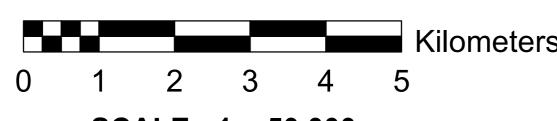
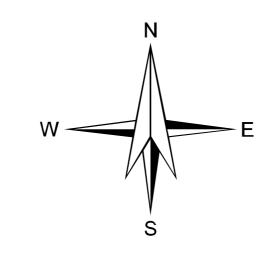
## GROUND WATER PROSPECTS MAP

(PREPARED FROM SATELLITE IMAGE INTERPRETATION WITH LIMITED FIELD CHECKS)





SCALE - 1: 50,000 MAP SHEET NO. 78D/8

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

## L E G E N D

														_
MAP UNIT (HYDROGEOMORPHIC UNIT)		OGICAL SEQUENCE / ROCK TYPE	GEOMORPHIC UNIT / LANDFORM	DEPTH TO WATER LEVEL  PRE / POST- MONSOON (AVERAGE IN METERS)  NO. OF WELLS OBSERVED	RECHARGE CONDITIONS  BASED ON AVAILABILITY OF WATER  (RAINFALL & OTHER SOURCES)	GROUND WATER PROSPECTS  RECHARGE STRUCTURES SUITABLE & PROGENEITY QUALITY OF GROUND PRIORITY					STRUCTURES SUITABLE &			
REPRESENTED IN THE MAP WITH ALPHANUMERIC CODE  ( COLOUR INDICATES YIELD RANGE AND HATCHING INDICATE DEPTH RANGE)		REPRESENTED IN THE MAP WITH NUMERIC CODE )	( REPRESENTED IN THE MAP WITH ALPHABETIC CODE )			AQUIFER MATERIAL  LS = LOOSE SEDIMENTS PR = PERMEABLE ROCK FIR = FISSURED ROCK FR = FRACTURED ROCK WR /= WEATHERED ROCK / WM WEATHERED MATERIAL IR = IMPERIVIOUS ROCK	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 m <sup>3</sup> / day)	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)	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	w	• 1	Channel Bar (CB)	No Well Observed	Excellant	LS	RW TW	5-10 m	400-500 LPM	Very High	P	Nil	Not Required	Groundwater prospects very high with high recharge potential. Recharge structures not required.
PB111	t day Deposit		Point Bar (PB)	No Well Observed	Very Good	LS	RW TW	5-10 m	300-500 LPM	Very High	P	Nil	Not Required	Groundwater prospects very high with high recharge potential. Recharge structures not required
OL13	mation/Presen ent Day)	wention/Preservent Day) Alluvium (Sand Dominant) (111)	Ox-bow Lake (OL)	No Well Observed	Very Good	LS	RW TW	10-15 m	200-300 LPM	Very High	Р	Nil	Not Required	Groundwater prospects very high with high recharge potential. Recharge structures not required
CM111	girathi For (Pres		Cut-off Meander (CM)	<u>13 / 9</u> 1	Very Good	LS	RW TW	10-15 m	200-300 LPM	Very High	Р	Nil	Not Required	Groundwater prospects very high with high recharge potential. Recharge structures not required
MS111	Hugli/Bha		Meander Scar (MS)	<u>6/3</u> 5	Good	LS	RW TW	10-15 m	200-250 LPM	High	P	Nil	Not Required	Groundwater prospects very high with high recharge potential. Recharge structures not required.
FP111			Flood Plain (FP)	<u>6 / 4</u> 1	Very Good	LS	TW	>150 m	>800 LPM	Very High	NP (As & Fe) [At shallow depth]	24	Not Required	Areas with high Arsenic and Iron concentration.Potable water available at depth range above150
FP111	-		Flood Plain (FP)	<u>6/4</u> 1	Very Good	LS	TW	>80 m	500-600 LPM	Very High	NP (As & Fe) [At shallow depth]	25	Not Required	Areas with high Arsenic and Iron concentration.Potable water available at depth range above 80r
B\$12	atwa Formation ene)	Alluvium (Clay Dominant) (12)	Backswamp (BS)	No Well Observed	Poor	LS	TW	60-70 m	40-50 LPM	Low	Р	Nil	Not Required	Areas of low groundwater potential Better potential at greater depths.
APY113	agh/Chinsura/K y to Late Holoc	Alluvium (Sand and Silt) (113)	Alluvial Plain Younger (APY)	7 / 4 98	Good	LS	TW	100-120 m	400-500 LPM	High	NP (As & Fe) [At shallow depth]	57	RW Low	Areas with high Arsenic and Iron concentration.Potable water available at depth range above 100
AC13	Panskura/Aramb (Earl	Alluvium (Sand,Silt & Clay) (13)	Abandoned Channel (AC)	No Well Observed	Very Good	LS	RW TW	10-15 m	250-300 LPM	Very High	P	Nil	Not Required	Areas of very high groundwater potential at shallow depth.Most suitable for extraction of groundwa
F// D /QQ D /QQ						hard rocks. Along these zone for ground water moveme		r higher and wells are	e likely to be sustainal	ble for longer duratio	n. However, the inferre	d fractures need to be	confirmed by detailed ground surve	vs.

GROUND WA	TER PROSPECTS INFORMATION	HYDROLOGICAL INFORMATION	STRUCTURAL INFORMATION	BASE MAP INFORMATION	LOCATION INFORMATION		
YIELD COLOU	DEPTH RANGE OF WELLS	DESCRIPTION SYMBOL	DIPS BEDDING SCHISTOSITY/ FOLIATION	SYMBOL DESCRIPTION	STATE INDEX DISTRICT INDEX		
RANGE CODE		CANAL / TANK IRRIGATED AREA	GENTLE (<15)	NH - 2 NATIONAL HIGHWAY	A-BIRBHUM B-BARDDHAMAN		
OF WELLS	< 30 METERS 30 - 80 METERS > 80 METERS	GROUND WATER IRRIGATED AREA	MODERATE (15 - 45)	NH-2 NATIONAL HIGHWAT	C-PURULIYA D-BANKURA N		
> 800 LPM VIOLET		RIVER / STREAM (with sand)	STEEP (45-80)	SH - 9 STATE HIGHWAY	E-PASCHIM MEDINIPUR F-PURBA MEDINIPUR G-S24 PARGANAS		
		WATER BODY / SPRING	SUB - VERTICAL TO VERTICAL ( > 80 )	METALLED ROAD	H-HOWRAH I- KOLKATA J-N24 PARGANAS		
400 - 800 LPM INDIGO		CANAL	ANTICLINE / ANTIFORM	1	INDIA		
		RAIN GUAGE STATION (With average annual rainfall in mm)	ANTIGERIAL / ANTII OKWI	OTHER ROAD	C D B		
200 - 400 LPM BLUE		RECHARGE STRUCTURES SUGGESTED	SYNCLINE / SYNFORM ←	RAILWAY	WEST K		
		PERCOLATION TANK CHECK DAM		KAILWAT	BENGAL &		
		DESILTING OF TANK ☐ RECHARGE PIT ★	TREND LINE	CITY / VILLAGE	K-HUGLI L-NADIA M-MURSHIDABAD		
00 - 200 LPM GREEN		SUBSURFACE DYKE IIIIIIII RECHARGE SHAFT A	ESCARPMENT		N-MALDAH		
		MEASURES  WELLS OBSERVED DURING FIELD VISIT		HABITATIONS : NON - COVERED (NC) PARTIALLY COVERED (PC)			
50 - 100 LPM YELLOW		YIELD RANGE BORE / YIELD RANGE DUG WELL / IN LPM TUBE WELL IN m³/ day RING WELL	LITHOLOGY / GEOMORPHIC UNIT BOUNDARY	PARTIALLY COVERED (PC)			
		> 800 LPM • 15/70 > 400 m³ / day • 8/15	MINOR MAJOR	BOUNDARY:	BLOCK INDEX MAPSHEET INDE		
30 - 50 LPM ORANG		400 - 800 LPM	FAULT F F F	INTERNATIONAL	M6, M21 78D03 78D07 7		
		200 - 400 LPM	THRUST TT TT		M21 78D03 78D07 7		
20 - 30 LPM BROWN		100 - 200 ET W	FRACTURE / LINEAMENT	DISTRICT			
		50 - 100 LPM	FRACTURE / LINEAMENT	BLOCK	M9 78D04 78D08 7		
10 - 20 LPM PINK		16 20 m / day	SHEAR ZONE (Confirmed / Inferred) S S/S S/S S	-	M2		
		20 - 30 LPM	DYKE (Confirmed / Inferred)	OTHER INFORMATION			
Prospects imited to valley		10 - 20 LPM	Commined / Interred)	Deinfell : 4277 mm	M11 79A01 79A05 7		
oortions only Hills, Plateaus		Colour inside well symbol indicates yield range. The figures on the top right	QUARTZ REEF (Confirmed / Inferred)	Rainfall : 1377 mm	M9 M18		
RED		hand side of well indicate the depth to water level and depth of well in meters  DUG - CUM- BORE WELL  HAND PUMP WELL	PEGMATITIE VEIN (Confirmed / Inferred)	(Source IMD)	M2-BEHARAMPORE M11-HARIHARPARA M3-BELDANGA I M16-MURSHIDABAD_JIAGANJ M3-BHAGAWANGOLA I M18-NAODA		
Run-off zone/ Barrier for G.W. movement	(Inselberg / Ridge / Dyke etc.)	ARTESIAN WELL OBSERVATION WELL OF	Lithologic contacts are inferred at places & Geomorphic boundaries	(Source IMD)	M6-BHAGAWANGOLA II M21-RANINAGAR I M9-DOMKAL M22-RANINAGAR II		
		G.W DEPT. / C.G.W.B.	are gradational		<del>                                     </del>		
PR	EPARED BY	TECHNICAL GUIDANCE & QUALITY CHECK	PARTICIPATING ORGANIZATIONS	METHODOLOGY & PROJECT EXECUTION	SPONSORED BY		
	TICS & REMOTE SENSING CELL	इसरो इंटा		इसरो ंडन्व	RAJIV GANDHI NATIONAL DRINKING WATER M		
	CIL OF SCIENCE AND TECHNOLOG OF SCIENCE AND TECHNOLOGY	NATIONAL REMOTE SENSING CENTRE	SURVEY OF INDIA GEOLOGICAL SURVEY OF INDIA	NATIONAL REMOTE SENSING CENTRE	(PHASE IV)		
	MENT OF WEST BENGAL	INDIAN SPACE RESEARCH ORGANISATION (ISRO)		INDIAN SPACE RESEARCH ORGANISATION (ISRO)	DEPARTMENT OF DRINKING WATER SUPPLY (I MINISTRY OF DRINKING WATER & SANITATI		
	LOOR, BIKASH BHAVAN	DEPT. OF SPACE, GOVT. OF INDIA	STATE WATER INVESTIGATION DIRECTORATE, GOW		GOVERNMENT OF INDIA		
SALT L	AKE, KOLKATA 700 091	BALANAGAR, HYDERABAD - 500 625	P.S.MAPS (LAND RECORD), GOVT OF WEST BENGA	L BALANAGAR, HYDERABAD - 500 625	NEW DELHI		

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.