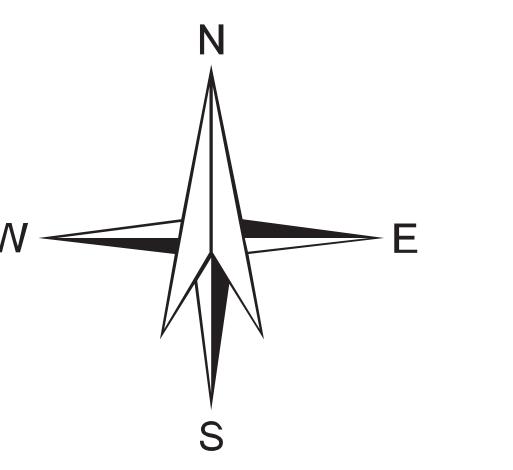


# GROUND WATER PROSPECTS MAP

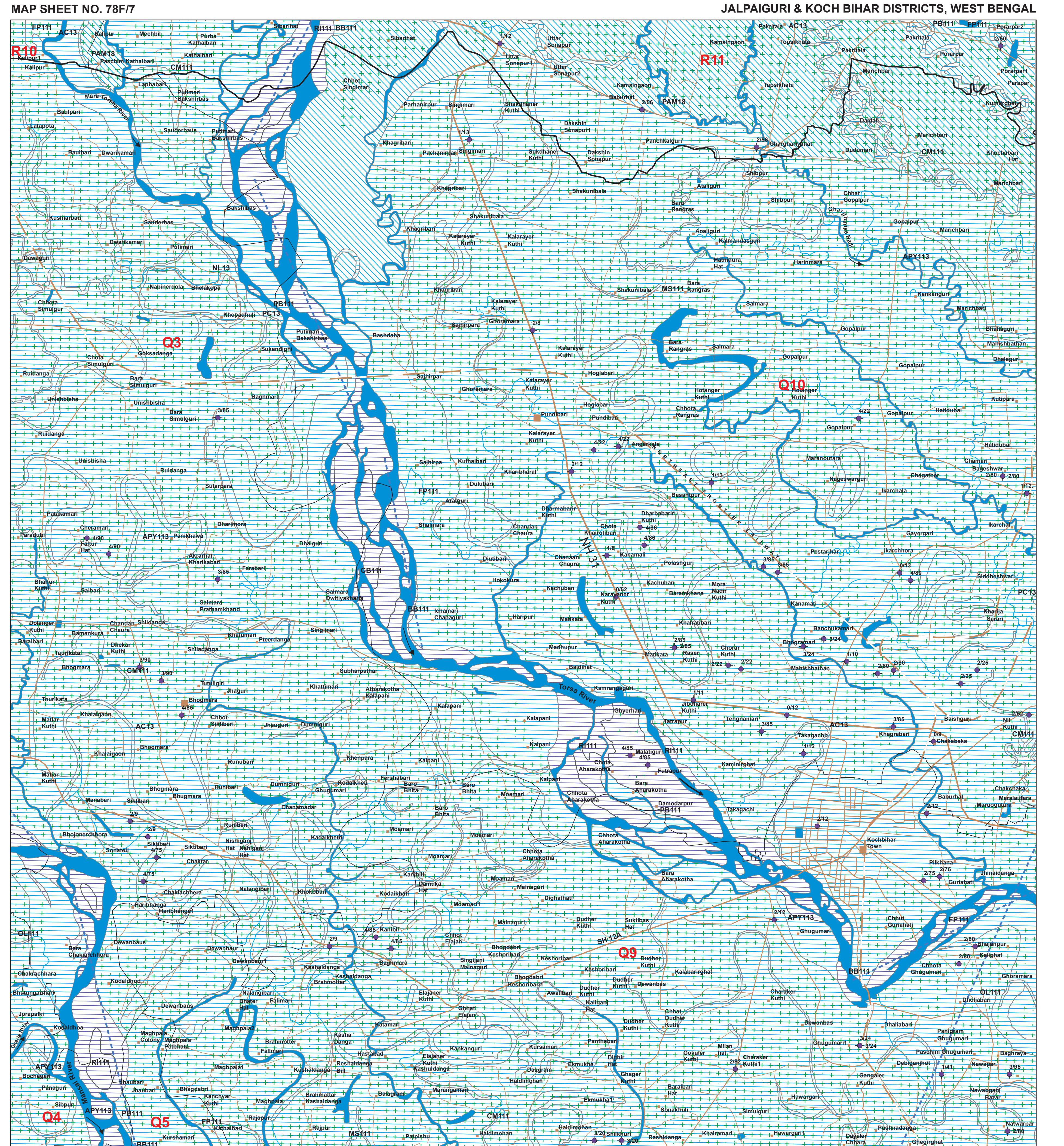
(PREPARED FROM SATELLITE IMAGE INTERPRETATION WITH LIMITED FIELD CHECKS)



0 1 2 3 4 5  
Kilometers

SCALE - 1 : 50,000

MAP SHEET NO. 78F/7



NRSC (ISRO), DEPT. OF SPACE, GOVT. OF INDIA DATA USED : IRS - P6 LISS III FCC dated February 2009, March 2009 & Nov 2011, GROUND TRUTH & WELL OBSERVATION during February-March 2011, Published GSI & SOI maps.

Designed & Developed by Hydrogeology Division, NRSC, ISRO

## LEGEND

MAP UNIT (HYDROGEOMORPHIC UNIT / LANDFORM REPRESENTED IN THE MAP WITH ALPHANUMERIC CODE (COLOR INDICATES YIELD RANGE & HATCHING INDICATE DEPTH RANGE)	GEOLOGICAL SEQUENCE / ROCK TYPE (REPRESENTED IN THE MAP WITH ALPHABETIC CODE)	GEOMORPHIC UNIT / LANDFORM (REPRESENTED IN NUMERIC CODE)	DEPTH TO WATER LEVEL PRE-POST MONITORING LEVAGE IN METERS)	RECHARGE CONDITIONS BASED ON AVAILABILITY OF WATER (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 (SUGGESTED) MIN - MAX (IN LPM or m <sup>3</sup> /day)	HOMOGENEITY RATE OF WELLS (PROBABILITY)	QUALITY OF WATER NON-POTABLE & MODERATE POTABLE	GROUND WATER IRRIGATED AREA (UPPER LIMIT IN PERCENTAGE)						
							LS	TW	DW	RW	ST						
Alluvium (Sand Dominant) (111)	CB111	Channel Bar (CB)	No Well Observed	Excellent	LS	TW	5-10 m	400-500 LPM	Very High	P	NII	Not Required	Highly productive shallow aquifer with good recharge from the river base flow.				
	BB111	Braid Bar (BB)	No Well Observed	Excellent	LS	TW	5-10 m	400-500 LPM	Very High	P	NII	Not Required	Groundwater prospects very high with high recharge potential. Recharge structures not required.				
	PB111	Point Bar (PB)	No Well Observed	Very Good	LS	RW	5-10 m	300-400 LPM	Very High	P	NII	Not Required	Groundwater prospects very high with high recharge potential. Recharge structures not required.				
	RI111	River Island (RI)	5 / 2	Very Good	LS	TW	5-10 m	400-500 LPM	High	P	NII	Not Required	Highly productive aquifer in shallow depth.Good recharge				
	OL111	Oxbow Lake (OL)	No Well Observed	Good	LS	TW	20-30 m	200-300 LPM	Moderate	P	75	Not Required	Though occur as water bodies, but highly productive aquifer occurs at depth.				
	CM111	Cut-off Meander (CM)	4 / 3	Very Good	LS	RW	10-20 m	300-400 LPM	Very High	P	85	Not Required	Highly productive shallow aquifers with good recharge.				
	MS111	Meander Scar (MS)	No Well Observed	Very Good	LS	RW	10-15 m	200-250 LPM	High	P	55	Not Required	Highly productive shallow aquifers with good recharge.				
	FP111	Flood Plain (FP)	No Well Observed	Very Good	LS	TW	<30 m	250-350 LPM	Very High	P	NII	Not Required	Receives good recharge and forms shallow aquifer.Overall quality of the water is potable.				
Alluvium (Sand and Silt) (113)	APY113	Alluvium (Sand and Silt) (APY)	3 / 2 65	Good	LS	TW	25-30 m	200-250 LPM	High	P	98	Not Required	Highly productive aquifer at shallow depth with good recharge.				
	AC13	Abandoned Channel (AC)	No Well Observed	Excellent to Very Good	LS	RW	10-15 m	250-300 LPM	Very High	P	NII	Not Required	Highly productive shallow aquifers with good recharge from base flow.				
	PC13	Palaeo-channel (PC)	No Well Observed	Very Good	LS	RW	15-20 m	150-200 LPM	Very High	P	NII	Not Required	Highly productive shallow aquifers with good recharge.				
	NL13	Natural Levee (NL)	No well observed	Good	LS	RW	20-30 m	200-250 LPM	High	P	59	Not Required	Areas of good groundwater potential at shallow depth.Recharge good, recharge structures not required.				
	PAM18	Alluvium (Gravel Dominant) (18)	2 / 2 2	Good	LS	TW	40-60 m	300-400 LPM	Moderate	P	75	Not Required	Good ground water prospect at greater depth along peneplain slope.				
	F / F / I /	These are 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, inferred fractures need to be confirmed by detailed ground surveys.															
	D - D / Q - Q / P - P	These are dykes, 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	COLOR CODE	DEPTH RANGE OF WELLS		DESCRIPTION	SYMBOL	DIPS	BEDDING	SCHISTOSITY / FOLIATION	SYMBOL
		SHALLOW	MODERATE	DEEP		GENTLE (+ 15)	/	/	NH-34
> 800 LPM	VIOLET	+ 30 METERS	30 - 60 METERS	+ 60 METERS		Moderate (15 - 45)	/	/	SH-12
400 - 800 LPM	INDIGO					Steep (45 - 80)	/	/	STATE HIGHWAY
200 - 400 LPM	BLUE					Sub-Vertical To Vertical (1 - 80)	X	X	METALLED ROAD
100 - 200 LPM	GREEN					Anticline / Antiform	↔	↔	OTHER ROAD
50 - 100 LPM	YELLOW					Syncline / Synform	↔	↔	RAILWAY
30 - 50 LPM	ORANGE					Trend Line	.....	.....	CITY / VILLAGE
20 - 30 LPM	BROWN					Escarpment	—	—	HABITATIONS: NON-COVERED (NC) PARTIALLY-COVERED (PC)
10 - 20 LPM	PINK					Lithology / Geomorphic Unit Boundary	—	—	BLOCK
RECHARGE STRUCTURES SUGGESTED		PERCOLATION TANK CANAL RAIN GAUGE STATION WATER BODY / SPRING WATER BODY / SPRING WATER BODY / SPRING		CHECK DAM RECHARGE TANK SUBSURFACE DYE SOIL CONSERVATION MEASURES		DIPS		SYMBOL	
Wells Observed During Field Visit		Depth Range of Wells in LPM (Average Depth of Well in mm) Rainfall Average Depth of Well in mm		Description		GENTLE (+ 15)		National Highway	
Wells Observed During Field Visit		Depth Range of Wells in LPM (Average Depth of Well in mm) Rainfall Average Depth of Well in mm		Symbol		MILD (+ 15)		State Highway	
Wells Observed During Field Visit		Depth Range of Wells in LPM (Average Depth of Well in mm) Rainfall Average Depth of Well in mm		Symbol		MODERATE (15 - 45)		Metalled Road	
Wells Observed During Field Visit		Depth Range of Wells in LPM (Average Depth of Well in mm) Rainfall Average Depth of Well in mm		Symbol		STEEP (45 - 80)		Other Road	
Wells Observed During Field Visit		Depth Range of Wells in LPM (Average Depth of Well in mm) Rainfall Average Depth of Well in mm		Symbol		SUB-VERTICAL TO VERTICAL (1 - 80)		Railway	
Wells Observed During Field Visit		Depth Range of Wells in LPM (Average Depth of Well in mm) Rainfall Average Depth of Well in mm		Symbol		TRENDS LINE		City / Village	
Wells Observed During Field Visit		Depth Range of Wells in LPM (Average Depth of Well in mm) Rainfall Average Depth of Well in mm		Symbol		ESCARPMENT		Habitations: Non-Covered (NC) Partially-Covered (PC)	
Wells Observed During Field Visit		Depth Range of Wells in LPM (Average Depth of Well in mm) Rainfall Average Depth of Well in mm		Symbol		FAULT		Boundary:	
Wells Observed During Field Visit		Depth Range of Wells in LPM (Average Depth of Well in mm) Rainfall Average Depth of Well in mm		Symbol		MINOR		International State District Block	
Wells Observed During Field Visit		Depth Range of Wells in LPM (Average Depth of Well in mm) Rainfall Average Depth of Well in mm		Symbol		MAJOR		Block Index	
Wells Observed During Field Visit		Depth Range of Wells in LPM (Average Depth of Well in mm) Rainfall Average Depth of Well in mm		Symbol		FAULT		78F2 78F6 78F10	
Wells Observed During Field Visit		Depth Range of Wells in LPM (Average Depth of Well in mm) Rainfall Average Depth of Well in mm		Symbol		THRUST		78F3 78F7 78F11	
Wells Observed During Field Visit</									