



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

**ALAPATTI FIRKA, KRISHNAGIRI DISTRICT,
TAMIL NADU**

दक्षिण पूर्वी तटीय क्षेत्र, चेन्नई

South Eastern Coastal Region, Chennai

Management Plan Summary -Alapatti Firka, Krishnagiri District.

Area:	171.76 Sq.Km
Monsoon Rainfall :	624 mm
Stage of groundwater development :	322.58 %
Uncommitted surface runoff/flow :	16.08 MCM.
Total volume of Weathered zone available (Rechargeable) :	20.61 MCM. (8.00m thickness)
Total volume of weathered zone available (Rechargeable) :	12.88 MCM (considering 5 m thickness).
Area are suitable for recharge :	57 % (As per integration studies)
Quantity Rechargeable:	1.57 MCM
Effect on Water Level:	0.50 m Rise
Cost Involved:	6.303 Crore

Management Plan-Alapatti Firka, Krishnagiri District.

Feasible Artificial Recharge & Water Conservation structures/ activities	Tentative Design	quantity (in nos. or area in sq. m)	Total volume (cu.m)	Tentative unit cost (in Rs lakh)	Total tentative cost (in Rs lakh)	Expected Annual GW recharge (cu.m)
Recharge Structures/ Activities						
Masonry Check dams (4 Fillings)	Crest- 10 -15 m; Height- 0.5 m to 1 m	11	300	30.0	330	13200
Percolation pond	150x150x1.5m Total Area=0.19sq.km	2	190000x1x3	12	24	570000
Revival, repair of water bodies (3 fillings)	~100mx100mx1.5m Total area=0.06sq.km	4	60000x1x3	12	48	180000
Recharge shaft	1.5 m dia. with bore well up to 17 m	6		4	24	
Water Conservation Activities						
Farm Pond (in ha) (4 filling)	30 m x 30m x 1.5 m	100 unit	1350	1	100	810000
Sprinkler/ drip/ HDPE pipes for 300 ha select area	For 1 ha with 5 m interval HDPE pipe	100 ha		0.6 /ha	60	400000
Sub total					586	1573200
Impact assessment and O & M						
Piezometers Up to 50 m bgl – 25 nos. @ 0.6 lakh (Impact assessment to be carried out by the implementing agencies)					15	
O & M - 5 % of total cost of the scheme					29.3	
TOTAL					630.3	

Tentative location of proposed 11 Check dam in the firka

SLNO	LONGITUDE	LATITUDE	STRUCTURES
1	78.07	12.54	Check dam
2	78.07	12.56	Check dam
3	78.09	12.58	Check dam
4	78.10	12.55	Check dam
5	78.11	12.57	Check dam
6	78.13	12.54	Check dam
7	78.13	12.52	Check dam
8	78.12	12.51	Check dam
9	78.10	12.50	Check dam
10	78.14	12.49	Check dam
11	78.15	12.47	Check dam

Tentative location of proposed de-siltation of pond/tanks with recharge shaft

SL.NO	LONGITUDE	LATITUDE	STRUCTURE	ACTION
1	78.12	12.58	TANK / RESERVOIR	DESILTATION AND RECHARGE SHAFT
2	78.12	12.59	TANK / RESERVOIR	DESILTATION AND RECHARGE SHAFT
3	78.14	12.59	TANK / RESERVOIR	DESILTATION AND RECHARGE SHAFT
4	78.13	12.56	TANK / RESERVOIR	DESILTATION AND RECHARGE SHAFT

Tentative location of proposed Percolation pond/tanks with recharge shaft

SL.NO	LONGITUDE	LATITUDE	STRUCTURE	ACTION
1	78.13	12.56	TANK / RESERVOIR	Percolation Tank with shaft
2	78.14	12.51	TANK / RESERVOIR	Percolation Tank with shaft

**ARTIFICIAL RECHARGE STRUCTURES PROPOSED
ALAPATTI FIRKA
KRISHNAGIRI TALUK
KRISHNAGIRI DISTRICT
TAMIL NADU**

