated Effluent for Irrigation

In Marathwada region there are number of different types of large, medium and small scale industries such as electroplating, chemical, pharmaceutical, breweries, etc. The Board has prescribed BOD – 100 mg/l. for disposal of treated effluent on land for irrigation purpose. In Waluj MIDC Area, there are number of different type of industries discharging the effluent on land for irrigation. There are complaints of ground water pollution at village Ranjangaon (Shenpunji) and Itawa.

Maharashtra Pollution Control Board in its 142nd meeting dated 10/08/2004 decided to review the standards for land disposal of treated effluent for irrigation purpose at Aurangabad. In this regard, the Board has given project to NEERI, Nagpur.

NEERI, Nagpur has carried out survey of MIDC Waluj Area and collected the samples of ground water, industrial effluent and soil where the effluent is being discharged. The project is in progress.

11.2 BIO-MONITORING OF RIVER BODIES

Maharashtra Pollution Control Board in co-ordination with Central Pollution Control Board arranged five days training programme on carry out Bio-monitoring of water bodies. Monitoring of environmental components is an important prerequisite for pollution control activities. It is difficult to monitor water quality only by using physico – chemical methods. The environmental scientists all over the world to over come this problem adopted use of Biomonitoring technique in addition to physico-chemical analysis.

The cumulative effect of all the pollutants can be determined by bio monitoring. As well as overall health of the aquatic ecosystem could also be properly assessed. Bio-monitoring is the introduction of biological variables for assessment of the structural and functional aspects of ecosystems. Bio-monitoring can be used as cost effective means for supplementing the physico-chemical analysis for determining the impact on aquatic ecosystem due to various reasons.

Bio-monitoring is done with the help of macro-invertebrates found in the benthic zone of the water body. Firstly we should collect the maximum no. of invertebrates present in the water body. After collection of the invertebrates we should identify those correctly and find out their name as well as taxonomic group/family. On the basis of no. of invertebrates collected and families collected we can able to find out their saprobic score. Diversity score is calculated by counting method. On the basis of these saprobic score and diversity score we can easily find out the water quality. Water quality given in 5 different categories i.e. Clean, slight pollution, moderate pollution, heavy pollution, severe pollution and same is indicated with colors blue, light blue, green, orange, red respectively.

Aurangabad Regional Office is the first office which is carring out bio-monitoring programme on monthly basis in the state of Maharashtra.

As per the directions and instruction of Regional Officer, SRO alongwith Field Officers carried out biomonitoring at 3 different points. Details about the same is enclosed in this file. Brief note for immidiate understanding is given as below.

- 1) The first location for biomonitoring was up stream of Jaykwadi dam: The benthic water invertebrates we found were only one type i.e. thiaredae. On the basis of saprobic and diversity score we have classified the water as SLIGHT POLLUTED. The indicator color is Light Blue.
- 2) The second location was down Stream of Jaykwadi Dam : At this selected location not a single invertebreate were found.
- 3) Our third location was Kaygaon Toka: We have found 3 nos. of families and more nos. of invertebrates. We were easily able to carry out the calculations as we have done in above case and classified water as Moderately polluted. The indicator color for the same is Green.

12. PUBLIC AWARENESS PROGRAAMMES

The Maharashtra Pollution Control Board is a prescribed authority to implement the number of acts, rules and regulations made for protection of the environment and control of pollution. Public participants in the programme of environment protection is necessary and for the participation of the public in such programmes, awareness in the public at a large scale is also very much essential. In the Marathwada region, following programmes were conducted for awareness of public regarding pollution control and environment protection.

1. World Environment Day:

The theme of the year is "GREEN CITY – PLAN FOR PLANET" Taking into consideration of the said theme, the World Environment Day was celebrated On 5th June by the Maharashtra Pollution Control Board in collaboration with Saraswati Bhuvan College of Science, Aurangabad. On the day following activities were conducted.

- a) Display regarding the steps taken by number of industries for control of pollution was installed. In this programme industries like M/s. Frigorifico Allana Ltd., M/s. Fosters India Ltd., M/s. Aurangabad Breweries Ltd., M/s. Orchid Chemicals, M/s. Lupin Pharmaceuticals Ltd., etc. had taken active participation. In the display number of charts, banners, posters and models were displayed for environmental awareness in public.
- b) Drawing competition was organized for schools boys regarding nature, clean city, environment, etc.
- c) The Blood Donation Camp was organized in collaboration with Seth Nandlal Dhoot Hospital, Aurangabad and at that time about 15 to 20 perosns have donated their blood.
- d) Mass plantation was carried out in the premises of MPCB, Aurngabad.
- e) Vermi-culture composting activity for solid waste generated in the premises of MPCB office at Aurangabad is started and the said activity is model for the awareness of public in general.

2. Exhibition at Latur:

Exhibition regarding steps taken by number of industries of Marathwada region for control of pollution, awareness display regarding scientific disposal of municipal solid waste, bio-medical waste and general awareness of the public regarding Clean Environment was organized in Krushi Pradarshan at Latur in March, 2005. The Honourable Chief Minister, Government of Maharashtra appreciated the said Exhibition of Maharashtra Pollution Control Board.

3. International Trade Fair at New Delhi:

Maharashtra Pollution Control Board had taken active participation regarding display of measures taken for control of pollution by industries located in Maharashtra in the form of number of static models, posters, banners, etc.at International Trade Fair, 2005 organized by the Government of India.at Pragati Maidan, New Delhi. Number of industries from Marathwada region had taken their active participation in the said Exhibition. The said exhibition was found most useful for the industrialists as well as public in general.

13. OTHER IMPORTANT ASPECTS

A. CESS

The Maharashtra Pollution Control Board is a prescribed authority to implement the Water (Prevention & Control of Pollution) Cess Act, 1977. As per the Water Cess Act, every industry and local body should submit cess returns and pay the cess to the Board. Most of the large and medium scale industries of Marathwada region are paying the cess regularly. The officers of the Board regularly checking the compliance of the above said Act and insisting the industries and local bodies to submit the cess returns and pay the cess those are not complying the said Act. Aurangabad Municipal Corporation has paid cess amount of Rs. 30 Lakhs after taking lot of efforts by the Board officers. The Board has issued notices to local bodies for non-payment of cess and after taking due follow-up by the officers of the Board from Marathwada region, some of the local bodies have paid the cess which are (1) Gangapur Municipal Council, (2) Vaijapur Municipal Council, (3) Ambad Municipal Council, (4) Dharur Municipal Council, (5) Ambajogai Municipal Council and (6) Georai Municipal Council. The Board officers are taking regular follow-up for submission of cess returns and cess payment with the remaining local bodies and industries.

B. RECYCLED PLASTIC RULES:

Government of India has promulgated rules for use and manufacture of recycled plastic and implementation is entrusted to the Board in collaboration with local bodies. The Board has taken the action against the plastic manufacturing units and after that plastic manufacturer applied for authorization under the Recycled Plastic Rules. The squad has been formed in various local bodies for checking the use of carry-bags below 20 micron.