

## MADURAI DISTRICT PROFILE

- Madurai district is bounded by Sivaganga district in the East, Theni district in the West, Tiruchirappalli and Dindigul districts in the North and Virudhunagar district in the South.
- The District lies between 9°33'30" 'N to 10°18'50" N Latitude, 77°29'10" 'E to 78°28'45" E Longitude and has an areal extent of 3696 sq.km.
- There are 13 Blocks, 420 Villages and 2263 Habitations in the District

### Physiography and Drainage:

- Central Part of Madurai district is drained by Vaigai River and Gundar river that forms parts of Vaigai. Northern Part of the district is drained by Pambar.
- South eastern part of the district (part of Sedapatti and Kallupatti blocks) falls in Vaippar basin and the area is drained by Arjuna Nadi.

### Rainfall:

The average annual rainfall and the 5 years rainfall collected from IMD, Chennai is as follows:

Actual Rainfall in mm					Normal Rainfall in mm
2013	2014	2015	2016	2017	
610.1	744.1	1002.4	510.2	904.6	927.28

### Geology:

Rock Type	Geological Formation
Hard Rock	Charnockite, Granite, Gneiss, Quartzite, Pegmatite and Alluvium

### Hydrogeology:

Type of aquifer	Water table conditions	
Aquifer parameters	Hard rock	Alluvial formation
Well yield (lpm):	45 – 135	315 – 1080
Transmissivity (T)(m <sup>2</sup> /day)	15 – 60	210 – 1500
Permeability (K)(m/day)	0.98 – 2.45	19.57 – 48.93
Specific capacity in m <sup>3</sup> /m/DD	0.6 – 6.53	0.554 - 7.6
Depth of Water level	5 m to 14m	

### Ground Water Level::

The Ground Water levels from the 31 number of observation wells of TWAD have been analysed for Post-Monsoon and Pre-Monsoon. Since 1991, average Ground water level in m Below Ground Level for pre and post monsoon is as follows:

**Sustainability::**

With a view to enhance the Sustainability of the drinking water sources, recharge structures are being implemented by TWAD Board under various State and Central Government assistances.

The Recharge Structures implemented so far is as under.

Recharge Structures										
Check Dam	Percolation Pond	Recharge Pit	Recharge Trench	Others	Ooranies	Defunct Bore well Recharge	Recharge Shaft	Roof top RWH	Hydro Fracturing	Total
444	3			7	9		42	50	45	600

**Groundwater Potential as on March 2011 (as per CGWB):**

Net Groundwater Availability (in MCM)	658.68.
Existing Gross Groundwater draft for all users (in MCM)	380.27
Stage of Groundwater development (in %)	58 %
Categorization of District	Safe

**Categorization of Firkas:**

The status of Categorization of firkas as of March 2011 for the District is shown below.

Categorisation based on Extraction (as on 2011)	No. of Firkas	Firkas
Over Exploited (>100%)	5	Usilampatti, Uthappanaickanur, Muduvarpatti, Palamedu,A.Vellalapatti
Critical (90%-100%)	5	Sedapatti,Kokkulam,Kottampatti,Madurai West, Sindhupatti
Semi Critical (70%-90%)	13	Madurai East, Madurai West, Pudukotta, Vellalur, Athipatti, Elumalai, Peraiyur, Thirumangalam, Karumathur

Safe (<70%)	28	Alanganallur, Appan thirupathi, Arumabanur, Avaniyapuram, Sivarakkottai Chathrapatti, Kallandhiri, Karungalakudi, Keelavalavu, Koolapandi, Kulamangalam, Kunnathur(M), Kuraiyur, Melavalavu, Melur(M), Mothagam, Othakkadai, Rajakkur, Sakkimangalam, Samayanallur, Sathamangalam, Solavandhan, T.Kallupatti, Thanichiam Thirupparan Kundram, Thiruvathavur, Valayankulam, Virathanur
Others (Poor& Saline)	-	
Total	<b>51</b>	

### Water supply status as on 1.4.2017

#### Rural Habitations

Total No. of Rural Habitations: 2263

Partially covered	2(10-39 lpcd )
Fully covered	2261 (40 lpcd and above)

#### Urban Towns (Water supply status - Sep 2016)

S.NO	Name of Towns	Population	Present water supply level LPCD
<b>Corporation</b>			
1	Madurai	1017865	63.60
<b>Municipalities</b>			
1	Usilampatti	35219	63
2	Melur	40017	90
3	Thirumangalam	51194	78
<b>Town Panchayats</b>			
1	Periyaiyur	10394	73
2	Paravai	20042	77
3	Sholavandan	22578	79
4	Alanganallur	12331	79
5	Vadipatti	26830	73
6	Palamedu	10493	78
7	T.Kallupatti	10762	76
8	A.Vellalapatti	8325	72
9	Elumalai	15746	72