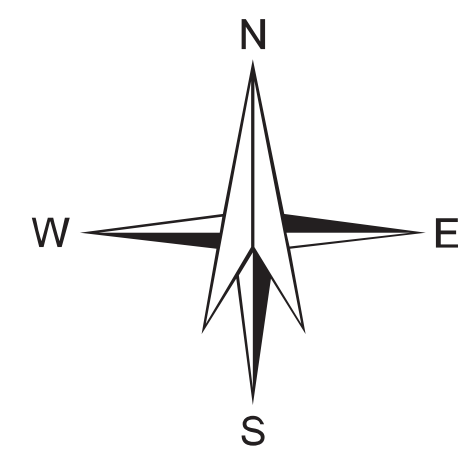
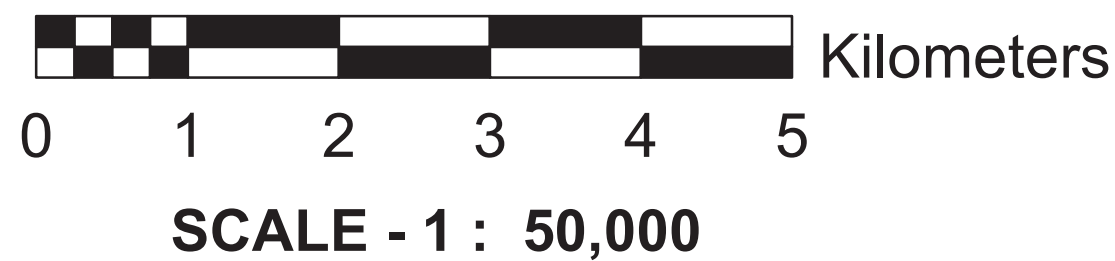


GROUND WATER PROSPECTS MAP

(PREPARED FROM SATELLITE IMAGE INTERPRETATION WITH LIMITED FIELD CHECKS)



LEGEND

MAP UNIT (HYDROGEOLOGIC UNIT) REPRESENTED IN THE MAP WITH ALPHANUMERIC CODE (COLOUR INDICATES YIELD RANGE AND HATCHING INDICATE DEPTH RANGE)	GEOLOGICAL SEQUENCE / ROCK TYPE (REPRESENTED IN THE MAP WITH NUMERIC CODE)	GEOMORPHIC UNIT / LANDFORM (REPRESENTED IN THE MAP WITH ALPHABETIC CODE)	DEPTH TO WATER LEVEL PRE (POST-MONSOON) (AVERAGE IN METERS) (NO. OF WELLS OBSERVED)	RECHARGE CONDITIONS BASED ON AVAILABILITY OF WATERS (RAINFALL & OTHER SOURCES)	GROUND WATER PROSPECTS							RECHARGE STRUCTURES SUITABLE & PRIORITY	REMARKS (PROBLEMS / LIMITATIONS)
					AQUIFER MATERIAL	TYPE OF WELLS SUITABLE	DEPTH RANGE OF WELLS (SUGGESTED) MIN. - MAX (IN METERS)	YIELD RANGE OF WELLS (EXPECTED) (% LPM or m ³ /day)	HOMOGENEITY IN THE UNIT & SUCCESS RATE OF WELLS (PROBABILITY) VERY HIGH MODERATE LOW	QUALITY OF WATER (POTABLE (P) NON-POTABLE (NP) (HARDNESS RANGE IF NOT POTABLE))	GROUND WATER IRRIGATED AREA (APPROX. RANGE IN PERCENTAGE)		
	Shugaon Formation (Present Day Deposit)	Braid Bar (BB)	No Well Observed	Excellent	LS	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.
		Point Bar (PB)	No Well Observed	Very Good	LS	RW TW	5-10 m	300-400 LPM	Very High	P	Nil	Not Required	Groundwater prospects very high with high recharge potential. Recharge structures not required.
		River Island (RI)	No Well Observed	Very Good	LS	TW	5-10 m	400-500 LPM	High	P	Nil	Not Required	Highly productive aquifer at shallow depth. Good recharge
		Meander Scar (MS)	No Well Observed	Very Good	LS	RW TW	10-15 m	200-250 LPM	High	P	Nil	Not Required	Highly productive shallow aquifers with good recharge.
		Cut-off Meander (CM)	No Well Observed	Good	LS	RW TW	10-20 m	300-400 LPM	High	P	Nil	Not Required	Highly productive shallow aquifers with good recharge from the river base flow.
		Flood Plain (FP)	$\frac{5}{3}$ 1	Very Good	LS	TW	<30 m	250-350 LPM	Very High	P	100	Not Required	Receives good recharge and forms shallow aquifer. Overall quality of the water is potable.
		Piedmont Alluvium Deep (PAD)	No Well Observed	Good	LS	TW	60-80 m	400-500 LPM	Moderate	P	2	Not Required	Good ground water prospect at greater depth as the principal aquifer occurs below PAM.
	Majda Jajalpur (Ganga-Koah Formation Early - Late Pleocene)	Alluvium (Sand and Silt) (113)	$\frac{6}{4}$ 42	Good	LS	TW	25-30 m	200-250 LPM	High	P	80	Not Required	Highly productive aquifer at shallow depth with good recharge.
		Abandoned Channel (AC)	No Well Observed	Excellent to Very Good	LS	RW TW	10-15 m	250-300 LPM	Very High	P	45	Not Required	Highly productive shallow aquifers with good recharge from base flow.
	Samsing Formation (Late Pleocene - Holocene)	Alluvium (Sand, Silt & Clay) (13)	No Well Observed	Very Good	LS	RW TW	10-20 m	150-200 LPM	Very High	P	Nil	Not Required	Highly productive shallow aquifers with good recharge.
		Alluvium (Gravel Dominant) (18)	Piedmont Alluvium Moderate (PAM)	$\frac{6}{4}$ 13	Good	LS	TW	40-60 m	300-400 LPM	Moderate	P	85	Not Required
F = Fault / Fracture zones, which generally act as conduits for movement of ground water in hard rocks. Along these zones, the yields are significantly higher and wells are likely to be sustainable for longer duration. However, the inferred fractures need to be confirmed by detailed ground surveys.													
D = Dyke / Quartz reefs and pegmatite veins, which generally act as barriers for ground water movement.													
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 RANGE OF WELLS	COLOUR CODE	DEPTH RANGE OF WELLS		DESCRIPTION	SYMBOL			DIPS	BEDDING	SCHISTOSITY / FOLIATION		SYMBOL	DESCRIPTION			STATE INDEX	DISTRICT INDEX		
> 800 LPM	VIOLET	SHALLOW < 10 m	MODERATE 10-15 m	CANAL / TANK IRRIGATED AREA				GENTLE (< 15°)				NH-34	NATIONAL HIGHWAY						
400-800 LPM	INDIGO			GROUND WATER IRRIGATED AREA				MODERATE (15-45°)				SH-12	STATE HIGHWAY						
200-400 LPM	BLUE			RIVER / STREAM (with sand)				STEEP (45-85°)					METALLED ROAD						
100-200 LPM	GREEN			WATER BODY / SPRING				SUB-VERTICAL TO VERTICAL (> 85°)					OTHER ROAD						
50-100 LPM	YELLOW			CANAL				ANTICLINE / ANTIFORM					RAILWAY						
30-50 LPM	ORANGE			RAIN GAUGE STATION (With average annual rainfall in mm)				SYNCLINE / SYNFORM					CITY / VILLAGE						
20-30 LPM	BROWN			RECHARGE STRUCTURES SUGGESTED				TREND LINE					HABITATIONS : NON - COVERED (NC) PARTIALLY COVERED (PC)						
10-20 LPM	RED			PERCOLATION TANK NALA BOND RESERVING OF TANK SUBSURFACE DYKE SOIL CONSERVATION MEASURES				ESCARPMENT					BOUNDARY :						
				WELL RANGE MR. LPM	YIELD RANGE m ³ /day	DUG WELL / BORE WELL		LITHOLOGY / GEOMORPHIC UNIT BOUNDARY					OTHER INFORMATION						
								FAULT					Rainfall : 3102 mm						
								THRUST					Nearest Rain gauge						
								PRACHTURE / LINEAMENT (Inferred)					Station : Jalpaiguri						
								PRACHTURE / LINEAMENT (Inferred)					(Source IMD)						
								SHEAR ZONE (Confirmed / Inferred)											
								DYKE (Confirmed / Inferred)											
								QUARTZ REEF (Confirmed / Inferred)											
								PSIDMATTIE VEIN (Confirmed / Inferred)											
								Lithologic contacts are inferred at places & Geomorphologic boundaries are gradational											
PREPARED BY GEOINFORMATICS & REMOTE SENSING CELL W.B. STATE COUNCIL OF SCIENCE AND TECHNOLOGY DEPARTMENT OF SCIENCE AND TECHNOLOGY GOVERNMENT OF WEST BENGAL 4TH FLOOR, BIKASH BHAVAN SALT LAKE, KOLKATA 700 091				TECHNICAL GUIDANCE & QUALITY CHECK NATIONAL REMOTE SENSING CENTRE INDIAN SPACE RESEARCH ORGANISATION (ISRO) DEPT. OF SPACE, GOVT. OF INDIA BALANAGAR, HYDERABAD - 500 625				PARTICIPATING ORGANIZATIONS PHED, GOVT. OF WEST BENGAL GEOINFORMATICS & REMOTE SENSING CELL W.B. STATE COUNCIL OF SCIENCE AND TECHNOLOGY, GOWB STATE WATER INVESTIGATION DIRECTORATE, GOWB				METHODOLOGY & PROJECT EXECUTION NATIONAL REMOTE SENSING CENTRE INDIAN SPACE RESEARCH ORGANISATION (ISRO) DEPT. OF SPACE, GOVT. OF INDIA BALANAGAR, HYDERABAD - 500 625				SPONSORED BY RAJIV GANDHI NATIONAL DRINKING WATER MISSION (PHASE IV) DEPARTMENT OF DRINKING WATER SUPPLY (DDWS) MINISTRY OF DRINKING WATER AND SANITATION (MDWS) GOVERNMENT OF INDIA NEW DELHI			