



केंद्रीय भूमि जल बोर्ड

जल संसाधन, नदी विकास और गंगा संरक्षण

विभाग, जल शक्ति मंत्रालय

भारत सरकार

Central Ground Water Board

Department of Water Resources, River
Development and Ganga Rejuvenation,
Ministry of Jal Shakti
Government of India

AQUIFER MAPPING AND MANAGEMENT OF GROUND WATER RESOURCES THEERTHAMALAI FIRKA, DHARMAPURI DISTRICT, TAMIL NADU

दक्षिण पूर्वी तटीय क्षेत्र, चेन्नई

South Eastern Coastal Region, Chennai

REPORT ON
AQUIFER DISPOSITION & MANAGEMENT PLAN
THEERTHAMALAI FIRKA,
DHARMAPURI DISTRICT, TAMIL NADU STATE

SALIENT FEATURES

1	Name of the Firka/ Area (Sq.Km.)	:	THEERTHAMALAI	300.57 Sq.km
	Revenue Division		Harur Taluk	
	Location	Lat	:	
		Long	:	
2	Number of Revenue Villages	:		
3	District	State	:	Dharmapuri TAMIL NADU
4	Population (2011 Census)	:	63099	
5	Normal Rainfall (mm)	:		820.60
			Monsoon	673.05
			Non-monsoon	147.55
6	Agriculture (2012-13) (Ha)		1. Gross Irrigated Area	6198.28
		:	2. Paddy	1627.81
			3. Sugar cane	1325.69
			4. Banana	72.49
			5. Other Crops	3025.6
			6. Groundwater	4797
			7. Surface Water	516.03
7	Existing and future water demands (ham)	:	Domestic & Industrial	
			Existing	197.58
			Future (year 2025)	224.57
8	Water Level Behaviour (mbgl)	:	Pre-monsoon	
			Post-monsoon	

AQUIFER DISPOSITION

9	Number of Aquifers	:	2
10	3D Aquifer disposition and basic characteristics of each Aquifer	:	Geology- Gneiss and Charnockite

Aquifer I (Weathered Zone)

Thickness varies from	2.4 – 11.5 m
Transmissivity (T):	2.3 – 42.1 m ² /day

Specific Yield (Sy): 0.10 - 12 %

Aquifer II (Fractured Zone)

Depth of fracturing varies from 11.5 – 59.8 m

Transmissivity (T): 8.5 – 58.6 m²/day

Specific Storage (S): 0.000002 – 0.002

Cumulative Yield (Aquifer I & II): 0.1 – 0.8 lps

11 Groundwater Issues :

- Geogenic contamination by Fluoride.
- Sustainability of wells (1-2 hrs).

12 Groundwater Resource Availability and Extraction (2012-13) :

Net Groundwater availability: 32.6806 MCM

Gross Groundwater draft for irrigation: 28.7575 MCM

Gross Groundwater draft for domestic & industrial supply: 1.9758 MCM

Gross Groundwater draft: 30.7333 MCM

Stage of Groundwater development: 94 %

Category: CRITICAL

13 Groundwater Extraction :

Groundwater extraction structures (Numbers) 4566

Bore wells: 34

Dug wells: 4532

14 Chemical Quality of Groundwater, Contamination and its suitability :

EC (µS/cm) Min Max 562 – 1989

No₃ (mg/l) 2 – 35

F (mg/l) 0.2 – 2.8

15 Groundwater Recharge Scenario

15.1 Recharge from Rainfall (Monsoon) 12.9472 MCM

15.2 Recharge from Other Sources (Monsoon) 16.8599 MCM

15.3 Recharge from Rainfall (Non-monsoon) 3.5479 MCM

15.4	Recharge from Other Sources (Non-monsoon)	2.9567 MCM
15.5	Total Annual Groundwater Recharge	36.3118 MCM
15.6	Natural Discharge	3.6312 MCM

Fig -

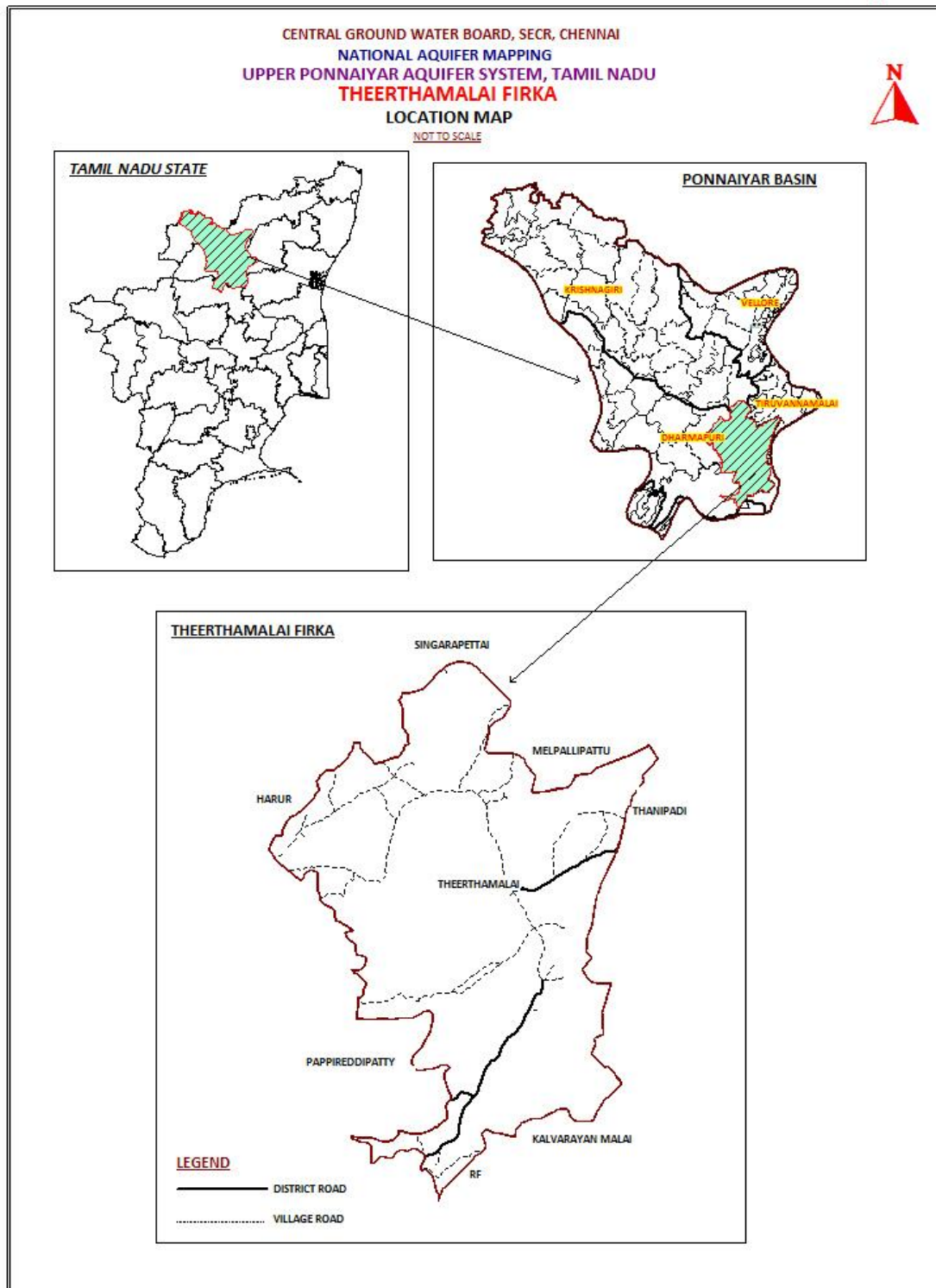


Fig-2(a-d): 3 D map and Sections – Theerthamalai Firka, Dharmapuri District.

