



“ORIENTATION TO RESIDENTS WELFARE ASSOCIATION ON CONSUMER RIGHTS”

About CMWSS Board

Chennai Metropolitan Water Supply and Sewerage Board, a statutory body established in 1978, is responsible for Water Supply and Sewerage services in Chennai Metropolitan Area (CMA)

(Before 1978 the Municipal Corporation was responsible for water supply and sewerage services in Chennai)

Mission

- **To provide adequate supply of good quality of water and safe disposal of sewage at a reasonable price**
- **To improve the environment**

Functions

- ❖ **Promoting or securing the planned development of water and sewerage services**
- ❖ **Efficient Operation & Maintenance, regulation of water supply and sewerage systems in Chennai Metropolitan Area**
- ❖ **Preparing the long term plans to meet the future requirements of water supply and sewerage in Chennai Metropolitan Area**

CONSTITUTION OF THE BOARD

CHAIRMAN

(SECRETARY TO GOVT. MUNICIPAL ADMINISTRATION & WATER SUPPLY)

Full Time Directors

Ex-Officio Directors

**MANAGING
DIRECTOR**

**SECRETARY TO GOVT.
FINANCE DEPT**

**MD
TWAD**

**COMMISSIONER
CMC**

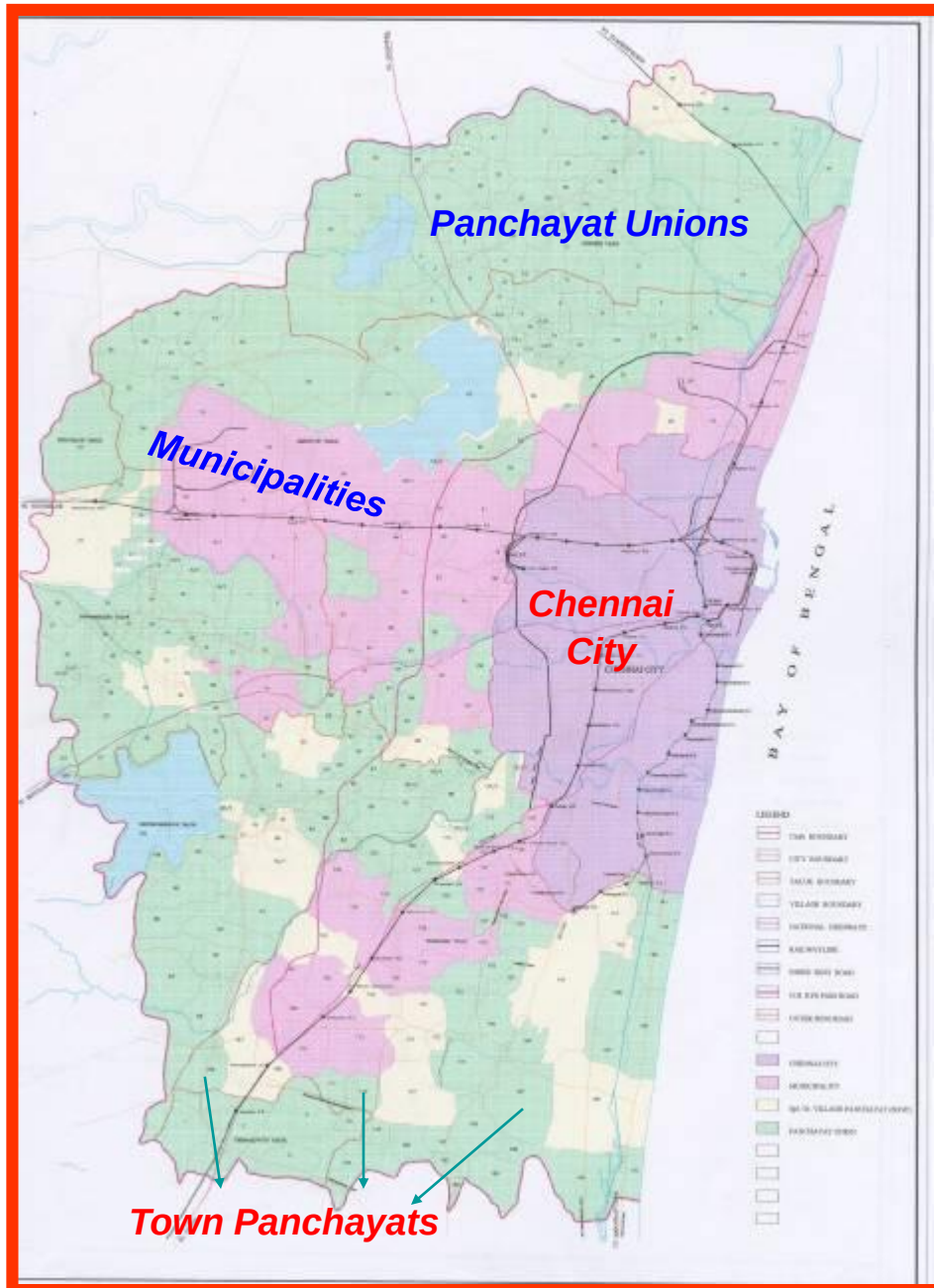
**MEMBER SECRETARY
CMDA**

**EXECUTIVE
DIRECTOR**

**FINANCE
DIRECTOR**

**ENGINEERING
DIRECTOR**

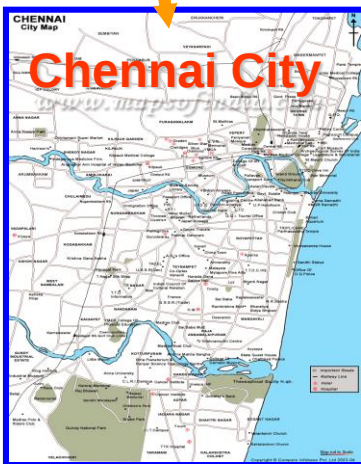
CHENNAI METROPOLITAN AREA (CMA)



- The Chennai Metropolitan Area comprises the Chennai City and its outlying urban and rural areas
- The extent of CMA excluding St.Thomas Mount cantonment is 1189 Sq.km
- The Chennai City covers 176 Sq.km
- The outlying areas consists of the following:
 - 1 Cantonment
 - 16 Municipalities
 - 20 Town Panchayats
 - 214 Villages Panchayats spread over in 10 Panchayat Unions in Kancheepuram and Tiruvallur Districts

Salient features of Chennai City

- The Chennai City is the capital of Tamil Nadu – Fourth largest City in India
- The growth of the City started in 17th Century.
- Organised water supply system was commenced in 1872 & Protected water supply system in 1914



1. Geographical Area	: 176 Sq.Km
2. Latitude / Longitude	: 13°04' Minutes North / 80°15' Minutes East
3. Population	: 5.4 Million (2007)
4. Topography	: Flat
5. Drainage	: Adayar & Cooum Rivers
6. Average Rain fall	: 1100 mm to 1300 mm per year
7. Temperature	: 30° c to 40° c
8. Climate	: Tropical
9. Humidity	: Vary between 65% and 80%
10. Water Supply Sources	: Surface and Ground water
11. Water Supply (per day) Normal year	: 350 - 450 Mld
12. Supply Rate (Per Day per Head) (Normal year)	: 70 – 100 lpcd
13. Current Water Supply (2008)	: 645 Mld (Domestic 585 mld + Others 60 mld)
14. Current Supply Rate	: 108 lpcd

CMWSSB – OPERATIONAL AREA

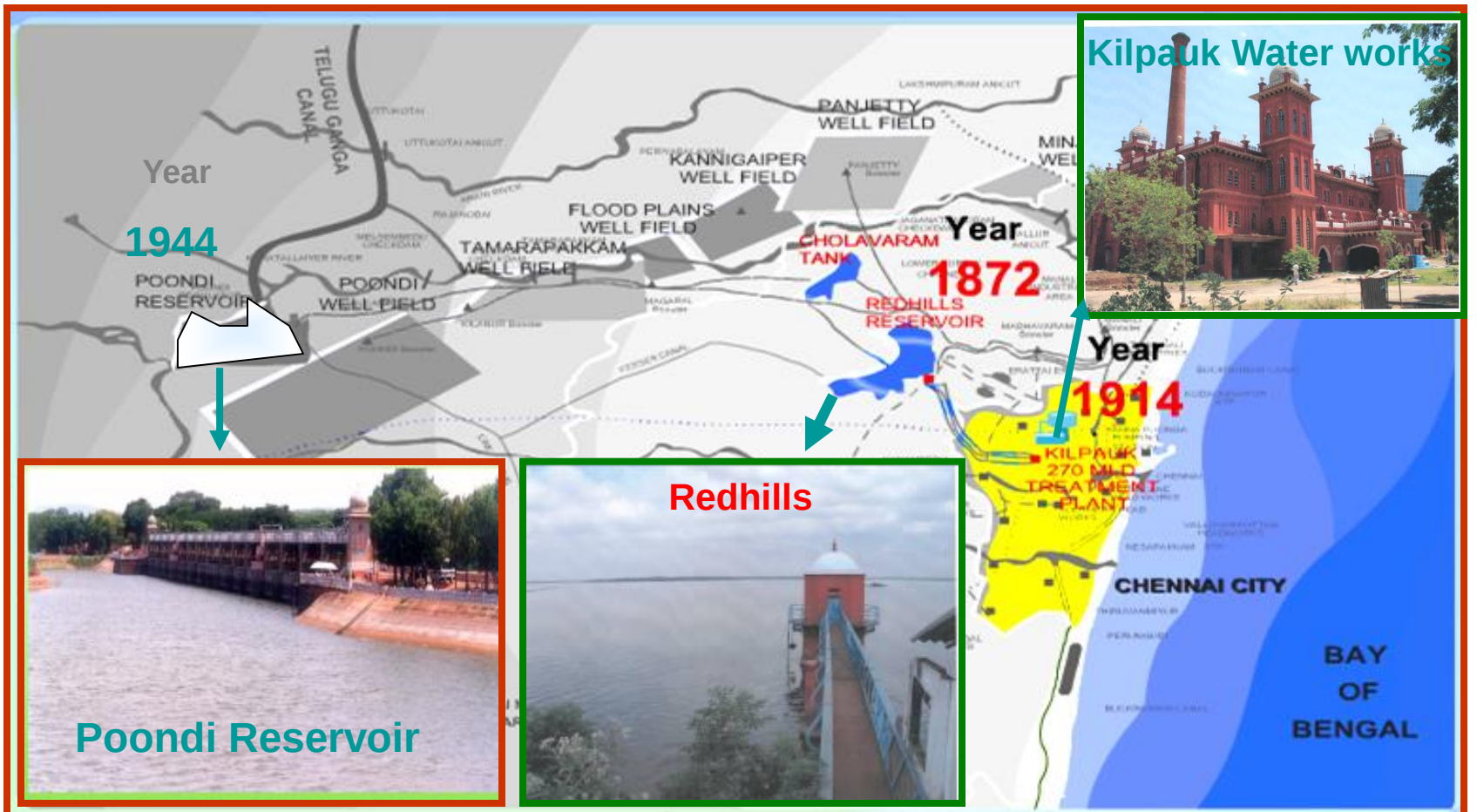
- **Chennai City Corporation Area : 176 sq.km**
- **Part of Ambattur Municipal Area
And Manali New Town
(With in CMA Area) : 7.88 sq.km**
- **Total Population served : 5.4 Million**

CMWSSB has already initiated measures to provide services for the entire Chennai Metropolitan Area (CMA)

CHENNAI CITY WATER SUPPLY

Pre – Independence,

Till 1870 - from shallow wells (Seven wells)	1872 - from Red hills & Cholavaram lakes
1914 - Kilpauk Water works (Protected water supply)	1944 - New reservoir at Poondi



Post – Independence,

1969

Development of well fields at Minjur, Panjetty & Tamaraipakkam (125 MLD)

1962 & 1973

Additional Head works at (Anna Poonga) Robinson Park, Southern Head Works, K.K.Nagar



Sources of drinking water to Chennai City

Surface Water

- ✓ The Reservoirs located at Poondi, Cholavaram, Red hills and Chembarambakkam.
- ✓ Krishna water through Kandaleru Reservoir in Andhra Pradesh under Telugu Ganga Project from 1996
- ✓ Veeranam Lake 228 km South of Chennai from Sep 2004

Ground Water

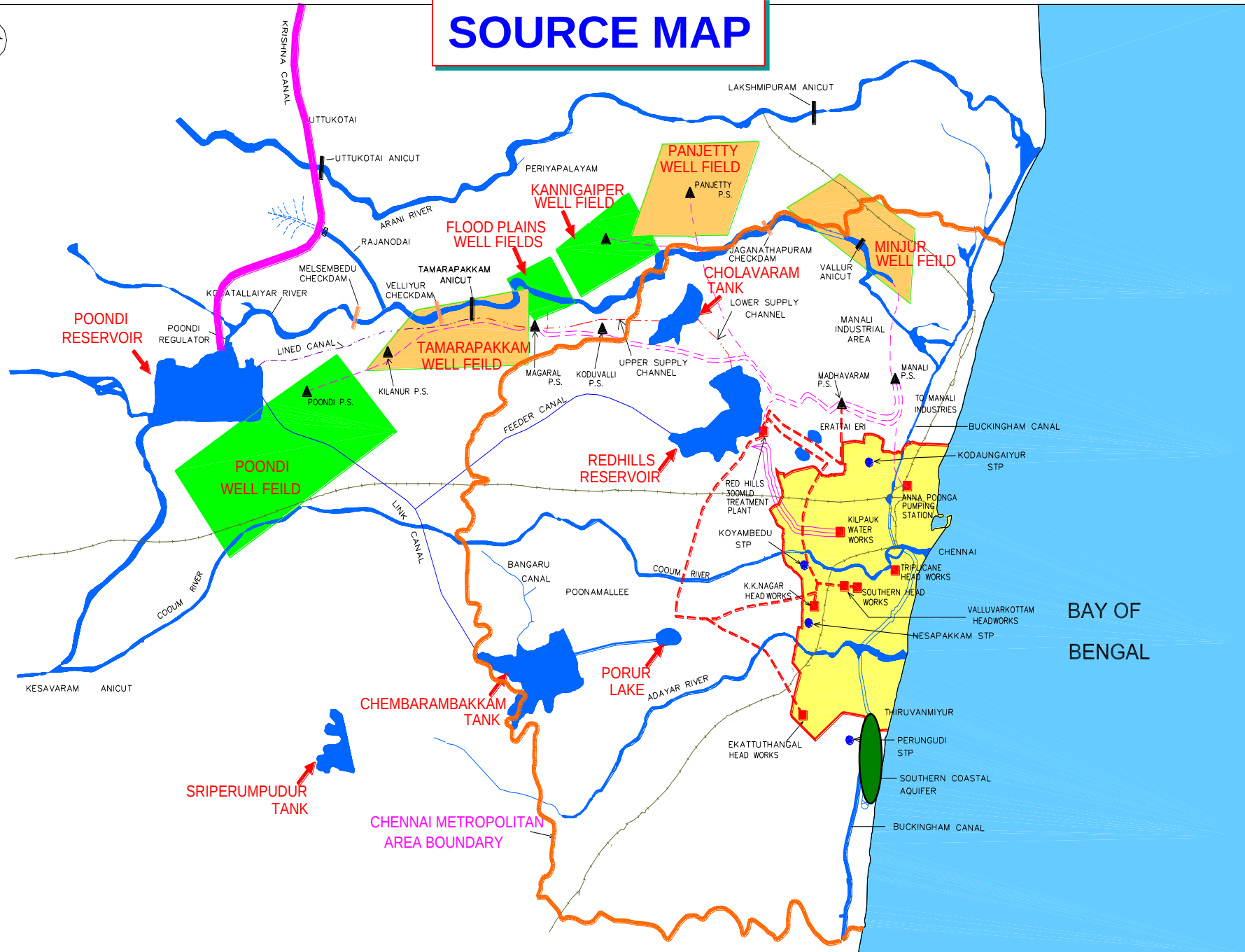
- Six well fields located in the Araniyar & Koratalaiyar river basin adjoining the reservoirs around Chennai.
- Wells are both owned as well as hired.

Other small sources

- Porur Eri, Madhavaram Rettai Eri, Southern Coastal Aquifer and Brackish water Treatment Plants



SOURCE MAP



TREATMENT CAPACITY AVAILABLE

Sl.No	Name of the Treatment Plant	Capacity in 'MLD'
1.	Kilpauk	270
2.	Red Hills	300
3.	Vadakuthu (Veeranam)	180
4.	Chembarambakkam	530
	Total	1280

270 MLD Treatment Plant at Kilpauk - 1914



300 MLD Treatment Plant at Red hills - 1996



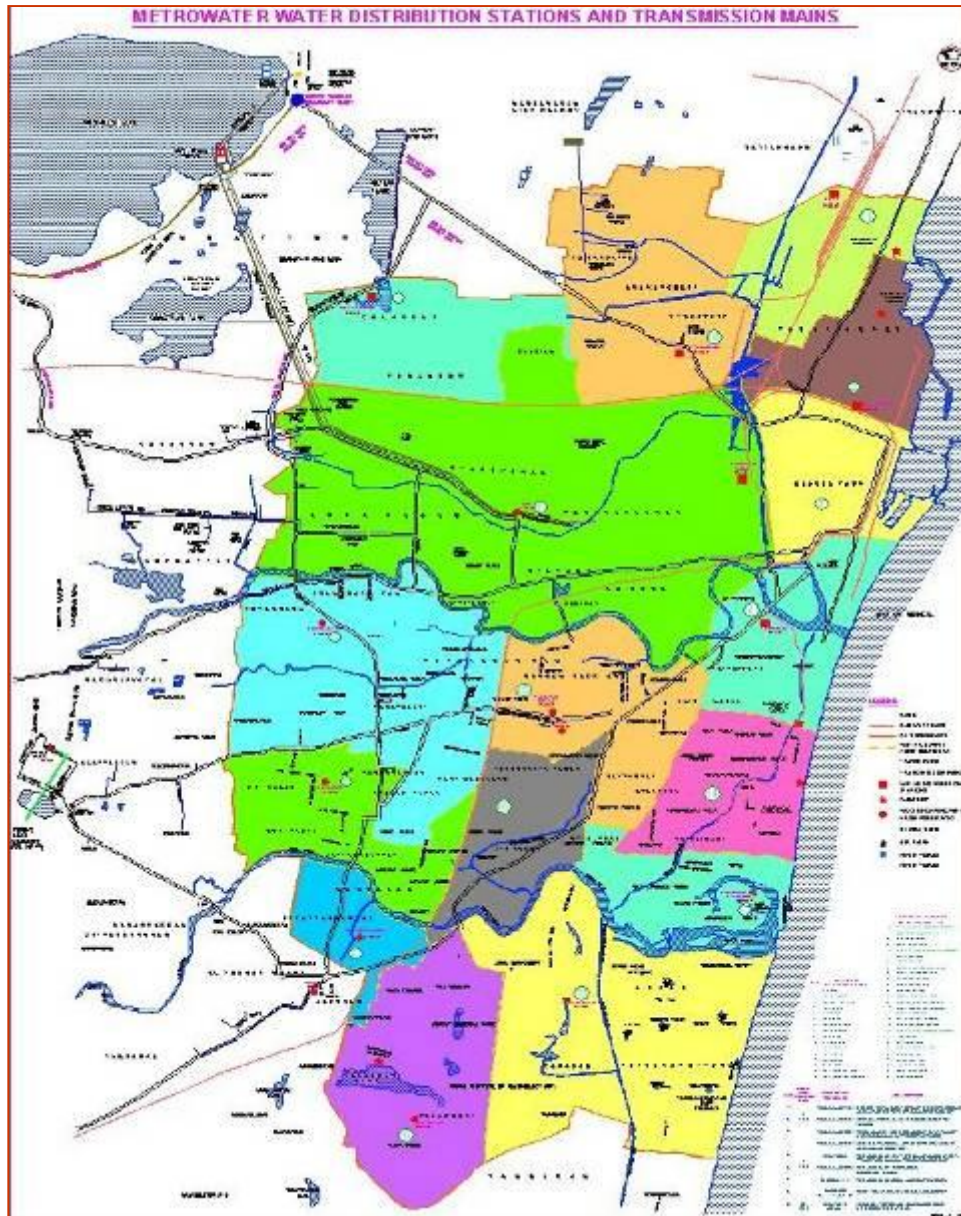
180 MLD Treatment Plant at Vadakuthu(Veeranam) - 2004



530 MLD Treatment Plant at Chembarambakkam - July 2007

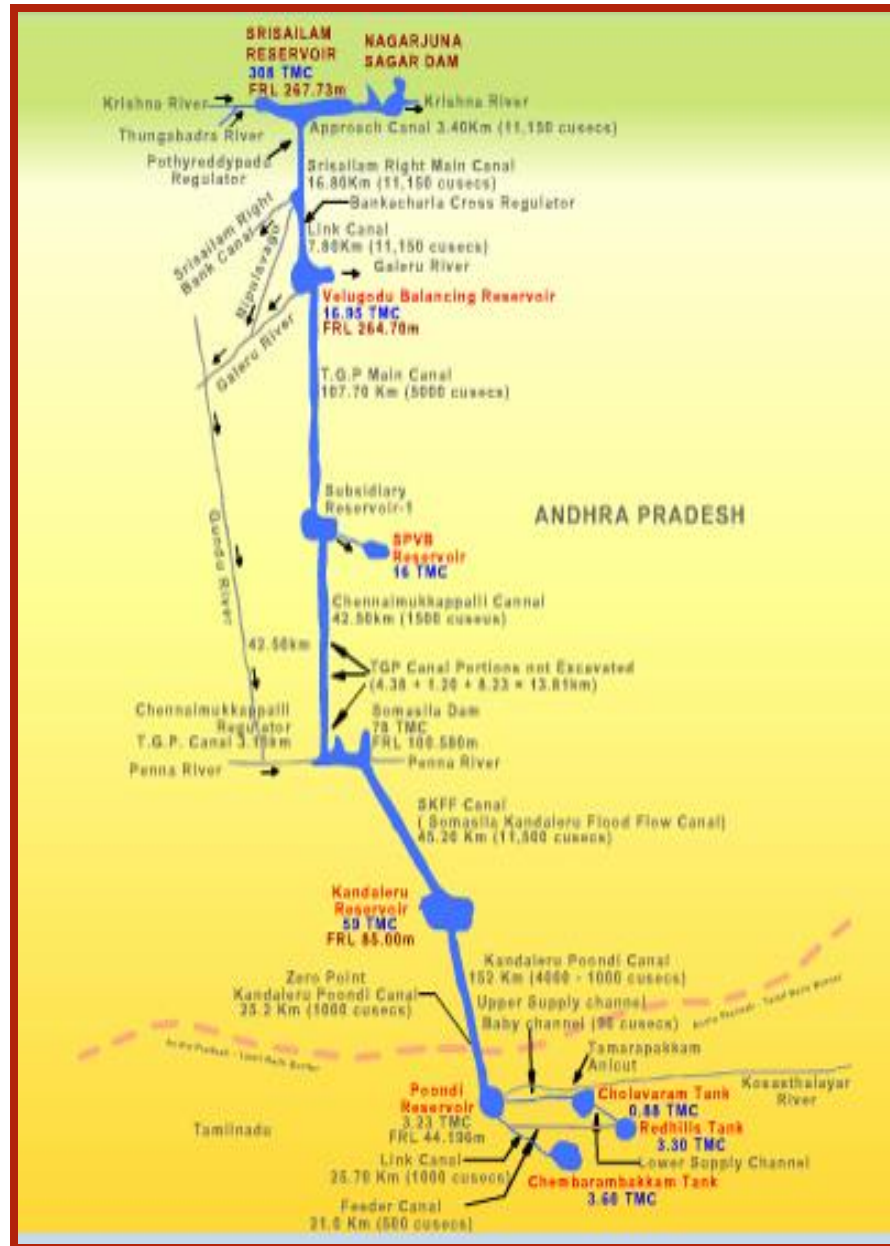


Water Distribution Stations in Chennai City



1. Kilpauk
2. Anna Poonga
3. Kannappan Thidal
4. Triplicane
5. K.K.Nagar
6. Velachery
7. Ekkaduthangal
8. Choolaimedu
9. Kolathur
10. Vysarpadi
11. Patel Nagar
12. Pallipattu
13. Nandanam
14. Mylapore
15. Valluvarkottam
16. Southern Head works

TELUGU – GANGA PROJECT SOURCE MAP



SOURCE MAP – NEW VEERANAM PROJECT

SOURCE MAP



MAJOR COMPONENTS OF WORK

- **Total Project Cost : Rs.720 Crore**
- Raw water drawal arrangements from the Veeranam lake and pumping arrangements at Sethiathope. (190 MLD)
 - Raw water conveyance pipeline from Sethiathope to Vadakuthu. (1775 mm dia M.S.Pipe – 20 kms)
 - Rehabilitation of Water Treatment Plant at Vadakuthu. (180 MLD)
 - Treated water pumping arrangements at Vadakuthu. (180 MLD).
 - Clear Water conveyance pipeline from Vadakuthu to Kadampuliur ridge point. (1750 mm dia MS pipe – 8 kms)
 - Break Pressure Tank at Kadampuliur. (3 ML)
 - Clear Water conveyance pipeline from Kadampuliur to Porur via. Panruti, Vikravandi, Thindivanam, Ongur, Thirukkazhukundram (Mangalam), Thiruporur, Kelambakkam, Vandalur, Tambaram Bye-pass Road in Porur for about 200 km. (1825 mm dia MS pipe – 178 Km & 1500 mm dia MS pipe – 22km)
 - Construction of Water Distribution Station (180 MLD) at Porur.
 - Telemetry system for the operation and maintenance of the whole system

The Project work commenced in Feb 2003 and commissioned in May 2004.

PRESENT SOURCES AND DISTRIBUTION OF WATER

Source	Qty in 'mld'
Poondi, Cholavaram & Redhills Lakes	300
Chembarambakkam	130
Veeranam Lake	180
Well fields (Ground water)	30
Others (SCA, Porur Lake & R.O.Plants)	5
Total	645

Distribution	Qty in 'mld'
Through pipeline	570
Mobile water supply	15
Supply to industries	30
Bulk supply	30
Total	645

Growth Profile - Water Supply

Details	1978	JAN - 2008
Operational Area	City 170 Sq.km	City + AUA (175.18+7.88 sq.km)
Population	3 Million	5.375 Million
Water Produced (Normal Years)	240 mld	645 mld
Area covered with piped supply	80%	99.9%
Treatment Capacity	182 mld	1280 mld
Length of water mains	1250 Kms.	2887 Kms.
No.of consumers	1,16,000	4,66,988
Distribution stations	3 Nos	16 Nos

Total No. of Streets in Chennai City : 15,640

WATER CONSERVATION MEASURES

- ✓ **Introduction of Ground Water Regulation Act – 1987 and amendment made in 2002**
- ✓ **Unaccounted for water**
- ✓ **Construction of Check dams**
- ✓ **Rain water Harvesting**
- ✓ **Re-use of Wastewater**

Need for Alternate Non-Rain dependent Sources (Sea water Desalination Project)

- **Even after implementation of the various water supply augmentation projects and water conservation measures, there is still a shortfall in meeting the water demand of Chennai City and adjoining areas.**
- **Further all the existing sources are depend on monsoon and subject to change in weather patterns and not 100% reliable and assured supply.**
- **Hence, it is necessary to examine the possibility of identifying another reliable and assured source of water supply to bridge the gap between demand and availability.**

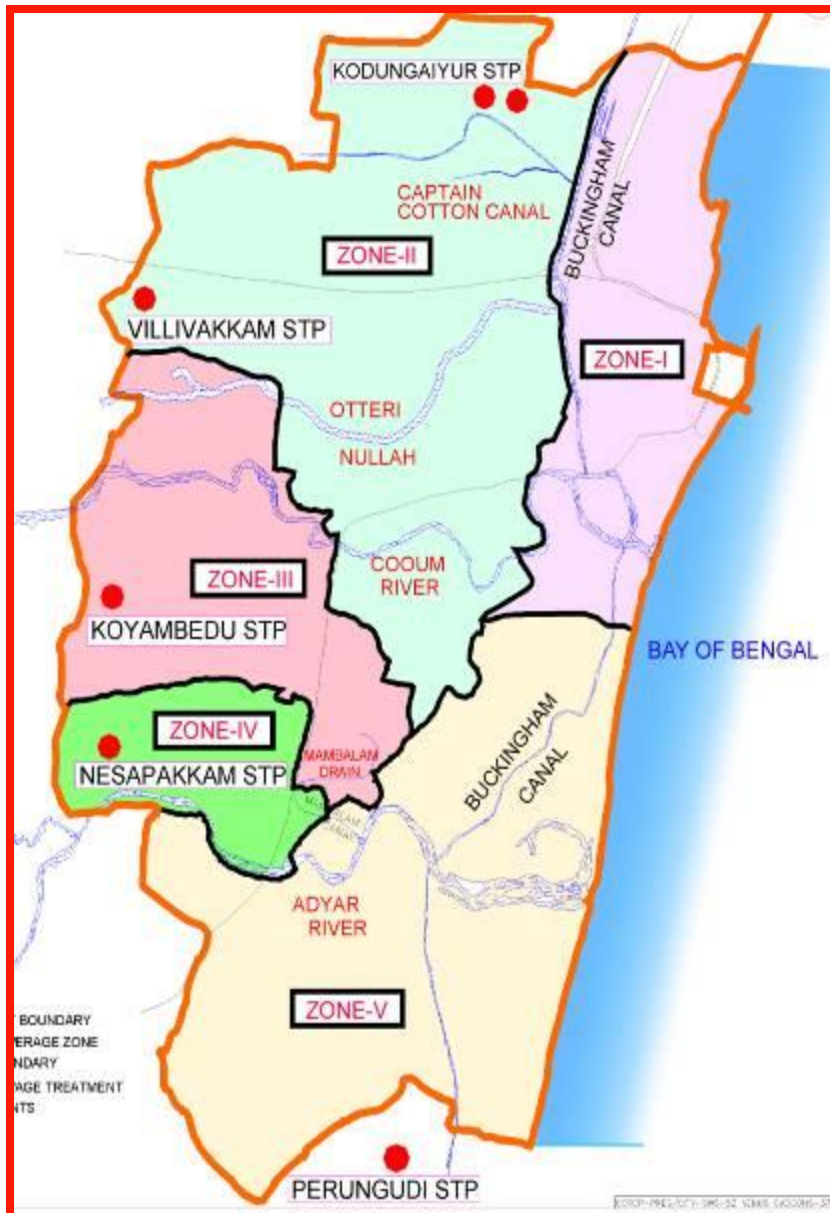
a) 100 MLD SEAWATER DESALINATION PLANT AT MINJUR ON DBOOT' BASIS

- **As a drought proofing measure and also to bridge the gap between demand and supply Chennai Metropolitan Water Supply and Sewerage Board proposed a Sea Water Desalination plant at Minjur on Design, Build, Own, Operate and Transfer basis.**
- **Accordingly tenders were invited, scrutinized and finally entered into a Bulk Water Purchase Agreement (BWPA) with the Special Purpose Vehicle M/s. Chennai Water Desalination Limited (CWDL) on 13.09.2005 for setting up of a 100 MLD Sea Water Desalination Plant at Kattupalli Village, Minjur.**

b) 100 MLD CAPACITY DESALINATION PLANT AT NEMMELI WITH FINANCIAL ASSISTANCE FROM GOVT. OF INDIA

- **Proposed to be constructed at Nemmeli, South of Chennai**
- **An extent of 40.05 acres from Alavandar Trust has been taken over on a long term lease for 30 years**
- **The estimated cost of the Plant and necessary infrastructure to convey water to the city works out to Rs.993.83 crore**
- **The plant, based on Reverse Osmosis technology**
- **The product water will be conveyed to Thiruvannamiyur, Pallipattu, Velachery water distribution stations for onward distribution to the residents of Chennai City.**

SEWAGE DISPOSAL



Sl. NO	Location	Treatment Capacity in 'mld'
1	Zone I & II at Kodungaiyur	270
2	Zone III at Koyambedu	94
3	Zone IV at Nesapakkam	63
4	Zone V at Perungudi	54
5	Villivakkam (Sub zone of Zone II)	5
	Total	486

CONSUMER ORIENTATION

- ✓ **Simplified procedures for service connections**
- ✓ **Computerized complaints monitoring**
- ✓ **Citizen's Charter**
- ✓ **Simplified Billing & Collection procedure**
- ✓ **Web Site - www.chennaietrowater.nic.in**

e-GOVERNANCE INITIATIVES IN CHENNAI METROWATER

- **2003 – Introduction of Information System and Technology Planning (ISTP) in Area-V as a pilot project using Oracle ERP 11i with the Sun Solaris Operating System**
- **2005 – Extension of ISTP for the remaining 9 Areas and connected Depots**
- **2007 – All the 10 Areas and the Depots have been fully integrated to the Central server at Head office**
- **2007 – Introduction of Credit Card of any Bank by logging on the website of Metro water for paying water taxes and charges**

e-GOVERNANCE - BENEFITS

- **Consumers can pay their water taxes and charges in any Area offices and connected Depot Offices irrespective of their location of the premises**
- **The payment made by the consumers will be updated then and there**
- **The arrears of the consumers can be viewed by the consumer in the website of Metro water at any time**

PUBLIC RELATIONS AND GRIEVANCE REDRESSAL

1) Complaint Redressal:

- A 24 hour Complaints Monitoring Cell is functioning in Head Office
- Complaints are also received in its 12 Area Offices and 160 Depot Offices are also receiving complaints
- Complaints attended by the respective Depots
- Receipts & Redressal and monitoring of the complaints are computerized and will be incorporated in ISTP during this year

2) Information & Facilitation Counters:

- Information and Facilitation Counters are functioning at Head Office in all Area Offices to assist and guide the consumers on various service rendered by the Board and also to redress their grievances

PUBLIC RELATIONS AND GRIEVANCE REDRESSAL

3) *Open House Meeting:*

- **Open House Meetings are conducted in all Area Offices between 10.00 A.M & 1.00 P.M on 2nd Saturday of every month with Voluntary Organizations, Consumer Action Groups, Residents Associations, Representatives of other Interest groups and individual consumers**
- **The meeting register their suggestions / grievances and issues**
- **The CMWSS Board is addressing the issues raised during the open house meetings then and there**

On-line Complaints

- **Complaints can be lodged through website of the Metro water**

(www.chennaietrowater.tn.nic.in)

- **The complainant get online complaint No.**
- **Complaints can also be lodged through e-mail (cmwssb@md2_vsnl.net.in) of the Board**

POLICIES EXIST WITH RESPECT TO SERVICE TO POOR AND THE CURRENT NATURE OF SERVICE TO THE POOR

CMWSSB introduced a flat rate of Rs.100/- for providing new house sewer connection for Below Poverty line people and drinking water is supplied through stand posts and street tanks at free of cost (20% population are living in slum).

For secondary uses India Mark II pumps were also installed to tap underground water .

Transparency in providing New Water / Sewer Connections

- **Simplified application form (only 7 particulars to be filled up)**
- **Free supply of application form at H.O., Area Offices & Depot Offices**
- **Self assessment of Connection charges**
- **Sanction without inspection of premises**

Transparency in providing New Water / Sewer Connections

- **Sanction order to the applicant from the Area Engineer through courier**
- **Issue of sanction order within 7 days**
- **Probable date of connection in the sanction order (30 days from the date of registration)**
- **Facility to verify the status of the application i.e. sanction / connection given in the website of the Board**

Tariff charges

Category	Qty of water	Rate/KL Rs.P.	Minimum Rate Chargeable (including sew charges) Rs. P.	Frequency of billing
Domestic				
Residential (i) Domestic Residential premises (Other than Flats or Block or line of Houses)	Upto 10 KL	2.50	Rs.50/- per month per dwelling unit (including sewerage charges)	Monthly
	11 to 15KL	10.00		
	16 to 25 KL	15.00		
	Above 25 KL	25.00		
(ii) Flats or houses in a Block of flats or line of houses respectively used wholly for residential purposes.	Per KL *Not applicable for dedicated water main	15.00	Rs.50/- per month per flat(including sewerage charges)	Monthly
(iii) Individual flats or Houses in a Block of Flats or line of houses respectively used for other than residential purposes.	Partly Commercial- Rs.150/- p.m.per flat Non Water Intensive- Rs.400/- p.m. per flat <u>Water Intensive-Rs.650/- p,m, per flat</u> Private Hospital- Rs.800/- p.m. per flat Institutional-Rs.300/- p.m. per flat Pvt. Educational Instn-Rs. 400/- p.m. per flat			Monthly

Tariff charges – Contd.,

B. Commercial.	Private Hospital- upto 500 KL Rs.50/KL.		Rs.800/- * (Water Intensive) / Monthly	
	All others upto-500 KL Rs.35/KL. Private Hospital- above 500 KL Rs.80/KL. for entire quantity. All others – above 500 KL Rs.60/KL. for entire quantity .		Rs.400/- (Non Water Intensive) / Monthly. Rs.800/-* (Water Intensive) /Monthly Rs.650/- * (Water intensive) / Monthly.	
C. Partly commercial.	Upto 10 KL	5.00		
	11 to 15 KL	15.00	150.00	Monthly
	above 15 KL	25.00		
D. Institutional	i) Pvt. Edn. Institution.	40.00/K.L. entire quantity	400.00	Monthly
	ii) Govt. Hospital	20.00/K.L. entire quantity	200.00	
	iii) All others	30.00/K.L. entire quantity	300.00	
E. Municipal Bulk supply	Entire consumption	15.00	---	Monthly
E.(i) Muicipal Bulk Supply	Entire Consumption	7.00 (wherever Local bodies met the cost of infrastructure	---	Monthly

THANK YOU

CMA – ESTIMATES OF WATER REQUIREMENTS - 2026

Sl.No	Category in CMA	Population in Lakhs	Rate of water supply in 'lpcd'	Total Requirement in MLD
1.	Chennai City	59	150	1230
2.	Municipalities and Town Panchayats in CMA	47.9	125 for Municipalities & 100 for Town Panchayat	796
3.	Rest of CMA (Village Panchayats)	19.88	80	223
	Total	126.78		2249

SOURCES AND AVAILABILITY OF WATER FOR MEETING DEMANDS

Sl. No	Name of Source	Safe Yield in 'mld'	Remarks
1	Poondi-Cholavaram-Redhills lake system	227	Based on assessment during 1997 revision of Master Plan for Water Supply
2	Ground water from Northern well fields	68	
3	Other sources like Southern Coastal Aquifer, Porur, Rettai Eri & R.O.Plants (Brackish water)	5	
4	Receipt of Krishna water from Telugu Ganga Project (When full agreed quantity of 930 MLD (12 TMC) supplied)	837	10% loss from entry point to Poondi Lake has been considered
5	Veeranam Lake (CWSAP-I)	180	
6	Desalination Plant	200	a) 100 MLD in 2008 b) 100 MLD in 2009
7	Local sources including Palar River in the CMA area other than city limits	32	Based on assessment during 1997 revision of Master Plan for Water Supply
8	Abstractable quantity of local groundwater in the City for the use of other than drinking and cooking purposes	240	
9	Waste water reuse a) Already in use b) Expected in future (SIPCOT use)	45 120	From 2009
	Total	1954	

The above sources will meet the Demand up to the year 2011. There is a gap of nearly 300 MLD to meet the CMA demand for the year 2026. This gap will be met by water conservation measures, promoting recycling and by identifying additional sources

Comparison of Supply levels with other Metropolitan Cities

<i>Sl.No</i>	<i>City</i>	<i>Supply (in lpcd)</i>
1.	Delhi	270
2.	Kolkata	250
3.	Mumbai	260
4.	Bangalore	140
5.	Pune	220
6.	Chennai	108