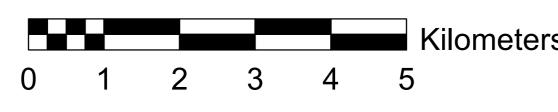
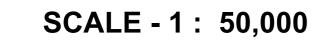
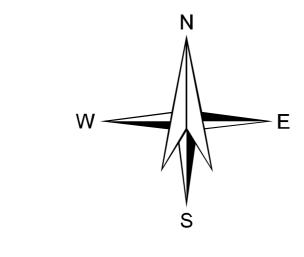
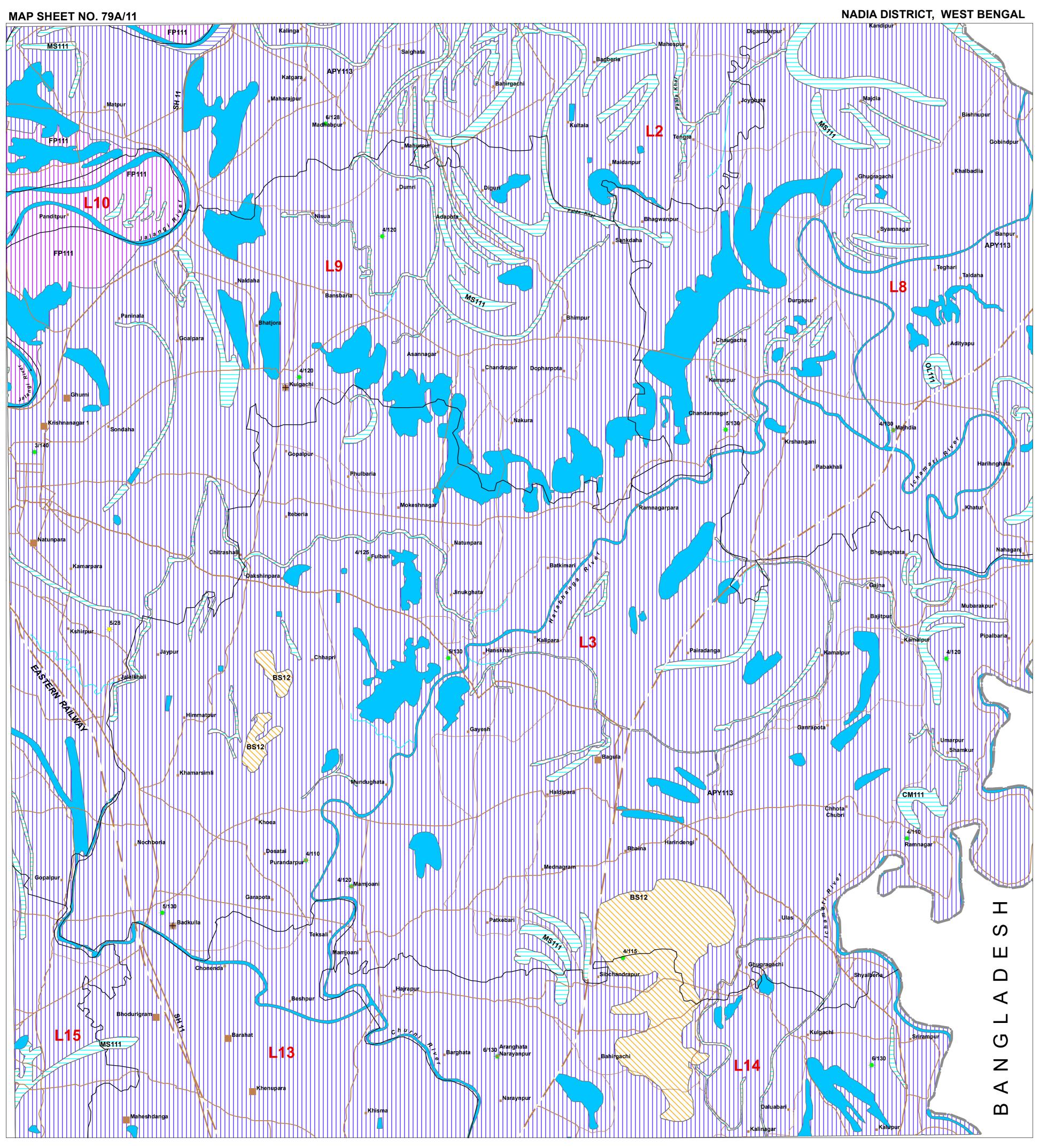
## GROUND WATER PROSPECTS MAP

(PREPARED FROM SATELLITE IMAGE INTERPRETATION WITH LIMITED FIELD CHECKS)









NRSC (ISRO), DEPT. OF SPACE, GOVT. OF INDIA DATA USED: IRS - P6 LISS III FCC dated September 2005-February 2006, GROUND TRUTH & WELL OBSERVATION during March-June, 2012 & Oct 2012-Jan 2013, Published Geological maps & Literatures. Designed & Developed by Hydrogeology Division, NRSC, ISRO

LEGEND

MAP UNIT GE	OLOGICAL SEQUENCE / ROCK TYPE	GEOMORPHIC UNIT / LANDFORM	DEPTH TO WATER LEVEL	RECHARGE CONDITIONS	GROUND WATER PROSPECTS					RECHARGE STRUCTURES			
HYDROGEOMORPHIC UNIT )  REPRESENTED IN THE MAP WITH LPHANUMERIC CODE  COLOUR INDICATES YIELD RANGE AND HATCHING INDICATE DEPTH RANGE)	(REPRESENTED IN THE MAP WITH NUMERIC CODE)	( REPRESENTED IN THE MAP WITH ALPHABETIC CODE )	PRE / POST- MONSOON (AVERAGE IN METERS)  NO. OF WELLS OBSERVED	BASED ON AVAILABILITY OF WATER (RAINFALL & OTHER SOURCES)	AQUIFER MATERIAL  LS = LOOSE SEDIMENTS PR = PERMEABLE ROCK FIR = FISSURED ROCK FR = FRACTURED ROCK WR /= WEATHERED ROCK / WM WEATHERED MATERIAL IR = IMPERIVIOUS ROCK	TYPE OF WELLS SUITABLE  DW = DUG WELL RW = RING WELL BW = BORE WELL TW = TUBE WELL DBW / = DUG CUM-BORE WELL / DTW DUG CUM-TUBE WELL	DEPTH RANGE OF WELLS (SUGGESTED) MIN - MAX (IN METERS)	YIELD RANGE OF WELLS (EXPECTED) (in LPM or m³/day)	HOMOGENEITY IN THE UNIT & SUCCESS RATE OF WELLS (PROBABILITY)  VERY HIGH HIGH MODERATE LOW	QUALITY OF WATER POTABLE (P) NON - POTABLE (NP) (INDICATE REASONS IF NON POTABLE)	GROUND WATER IRRIGATED AREA (APPROX. RANGE IN PERCENTAGE)	SUITABLE & PRIORITY  PT = PERCOLATION TANK CD = CHECK DAM NB = NALA BUND RW = RECHARGE WELL DT = DESILTING OF TANK RP = RECHARGE PIT SD = SUBSURFACE DYKE RS = RECHARGE SHAFT ST = STORAGE TANK SCM = SOIL CONSERVATION MEASURES	REMARKS (PROBLEMS/LIMITATIONS)
CB111		Channel Bar (CB)	No well observed	Excellant	LS	TW	5-10 m	400-500 LPM	Very High	Р	Nil	Not Required	Groundwater prospects very hig with high recharge potential. Recharge structures not require
ent day Depos		Ox-bow Lake (OL)	No well observed	Very Good	LS	TW	10-15 m	250-350 LPM	Very High	P	Nil	Not Required	Groundwater prospects very hi with high recharge potential. Recharge structures not require
hi Formation/Pres (Present Day)	Alluvium (Sand Dominant) (111)	Cut-off Meander (CM)	No well observed	Very Good	LS	RW TW	10-15 m	250-350 LPM	Very High	P	9.04	Not Required	Groundwater prospects very hi with high recharge potential. Recharge structures not require
Hugli/Bhagirath		Meander Scar (MS)	No well observed	Good	LS	RW TW	10-15 m	200-250 LPM	High	P	Nil	Not Required	Groundwater prospects very hi with high recharge potential. Recharge structures not require
FP111		Flood Plain (FP)	No well observed	Very Good	LS	TW	>150 m	>800 LPM	Very High	NP (As & Fe) [At shallow depth]	2.38	Not Required	Areas with high Arsenic and Iror concentration.Potable water available at depth range above15
twa/Basudebpur/ oshi Formation	Alluvium (Clay Dominant) (12)	Backswamp (BS)	<u>5 / 3</u> 1	Poor	LS	TW	60-70 m	40-50 LPM	Low	P	Nil	Not Required	Areas of low groundwater potent Better potential at greater depths
TO A B A B A B A B A B A B A B A B A B A	(13)	Abandoned Channel (AC)	No well observed	Very Good	LS	R W T W	10-15 m	250-300 LPM	Very High	P	0.15	Not Required	Areas of very high groundwater potential at shallow depth.Most suitable for extraction of groundwards
ELILA ELILA INSKUra/Aramb Kandi/Malda (Es	Alluvium (Sand and Silt) (113)	Alluvial Plain Younger (APY)	6 / 4	Good	LS	TW	100-120 m	500-600 LPM	High	NP (As & Fe) [At shallow depth]	67.6	Not Required	Areas with high Arsenic and Iron concentration.Potable water available at depth range above1

N.B.-The depth range and yield range of wells may vary within the unit because of certain inhomogeneities. Fractures/Lineaments which are clearly observed / inferred from the satellite image are indicated on the map. There could be some obscured fractures which also influence the ground water prospects.

Locations of the recharge structures shown in the map are tentative. This map is useful for narrowing down the target zones, and exact location on the ground for wells and recharge structures should be identified based on follow-up ground hydrogeological/geophysical surveys.

GROUND WATER PROSPECTS INFORMATION	HYDROLOGICAL INFORMATION	STRUCTURAL INFORMATION	BASE MAP INFORMATION	LOCATION INFORMATION		
YIELD COLOUR DEPTH RANGE OF WELLS	DESCRIPTION SYMBOL	DIPS BEDDING SCHISTOSITY/ FOLIATION	SYMBOL DESCRIPTION	STATE INDEX DISTRICT INDEX		
YIELD COLOUR RANGE CODE SHALLOW MODERATE DEEP OF WELLS SAGMETERS 30 - 80 METERS > 80 METERS	CANAL / TANK IRRIGATED AREA	GENTLE (<15)	NH - 2 NATIONAL HIGHWAY	A-BIRBHUM B-BARDDHAMAN		
> 800 LPM VIOLET	RIVER / STREAM (with sand)	MODERATE (15 - 45 )  STEEP (45 - 80 )	SH - 9 STATE HIGHWAY	C-PURULIYA D-BANKURA E-PASCHIM MEDINIPUR F-PURBA MEDNIPUR G-SOUTH 24 PARGANAS H-HOWRAH		
	WATER BODY / SPRING	SUB - VERTICAL TO VERTICAL (>80)	METALLED ROAD	I-KOLKATA J-N24 PARGANAS A M		
400 - 800 LPM INDIGO	CANAL  RAIN GUAGE STATION (With average annual rainfall in mm)	ANTICLINE / ANTIFORM ←←	OTHER ROAD	INDIA		
200 - 400 LPM BLUE	PERCOLATION TANK CHECK DAM	SYNCLINE / SYNFORM ←	RAILWAY	WEST BENGAL		
100 - 200 LPM GREEN	NALA BUND ☐ RECHARGE WELL ☐ RECHARGE PIT ★ SUBSURFACE DYKE ☐ RECHARGE SHAFT △	TREND LINE	CITY / VILLAGE	K-HUGLI L-NADIA M-MURSIDABAD N-MALDA		
50 - 100 LPM YELLOW	SOIL CONSERVATION  MEASURES  WELLS OBSERVED DURING FIELD VISIT  YIELD RANGE BORE / YIELD RANGE DUG WELL /	ESCARPMENT  LITHOLOGY / GEOMORPHIC UNIT BOUNDARY	HABITATIONS : NON - COVERED (NC) PARTIALLY COVERED (PC)			
30 - 50 LPM ORANGE	N LPM   TUBE WELL   IN m³/ day   RING WELL	MINOR   MAJOR   FAULT   F   F   F   F   F   F   F   F   F	BOUNDARY : INTERNATIONAL	BLOCK INDEX MAPSHEET INDEX		
20 - 30 LPM BROWN	200 - 400 LPM	THRUST T T T T T T T T T T T T T T T T T T	STATE DISTRICT	19A06 79A10 79A14		
10 - 20 LPM PINK	30 - 50 LPM	FRACTURE / LINEAMENT (Inferred)  SHEAR ZONE (Confirmed / Inferred) S S S S S S S S S S S S S S S S S S S	OTHER INFORMATION	79A07 79A11 79A15		
Prospects limited to valley	10 - 20 LPM	DYKE (Confirmed / Inferred)		79A08 79A12 79A16		
portions only (Hills, Plateaus etc.)	Colour inside well symbol indicates yield range. The figures on the top right hand side of well indicate the depth to water level and depth of well in meters	QUARTZ REEF (Confirmed / Inferred)	Rainfall : 1444 mm	L13-RANAGHAT I L8-KRISHNAGANJ		
Run-off zone/	DUG - CUM- BORE WELL + HAND PUMP WELL	PEGMATITIE VEIN (Confirmed / Inferred)	(Source IMD)	L14-RANAGHAT II L9-KRISHNANAGAR I L15-SANTIPUR L10-KRISHNANAGAR II L3-HANSKHALI L2-CHAPRA		
G.W. movement (Inselberg / Ridge / Dyke etc.)	ARTESIAN WELL  OBSERVATION WELL OF G.W DEPT. / C.G.W.B.	Lithologic contacts are inferred at places & Geomorphic boundaries are gradational				
PREPARED BY  GEOINFORMATICS & REMOTE SENSING CELL  N.B. STATE COUNCIL OF SCIENCE AND TECHNOLOGY	TECHNICAL GUIDANCE & QUALITY CHECK	PARTICIPATING ORGANIZATIONS SURVEY OF INDIA	METHODOLOGY & PROJECT EXECUTION	SPONSORED BY  RAJIV GANDHI NATIONAL DRINKING WATER MISSION (PHASE IV)		
DEPARTMENT OF SCIENCE AND TECHNOLOGY GOVERNMENT OF WEST BENGAL 4TH FLOOR, BIKASH BHAVAN SALT LAKE, KOLKATA 700 091	NATIONAL REMOTE SENSING CENTRE INDIAN SPACE RESEARCH ORGANISATION (ISRO) DEPT. OF SPACE, GOVT. OF INDIA BALANAGAR, HYDERABAD - 500 625	GEOLOGICAL SURVEY OF INDIA PHED, GOVT. OF WEST BENGAL STATE WATER INVESTIGATION DIRECTORATE, GOWB P.S.MAPS (LAND RECORD), GOVT OF WEST BENGAL	NATIONAL REMOTE SENSING CENTRE INDIAN SPACE RESEARCH ORGANISATION (ISRO) DEPT. OF SPACE, GOVT. OF INDIA BALANAGAR, HYDERABAD - 500 625	DEPARTMENT OF DRINKING WATER SUPPLY (DDWS MINISTRY OF DRINKING WATER & SANITATION GOVERNMENT OF INDIA NEW DELHI		