



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 KRISHNAPURAM FIRKA, DHARMAPURI DISTRICT, TAMIL NADU

दक्षिण पूर्वी तटीय क्षेत्र, चेन्नई

South Eastern Coastal Region, Chennai

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

SALIENT FEATURES

1	Name of the Firka/Area (Sq.Km.)	:	KRISHNAPURAM	136.51 Sq.km
	Revenue Division		Dharmapuri	
	Location	Lat	:	
		Long	:	
2	Number of Revenue Villages	:	15	
3	District	State	:	Dharmapuri TAMIL NADU
4	Population (2011 Census)	:	58843	
5	Normal Rainfall (mm)	:	1011.76	
			Monsoon	795.93
			Non-monsoon	215.83
6	Agriculture (2012-13) (Ha)		1. Gross Irrigated Area	2687.80
		:	2. Paddy	808.73
			3. Sugarcane	398.87
			4. Banana	36.09
			5. Other Crops	1243.69
			6. Groundwater	3373
			7. Surface Water	226.60
7	Existing and future water demands (ham)	:	Domestic & Industrial	
			Existing	66.54
			Future (year 2025)	75.63
8	Water Level Behaviour (m.bgl)	:	Pre-monsoon	12.10 – 24.50 m. bgl
			Post-monsoon	9.50 – 16.57 m.bgl

AQUIFER DISPOSITION

9	Number of Aquifers	:	2	
10	3D Aquifer disposition and basic characteristics of each Aquifer	:	Geology- Charnockite and Gneiss	
			Aquifer I (Weathered Zone)	
			Thickness varies from	5.7 – 18.25 m

Transmissivity (T): 2.3 – 65.8 m²/day

Specific Yield (Sy): 0.10 – 12%

Aquifer II (Fractured Zone)

Depth of fracturing varies from 18.25 – 157.25 m

Transmissivity (T): 8.9 – 152 m²/day

Specific Storage (S): 0.00002 – 0.02

Cumulative Yield (Aquifer I & II): 0.2 to 2 lps

11	Groundwater Issues	:	<ul style="list-style-type: none">• Geogenic contamination by Fluoride.• Sustainability of wells (1-2 hrs)												
12	Groundwater Resource Availability and Extraction (2012-13)	:	Net Groundwater availability: 16.1037 MCM Gross Groundwater draft for irrigation: 12.6060 MCM Gross Groundwater draft for domestic & industrial supply: 0.6654 MCM Gross Groundwater draft: 13.2714 MCM Stage of Groundwater development: 82 % Category: SEMI CRITICAL												
13	Groundwater Extraction	:	Groundwater extraction structures (Numbers) 3076 Bore wells: 89 Dug wells: 2987												
14	Chemical Quality of Groundwater, Contamination and its suitability	:	<table><thead><tr><th></th><th>Min</th><th>Max</th></tr></thead><tbody><tr><td>EC (µS/cm)</td><td>680 – 2250</td><td></td></tr><tr><td>No₃ (mg/l)</td><td>2 – 58</td><td></td></tr><tr><td>F (mg/l)</td><td>0.24 – 2.15</td><td></td></tr></tbody></table>		Min	Max	EC (µS/cm)	680 – 2250		No ₃ (mg/l)	2 – 58		F (mg/l)	0.24 – 2.15	
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EC (µS/cm)	680 – 2250														
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15 Groundwater Recharge Scenario															
15.1	Recharge from Rainfall (Monsoon)		8.4407 MCM												
15.2	Recharge from Other Sources (Monsoon)		5.9113 MCM												
15.3	Recharge from Rainfall (Non-monsoon)		1.9074 MCM												

15.4	Recharge from Other Sources (Non-monsoon)	1.6337 MCM
15.5	Total Annual Groundwater Recharge	17.8930 MCM
15.6	Natural Discharge	1.7893 MCM

CENTRAL GROUND WATER BOARD, SECR, CHENNAI
NATIONAL AQUIFER MAPPING
UPPER PONNAIYAR AQUIFER SYSTEM, TAMIL NADU
KRISHNAPURAM FIRKA
LOCATION MAP



NOT TO SCALE

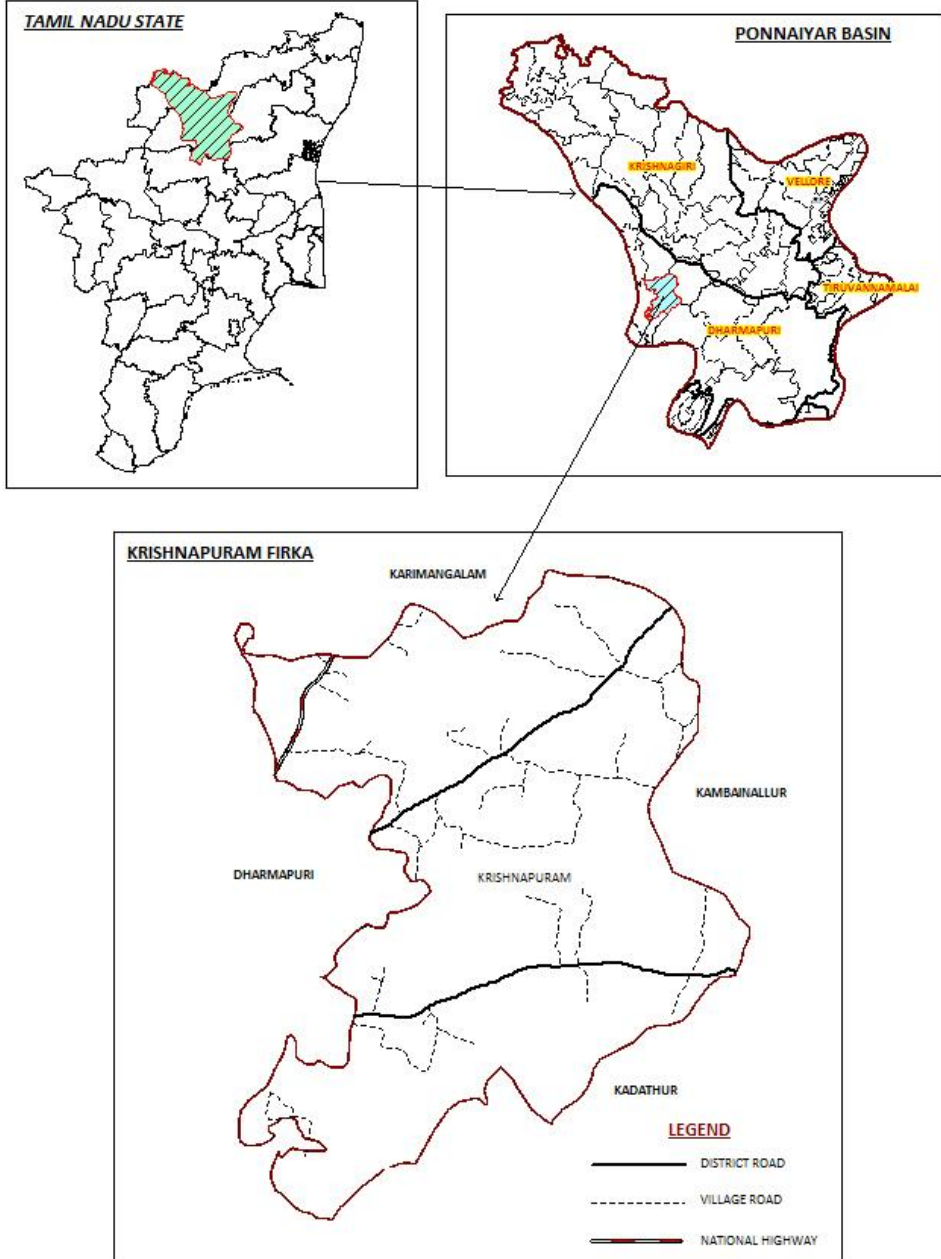


Fig-2: 3 D map and 2D - Sections.

