



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**

**AMMANKOIL FIRKA, TIRUVANNAMALAI
DISTRICT, TAMIL NADU**

दक्षिण पूर्वी तटीय क्षेत्र, चेन्नई
South Eastern Coastal Region, Chennai

Management Plan Summary -Ammankoil Firka, Velore District.

Area:	87.67Sq.Km
Monsoon Rainfall :	925 mm
Stage of groundwater development :	181.83 %
Uncommitted surface runoff/flow :	12.16 MCM.
Total volume of Weathered zone available (Rechargeable) :	10.52 MCM. (8.00m thickness)
Total volume of weathered zone available (Rechargeable) :	6.58 MCM (considering 5 m thickness).
Area are suitable for recharge :	94 % (As per integration studies)
Quantity Rechargeable:	5.00 MCM
Effect on Water Level:	4.05 m Rise
Cost Involved:	11.73 Crore

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	10	300 (60%)	15.0	150	7200
Nala bunds / Gabion (4 Fillings)	Width: 5 to 15 m	10	150 (60%)	2.0	20	3600
Recharge shaft (ON ROAD SIDE)	(1.5 m dia. with bore well up to 17 m)	80	77.2(60%)	4.0	320	3706
Revival, repair of water bodies (3 fillings)	Shaft = 1.5 m dia x 2m h Recharge= area of the smaller tanks x 1.0 m	15	2200000* 1* 3 (60%)	28.0 (25+3)	420	3960000
Recharge shaft with the pond /tanks/canals (3 fillings)	Shaft = 3.0 m dia x 3m h Recharge=(20% of the total area of the big tanks)	15	200000* 1.0*3	5.0	75	600000
Farm Pond (in ha) (4 filling)	(30 m x 30m x 1.5 m) 900 sq.m or 0.1 ha	80 unit	1350x4	1	80	432000
				Sub Total	1630	5006506
Water Conservation Activities						
Sprinkler/ drip/ HDPE pipes for 300 ha select area	For 1 ha with 5 m interval HDPE pipe	80 ha		0.6 /ha	48	300000
Sub total					1113	
Impact assessment and O & M						
Piezometers Up to 50 m bgl – 8 nos. @ 0.6 lakh (Impact assessment to be carried out by the implementing agencies)					4.80	
O & M - 5 % of total cost of the scheme					5.65	
TOTAL					1173.45	

Tentative sites for artificial recharge structures, Ammankovil firka

S.NO	LONGITUDE	LATITUDE	TYPE OF ARS
1	78.47	12.56	NALA BUND
2	78.47	12.56	NALA BUND
3	78.54	12.58	NALA BUND
4	78.46	12.54	NALA BUND
5	78.44	12.54	NALA BUND
6	78.46	12.52	NALA BUND
7	78.48	12.50	NALA BUND
8	78.48	12.50	NALA BUND
9	78.47	12.51	NALA BUND
10	78.48	12.55	NALA BUND
11	78.53	12.57	CHECK DAM
12	78.48	12.55	CHECK DAM
13	78.49	12.56	CHECK DAM
14	78.44	12.54	CHECK DAM
15	78.47	12.52	CHECK DAM
16	78.46	12.52	CHECK DAM
17	78.48	12.50	CHECK DAM
18	78.47	12.55	CHECK DAM
19	78.47	12.51	CHECK DAM
20	78.43	12.57	CHECK DAM
21	78.54	12.56	RR CUM RS
22	78.52	12.53	RR CUM RS
23	78.53	12.54	RR CUM RS
24	78.51	12.55	RR CUM RS
25	78.53	12.56	RR CUM RS
26	78.50	12.52	RR CUM RS
27	78.53	12.51	RR CUM RS
28	78.48	12.51	RR CUM RS
29	78.50	12.50	RR CUM RS
30	78.47	12.55	RR CUM RS
31	78.44	12.55	RR CUM RS
32	78.51	12.51	RR CUM RS
33	78.51	12.51	RR CUM RS
34	78.49	12.50	RR CUM RS
35	78.49	12.51	RR CUM RS
36	78.54	12.57	RS
37	78.53	12.57	RS
38	78.52	12.57	RS
39	78.52	12.56	RS

40	78.53	12.55	RS
41	78.51	12.55	RS
42	78.50	12.54	RS
43	78.52	12.54	RS
44	78.52	12.50	RS
45	78.50	12.51	RS
46	78.45	12.53	RS
47	78.48	12.54	RS
48	78.51	12.52	RS
49	78.53	12.52	RS
50	78.49	12.51	RS

