

# HMWS&SB

12<sup>th</sup>

## ANNUAL REPORT

### THE BOARD OF DIRECTORS\*

#### Ex- Officio Chairman

**Sri. N.CHANDRABABU NAIDU,**

Hon'ble Chief Minister, A.P.

#### Ex- Officio Vice Chairman

**Sri. B.V.Mohan Reddy,**

Hon'ble Minister of Municipal

Administration & Urban Development

#### Ex- Officio Directors

**Smt. Sathi Nair, IAS,**

Special Chief Secretary to Govt, (EFS&T) &

Chairman, A.P. Pollution Control Board

**Sri. T.Chatterjee, IAS,**

Principal Secretary to Govt,

MA & UD Department

**Sri. J.Harinarayana, IAS,**

Principal Secretary to Govt,

Irrigation Department

**Sri. S.K.Arora,, IAS,**

Principal Secretary to Govt,

Finance Department

#### Directors

**Sri. D.Ramakrishna,**

Director (Technical),

HMWSSB

**Sri. G. Nageswara Rao**

Director (Finance),

HMWSSB

**Sri. M.G.Gopal, IAS.,**

Managing Director,

HMWSSB

**Smt. Chitra Ramachandran, IAS,**  
Commissioner,  
Municipal Corporation of Hyderabad

**Dr.(Capt) I. Srinivasa Sarma,**  
Director of Health Department

\* as on 30.01.2003.

## **TWELTH ANNUAL REPORT 2000-01.**

### **REPORT OF THE MANAGING DIRECTOR:**

#### **I. GENERAL:**

During the financial year 2000-01 the Board continuously witnessed unfavourable monsoon conditions in Medak and RangaReddy Districts, where the major source reservoirs of the Board are located. In all these catchments areas the actual rainfall was less than the normal, when considered for the year. The rainfall in Hyderabad District is above normal and helped marginally to recoup ground water. In view of limited availability of water, the Board maintained alternate day supply throughout the year under review. The quantity of 145 MGD was also constant & the same was maintained throughout the financial year 2000-01. Prudent planning and effective management of the available quantity of water helped the Board to give a satisfactory water supply to the residents of the twin cities and neighboring municipalities. As a short term measure, various works were taken up to improve the availability of ground water, during the year under review, by drilling new bore wells, carrying out repairs to existing bore wells besides engaging additional water tankers.

The comparative rainfall figures in the three main districts, viz., Hyderabad, Ranga Reddy and Medak where the source reservoirs of the Board are located, in the last five years is appended below. As the rainfall was inconsistent, the Board had to change the supply from daily to alternate day supply.

(Rainfall quantity in mm)

<b>District</b>	<b>1996-97</b>	<b>1996-98</b>	<b>1996-99</b>	<b>1996-2000</b>	<b>2000-01</b>
Hyderabad	971	609	985	545	970
Ranga Reddy	877	605	1133	697	876
Medak	973	658	964	845	821

The break up of 145 MGD drawl from the source reservoirs was as follows: -

1. Osman Sagar                      25 MGD.

2. Himayat Sagar 15 MGD.
3. Manjira 45 MGD.
4. Singoor 60 MGD.

The comparative figures of the last five years of the water levels in the main source reservoirs of the Board as on 1<sup>st</sup> September are shown in the following table.

Sl. No	Particulars	Osman Sagar (Ft.)	Himayat Sagar (Ft.)	Manjira (Ft.)	Singoor (Ft.*)
	<b>Full Level</b>	<b>1790.00</b>	<b>1763.50</b>	<b>1651.75</b>	<b><u>1717.40*</u></b> <b>523.60 Mts.</b>
1	September 97	1779.80	1744.26	1647.60	519.25
2	September 98	1785.75	1753.54	1649.20	522.55
3	September 99	1782.45	1756.10	1647.10	512.61
4	September 2000	1789.15	1760.38	1647.30	522.96
5	September 2001	1777.10	1749.70	1645.60	520.40

## II. FINANCE:

During the year under view, the Board had received Rs.26.41 crores as capital grants for the on going Mega City Project from the surrounding municipalities and Rs.7.50 crores as revenue grants from Government of Andhra Pradesh. Out of Rs.7.50 crores, Rs.5.00 crores were released towards augmenting water supply to the twin cities and neighboring colonies and Rs.2.50 crores was released towards works connected with rectification of damage on account of heavy rains and floods during August 2000. The Board had generated an income of Rs.111.73 crores through levy of water & sewerage cess. With the thrust on providing more connections to the needy, the Board had realized from new connections an amount of Rs.24.62 crores as connection charges. The existing project with the assistance of HUDCO is progressing well and most of the works taken up are expected to be will be completed in an year's time. In view of the necessity to augment and achieve equitable distribution under Mega City Project, additional works are contemplated, with revised funding pattern to achieve the desired results.

## III. OPERATIONS OF THE BOARD:

The income from water cess had increased to Rs.92.53 crores during the financial year 2000-01 as against Rs.84.81 crores in the previous year, showing an increase of Rs.7.54 crores. The income from sewerage cess had increased by Rs.2.23 crores to Rs.19.37 crores during the financial year 2000-01 as against Rs.17.14 crores in the previous year. There was no revision of water & sewerage tariff during the year under review. The last revision was made on 1<sup>st</sup> February 1997. Single Window Cell continues to fulfill its desired role of facilitating smooth procedure of according new connections/ enhancements to existing sizes of connections. The new connection charges amounted to Rs.24.62 crores during the year 2000-01 as against Rs.14.49 crores in the previous year, recording a quantum leap of Rs.10.17 crores(a 70% increase over last year amount

realized). Interest & other income had reduced by Rs.1.35 crore to Rs.2.35 crores during the year as compared to figure of Rs.3.70 crores earned during the previous year.

The staff cost increased to Rs.57.99 crores as against Rs.49.78 crores i.e., an increase of 16% over the previous year, due to normal increases in dearness allowance etc. The staff strength remained constant and decreasing on account of employees retiring in the normal course, with out replacement. The power & electricity cost was at Rs.46.96 crores during the year as against Rs.41.90 crores in the previous year, resulting in an increase of Rs.5.06 crores i.e., by 12%. During the current financial year also, the Board had benefited from the low cost of power generated and supplied by Andhra Pradesh Gas Power Corporation Limited (APGPCL). The operations & maintenance expenditure of the water supply & sewerage system was at Rs.27.16 crores compared to the expenditure of Rs.20.67 crores incurred in the previous year. The increase of Rs.6.49 crores was due to higher maintenance costs incurred by the Board in respect of outlived plant and equipments of water supply & sewerage systems. Interest expenditure during project construction period is capitalized as per the standard practice and accounting policy adopted by the Board and as such the finance charges on the current operations were nominal at Rs. 0.28 crore only.

The operations had resulted in a gross surplus of Rs.0.64 crores for the year 2000-01, before considering depreciation and interest charges. After considering interest and depreciation charges, the net result of operations for the year 2000-01 was a deficit of Rs.13.05 crores as compared to a net deficit of Rs.16.01 crores during the previous year.

In the month of October 2000, A.P. Housing Board handed over the water supply system in respect of Bharathnagar & Kukatpally housing colonies. New computerized collection cash counters were opened by the Board in the month of December 2000, linking with the Head Office server. With the planned expansion of e-Seva counters through out the twin cities, the Board decided to switch over at appropriate time for the convenience of customers.

The Board continued to offer the services of Single Window Cell for processing and releasing of new connections. The systematic approach of routing the files through various offices helped the customers and the Board in orderly release of new connections in a time bound schedule.

During the year 2000-01, a total of 24,252 sanctions were accorded by the Board. Out of the total sanctions, 782 sanctions relate to higher dia connections of water supply having a size of 20mm and above.

#### **IV. MEGA CITY PROJECT: -**

The Mega City Project is being implemented and works amounting to more than Rs.110.00 crores were under execution as on 31-03-2001. It was originally launched with a total outlay of Rs.112.00 crores of which financial assistance was sought from HUDCO to the extent of Rs.68.40 crores. The Project cost has been revised upwards, considering additional requirements, to Rs.136.80 crores.

The summary of works as per the revised project cost of Rs.136.80 crores is given below.

S. No.	Works Category	MCH Limits		9 Municipalities		Total	
		No. of works	Cost (Rs. in Crore)	No. of works	Cost (Rs. in Crore)	No. of works	Cost (Rs. in Crore)
1.	Water Supply Improvements	22	38.86	61	63.88	83	102.74
2.	Sewerage Improvements	8	26.16	1	7.90	9	34.06
3.	Total	30	65.02	62	71.78	92	136.80

The Board has been receiving the share of margin money from the municipalities as agreed to for undertaking works in their jurisdiction during the year 2000-01. The major works include construction of storage reservoirs at 13 (thirteen) locations with a total capacity of 31.50 ML in the surrounding nine municipalities and construction of storage reservoirs at 3 (three) locations with a total capacity of 21 ML in MCH limits. Works also include laying trunk feeder mains to the reservoirs and trunk distribution mains from the reservoirs for a total length of 125 km in surrounding municipalities and similarly for a total length of 34 km with in MCH limits. Trunk sewers and collecting sewers to a length of 45 km had been laid to abate pollution of Saroornagar Lake, Erragunta and Nallacheruvu under this Project.

**V. PROJECT for AUGMENTATION of WATER SUPPLY to HYDERABAD METROPOLITAN AREA: -**

**FUTURE PROJECTS FOR AUGMENTING THE WATER SUPPLY: -**

To bridge the gap between the demand and supply of water, it is proposed to transmit 16.5 TMC from river Krishna, tapping from Nagarjunsagar in different phases. In the 1<sup>st</sup> phase and Stage I, it is proposed to transmit 205 Mld (45 Mgd) of treated water from Nagarjunsagar with the transmission system capable of transmitting 410 Mld (90 Mgd) of treated water by tapping SLBC Canal near Kodandapur, estimated to cost Rs.1000 crores. The project is under implementation as planned, pending finalization of funding pattern and for structuring debt/bonds/term loan etc.

**REFURBISHMENT OF THE EXISTING SYSTEM: -**

It is proposed to take up Rehabilitation and Refurbishment of the existing Manjira and Singur systems and to certain extent Osmansagar system to enable utilize the systems to their designed capacities.

As against the total allocated water of 6.96 TMC for water supply to twin cities both Manjira and Singur systems at present only 6.16 TMC (105 Mgd of treated water) is being drawn. To ensure that the entire 6.96 TMC could be drawn, it is necessary to take up certain rehabilitation and strengthening measures i.e., refurbishment of the existing systems.

**REFURBISHION OF THE EXISTING HEAD WORKS AND TRANSMISSION SYSTEMS: -**

For the effective utilization and for drawing the allocated quantity of 6.96

TMC raw water from Singur system for all the four phases (including Manjira systems) refurbishing and strengthening of the existing head works and transmission systems of Singur system is needed. Similarly, the transmission system and water treatment units in Osmansagar and Himayatsagar systems also need refurbishing to increase the efficiency and also to avoid loss of water before and after treatment.

**Details of the Proposals:**

**Manjira Phase - I:**

- i. Modifications to the existing Rajampet filters and clear water reservoir including providing the recycling systems for reusing the wastewater generated in the filtration.
  - (ii) Repairs and Replacement for raw water and clear water pumps and motor of Phase – I System.
  - (iii) Strengthening of transmission mains from Rajampet to Lingampally (about 45 kms) of Phase – I System.
- i. Strengthening of electric sub-stations of Phase – I System.

**Manjira Phase – II:**

- (i) Modifications of Kalabgur filters and clear water reservoir including providing the recycling system for reusing the wastewater generated in the filtration.
  - i. Strengthening of transmission mains for Kalabgur to Hydernagar (about 45 kms ) including repairs and replacement of outlived valves and other appurtenances etc.
  - ii. Strengthening of electric sub-stations of Phase – II System.
  - iii. Replacement of existing two numbers 533 mm dia RCC duplicate gravity mains between Alwal to Moula-Ali with a single 1000 mm dia PSC pipeline of about 15 kms and extending with a 600 mm dia MS branch line to connect the 5.0 ML Capacity GLSR at Meerpet hillock in Kapra Municipality.

**Manjira Phase – III:**

- (i) Providing recycling arrangement for the backwash water of Peddapur Phase – III filters including minor refurbishment to the filters.
- (ii) Laying a new 1200 mm dia PSC/MS pipeline in lieu of existing 1200 mm dia gravity pipeline from Singapur to Lingampally of about 27 kms.

**Osmansagar Sytems:**

- (i) Laying equivalent size RCC pressure pipeline from Osmansagar Reservoir to Asifnagar Filters in lieu of old masonry conduit to avoid leakage and pilferage of water and to prevent possible pollution enroute.
- i. Modernization of Asifnagar Filters including providing the recycling system for reusing the wastewater generated in the filtration.

**ENERGY AUDIT, REPAIRS & REPLACEMENT TO DISTRIBUTION**

## **NETWORK: -**

- i. Laying Rider water supply main parallel to the main transmission Manjira pipeline Phase – II in Qutubullahpur and Kukatpally Municipal Water supply systems with suitable CI LA class water supply pipelines.
  - ii(a) Improvements to Chanchalguda water supply distribution zone by laying 400 mm dia DI feeder main to the Mahaboob Mansion ELSR from 1200 mm dia Sainikpuri – Saidabad trunk main.
  - (b) Improvement to Adikmet water supply distribution zone by laying 750 mm/ 600mm / 450mm / 300mm / 200mm dia DI distribution mains from the Adikmet reservoir to Tilaknagar main road.
  - iii Extension of 600 mm dia PSC Water Supply Feeder Main from off take point of 1200 mm dia PSC Gravity Main to the proposed TNGO's Colony at Gopannapally.
  - iv Extension of 350 mm / 300 mm dia DI mains to provide water supply to Indian School of Business at Manikonda.
- v Replacement of Pumps and motors at Patancheru and Kalabgur pumping stations under Phase – II for Energy Audit to improve the efficiency levels and to reduce the power consumption at these pumping stations.

## **UN-ACCOUNTED FOR WATER MANAGEMENT (UFW): -**

It is proposed to procure and install bulk flow meters of ISO standards Full Bore Electro Magnetic type on all key transmission main connecting sources to MBR's and down below to principal distribution reservoirs in lieu of existing of Insertion type (turbine) bulk flow meters. These meters help in quantifying the transmission and distribution of water to various O&M Divisions from each source, allocation of water to each O&M Division and for proper monitoring of water supply allocation. It is also proposed to procure and install sufficient number of bulk consumer meters of ISO standards of full bore mechanical type for replacing the non-working bulk consumer of ISI standards, thus curbing revenue losses.

The items proposed under this component are: -

- i. Procurement and Installation of Bulk Flow Meters of ISO Standards Full Bore Electro Magnetic type.
- ii. Procurement and Installation of Bulk Consumer Meters of ISO Standards Full Bore Electro Mechanical type.

After the approval of GOAP, the project was posed to HUDCO for financial assistance. HUDCO in turn assessed the same and accepted the proposal in principle in the month of December 2000, subject to minor modifications. The Board would commence the project in the financial year 2001-02, after receipt of the necessary funds.

## **VI. RAIN WATER HARVESTING (RWH): -**

HMWSSB has been made a nodal agency for motivating and campaigning in Hyderabad District and also as a reporting agency for the works taken up by various Govt. Departments. HMWSSB has been campaigning through print media, electronic media, by distributing pamphlets, brochures with technical information on posters. The Board had trained CMEY groups for campaigning in 100 municipal wards, conducted street plays, produced documentaries & cinema slides. Those slides were screened in theatres of twin cities to make people understand the need for rainwater harvesting structures. During the year 2000 under Janma Bhoomi programme, basthi sabhas were conducted in twin cities for awareness of rainwater harvesting among the people. Government of Andhra Pradesh had given 50% subsidy for a limited period during the year 2000. Board also proposed to make it mandatory for all dwellings in twin cities where the plot area is 300 sq.yards(250.56 sq.meters) & above to build Rain Water Harvesting structure in their premises before giving water supply connections.

HMWSSB in association with the Department of Ground water, GOAP, has been extending technical guidance to the citizens on artificial recharging of ground water and rain water harvesting. After implementation of these techniques in the year 1998 and 1999-2000 at several places, the benefits have been derived. Several newspapers and electronic media have highlighted the gains that accrued to the customers who responded initially with a sense of curiosity, commitment and urgency. Several ground water sources were recharged and customers were satisfied with the enhanced yields. The evaluation done by the Department of Ground Water and by Dr.Prasad's Environmental Sciences Pvt.

Ltd., clearly brought out the increase in ground water table was significant at the places where recharge structures were taken up.

Works completed during the year 2000-01 by HMWSSB

PHASE-I (from: 01-05-2000 to 31-10-2000)

<b>Total No. of Structures</b>	<b>Volume in Cum.</b>	<b>Expenditure Rs. Lakhs</b>
295 structures (individual houses/apartments)	3,945	14
2Nos de-silting of Himayatsagar and Osamansagar lakes.	1,24,678	23
	1,28,623	37

**PHASE – II (From: 01-11-2000 to 30-04-2001)**

<b>Total No. of Structures</b>	<b>Volume in Cum.</b>	<b>Expenditure Rs. Lakhs</b>
303 structures (individual houses/apartments)	3553	14

**VII. QUALITY ASSURANCE & TESTING (QAT):**

### **Water Quality Monitoring and Surveillance In HMWSSB: -**

In order to provide clean, potable water there are 5 laboratories provided at various treatment plants including the central laboratory at Asifnagar Filter Beds under the control of Dy. General Manager, Quality Assurance and Testing (Q.A.T.) wing. These Laboratories ensure chemical and bacteriological quality as far as the treatment is concerned at respective treatment plants. To carryout the task of monitoring the water quality in distribution network both internal and external monitoring is adopted. Internal Monitoring is carried out within the Board by the Board's staff, whereas the external monitoring is done in co-ordination with outside agencies like Institute of Preventive Medicine (I.P.M.)

#### **Internal Monitoring: -**

The quality monitoring units of the Central Lab/Asif Nagar Filter beds and another lab at Miralam Filters daily check the residual chlorine in the service reservoirs and the distribution system. The sample takers collect samples from various points in particular where the residual chlorine (R.C) is low/absent. Twenty sample takers regularly monitor the water quality in the allotted 20 zones in Hyderabad and Secunderabad. Each Sample taker is assigned a specific area covering slums, tail end taps and the disease prone localities in a ward. About 300-400 points are examined and analysed daily by QAT wing. On the basis of the analysed data, Managers (E) of different reservoirs are advised to adjust the booster chlorination to ensure the presence of a minimum of 0.2. ppm of chlorine in the tail end taps. Samples collected for bacteriological quality assessment are analysed in the in the QAT labs and also at IPM. The monitored/-analyzed data is regularly disseminated to the concerned field engineers for taking appropriate measures. The impact of measures taken by them for rectifying leakages and the defects in the pipes is promptly assessed by re-sampling and analysis.

#### **Water Quality Assessment In The Distribution Network: -**

Continuous vigilance is exercised by the QAT monitoring units through regular checking of R.C. and sampling for bacteriological quality assessment from the vulnerable points. Besides detailed laboratory examination, field tests are conducted by H<sub>2</sub>S strip test method for rapid quality assessment. The field monitoring kits are also provided to the engineers and other staff for checking residual chlorine through out the distribution network. Daily a total of 1200-1500 points are checked by the sample takers and the field staff of the O&M Divisions. As a result of intensified monitoring, appropriate adjustment of the booster chlorination could be undertaken to ensure optimum residuals. Positive correlation between presences of 0.2. ppm of R.C. and bacteriological wholesomeness of water has been found besides monitoring of water. Besides monitoring piped water supply, bore wells are also being assessed for bacteriological quality and remedial measures are being suggested wherever pollution is detected.

#### **Regular Investigations Conducted In The Q.A.T. Labs of The Board: -**

1. Periodical assessment of raw water quality to determine seasonal variations.

2. Identification of pollution sources in the catchments areas of the reservoirs
3. Formulation of treatment measures required.
4. Determination of Alum & Chlorine Dosages.
5. Evaluation of the performance of the treatment plants and the quality of the treated water.
6. Monitoring of Residual Chlorine at the reservoir and the taps in the distribution network.
7. Tests for detecting pollution of water in the distribution system.
8. Epidemiological surveys for detecting causes of disease outbreaks.

**Remedial Measures Undertaken For Controlling Pollution In Distribution System: -**

On the basis of reports of laboratory tests, field investigations and sanitary surveys, remedial measures are regularly undertaken for rectifying leakages and other defects in the pipelines. 52 booster chlorinators have been installed at various service reservoirs and pumps and sump houses to maintain optimum concentration of residual chlorine throughout the distribution system. Comprehensive investigations have been conducted to detect the source of pollution in the localities from where incidences of diseases are reported in the Institute of Tropical diseases (Fever Hospital).

***Functioning of Central Chlorination Cell: -***

A Central Chlorination Cell is created in the Board to work under the control of Dy.General Manager (QAT). The central chlorination cell staff are regularly monitoring the chlorinators for effective maintenance of chlorination and dosing of chlorine round the clock. Any complaint regarding non-functioning of chlorinators have been attended to on top priority to ensure mixing of chlorine in drinking water.

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**VII. METRO CUSTOMER CARE CENTRE (MCC): -**

The focus on customer care is attempted at all levels. One of the most important services to the customers would be to act upon their complaints at a very short notice. For the convenience of customers as well as the employees serving them, the electronic equipment is used more frequently. The hotline telephone number of 1916 has become popular and easily remembered by the needy. The Board has been campaigning through media in order to popularize the facility available to the customers. Thus MCC addresses the needs of the customers or helps in solving the complaints of the customers continuously.

**VII. WATER LOK- ADALAT: -**

In order to redress the customer grievances, the Board has taken initiative to establish permanent water Lok Adalat at its Board Office during the year 2000-01. The first water Lok Adalat held on 2<sup>nd</sup> December 2000. This is beneficial to the customers to settle their disputes out of the court amicably, in a speedy manner & without any expense. The award passed in this Lok Adalat is final and no appeal shall lie to any court and that the consumers are also entitled for refund of the court fee, if any, paid for institution of the cases.

The Lok-Adalat function will also be beneficial to the Board as the disputed outstanding

dues will be settled and balance amounts realised expeditiously.

**VII. METRO STAFF TRAINING COLLEGE: -**

With the establishment of a full-fledged Training Institute at Hydernagar reservoir premises and tie up arrangements with SISI – CMTES on 12<sup>th</sup> June 2000, the focus on continuous training is possible. A number of courses were conducted for Personnel & Administration Staff in Office Automation and Computer Basics. Selected Officers were sent to Dr. M.C.R. Institute Of Administration, GOAP, to improve their training skills. Short refresher courses on Office Management and Service Matters for P&A Staff were conducted. The emphasis shifted from Officers Training to Subordinates Training.

Statistics for 2000-01

1. Total Number of Training days: Remarks:

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1. Total Number of HMWSSB Staff Trained:

a) Officers 312

b) Subordinates Staff 162

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Total 474

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**VII. EMPLOYEE RELATIONS: -**

During the year under review, the relations with the employees continued to be cordial.

**VII. AUDITORS: -**

The Government of Andhra Pradesh had entrusted the audit of the Board to the Principal

Accountant General of Andhra Pradesh for an initial period of five years from the financial year 1990-91. However, the same was extended by another five years with effect from 1995-96. With the completion of the second five-year term the Govt., A.P. again entrusted the Audit to the CAG for the next five years commencing from 2000-01. Accordingly the Principal Accountant General of Andhra Pradesh conducted the audit.

**VII. ACKNOWLEDGEMENTS: -**

I wish to convey my sense of appreciation to all the staff for their unstinted support and co-operation. I wish to particularly pay tributes to the services rendered by the employees who retired during the financial year. The Board pays its condolences to those who passed away. My sincere thanks to the Directors of the Board for their support and guidance.

My sincere gratitude for the continued support received from the financial institution HUDCO and the bankers of the Board- Syndicate Bank, SBH, Canara Bank. My sincere gratitude also for the support received from other Government Departments like Traffic, Public Health and other regulatory agencies viz., HUDA, MCH, AP Transco and

APPCB.

Hyderabad,  
30-01-2003.

M.G. Gopal

**HMWS&SB**  
**AUDITED ACCOUNTS**  
**FOR THE YEAR**  
**2000-01**  
**AND**  
FINANCIAL HIGHLIGHTS