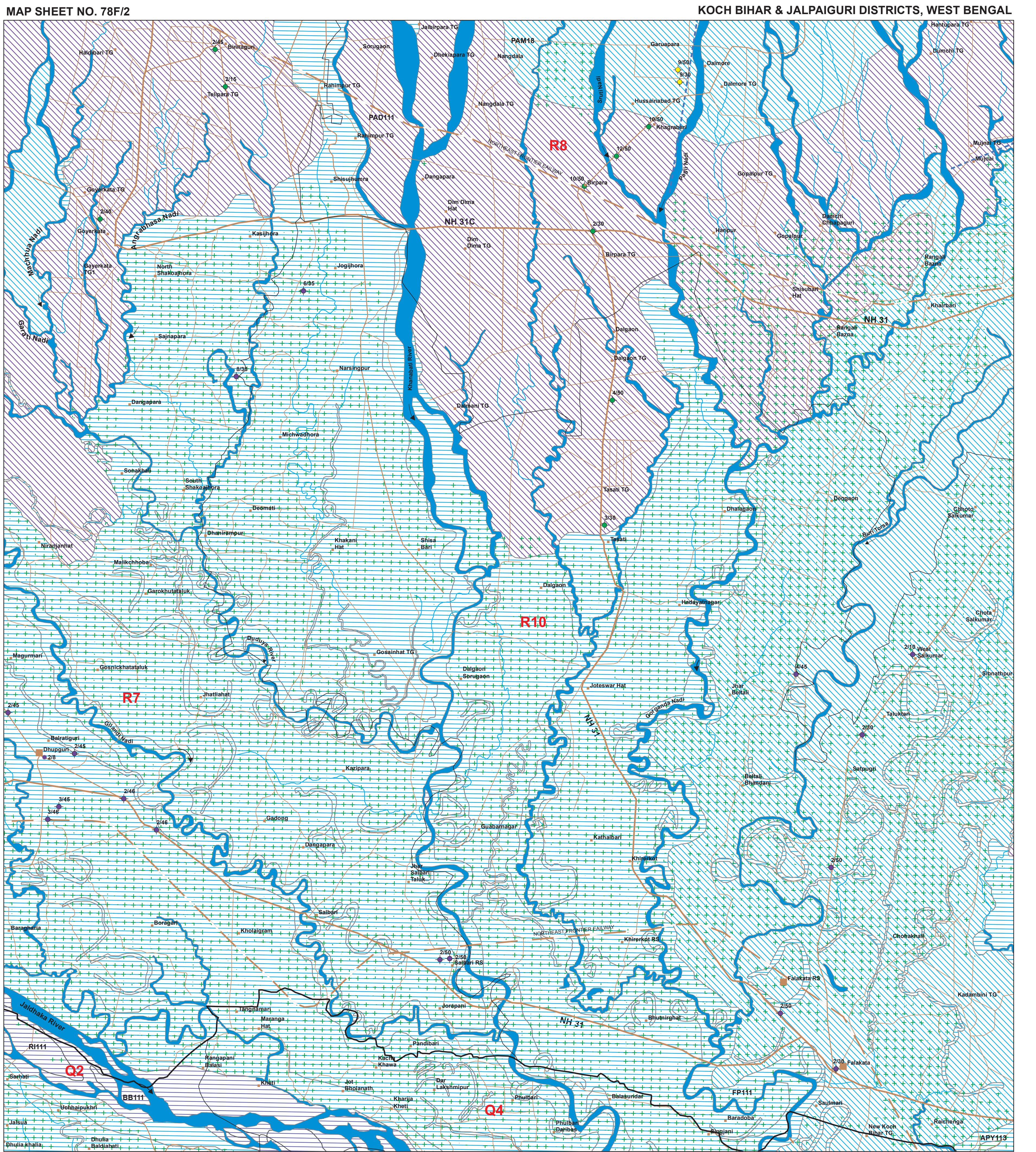
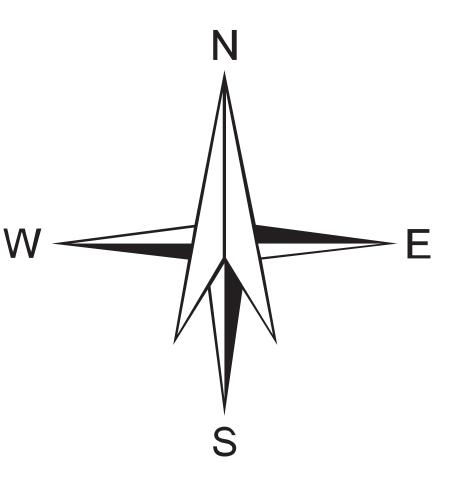


GROUND WATER PROSPECTS MAP

(PREPARED FROM SATELLITE IMAGE INTERPRETATION WITH LIMITED FIELD CHECKS)

0 1 2 3 4 5 Kilometers

SCALE - 1 : 50,000



© 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 Geological maps & Literatures. Designed & Developed by Hydrogeology Division, NRSC, ISRO

LEGEND

MAP UNIT (HYDROGEOLOGIC UNIT) REPRESENTED IN THE MAP WITH ALPHANUMERIC CODE (COLOUR INDICATES YIELD RANGES HATCHING INDICATE DEPTH RANGE)	GEOLOGICAL SEQUENCE / ROCK TYPE (REPRESENTED IN THE MAP WITH ALPHABETIC CODE)	GEOMORPHIC UNIT / LANDFORM (REPRESENTED IN THE MAP WITH ALPHABETIC CODE)	DEPTH TO WATER LEVEL PRE / POST MONSOON (AVERAGE IN METERS)	RECHARGE CONDITIONS BASED ON AVAILABILITY OF WATER (RAINFALL & OTHER SOURCES)	GROUND WATER PROSPECTS							RECHARGE STRUCTURES SUITABLE & PRIORITY	REMARKS (PROBLEMS / LIMITATIONS)		
					NO. OF WELLS OBSERVED	TYPE OF WELLS SUITABLE	DEPTH RANGE OF WELLS (SUGGESTED)	YIELD RANGE OF WELLS (EXPECTED)	HOMOGENEITY IN THE UNIT & SUCCESS RATE OF WELLS (PROBABILITY)	QUALITY OF WATER POTABLE (P) (NON-POTABLE)	GROUND WATER IRRIGATED AREA (APPROX. RANGE IN PERCENTAGE)				
BB111	Shagun Formation / Present Day Deposits (Present Day Deposits)	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.		
PB111		Point Bar (PB)	No Well Observed	Very Good	LS	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.		
RI111		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.		
OL111		Oxbow Lake (OL)	No Well Observed	Good	LS	TW	20-30 m	200-300 LPM	Moderate	P	Nil	Not Required	Though occurs as water bodies, but highly productive aquifer occurs at depth.		
CM111		Cut-off Meander (CM)	No Well Observed	Very Good	LS	RW TW	10-20 m	300-400 LPM	Very High	P	20	Not Required	Highly productive shallow aquifers with good recharge.		
MS111		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.		
FP111		Flood Plain (FP)	No Well Observed	Very Good	LS	TW	<30 m	250-350 LPM	Very High	P	98	Not Required	Receives good recharge and forms shallow aquifer. Overall quality of the water is potable.		
PAD111		Piedmont Alluvium Deep (PAD)	6 / 4 9	Good	LS	TW	60-80 m	400-500 LPM	Moderate	P	10	Not Required	Good ground water prospect at greater depth as the principal aquifer occurs below PAM.		
APY113		Alluvium (Sand, Silt & Clay) (113)	4 / 3 11	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 TW	10-15 m	250-300 LPM	Very High	P	35	Not Required	Highly productive shallow aquifers with good recharge from base flow.		
PC13		Alluvium (Sand, Silt & Clay) (13)	Paleo-channel (PC)	No Well Observed	Very Good	LS	RW TW	10-30 m	300-400 LPM	Very High	P	Nil	Not Required	Highly productive shallow aquifers with good recharge.	
PAM18		Alluvium (Gravel Dominant) (10)	Piedmont Alluvium Moderate (PAM)	5 / 3 8	Good	LS	TW	40 - 60 m	300-400 LPM	Moderate	P	85	Not Required	Good ground water prospect at moderate depth along piedmont slope.	
F / F / / - 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, the 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	COLOUR CODE	DEPTH RANGE OF WELLS		DESCRIPTION	SYMBOL	DIPS	BEDDING	SCHISTOSITY / FOLIATION	SUBDIVISION
		SHALLOW <30 METERS	MODERATE 30 - 60 METERS	DEEP +60 METERS		GENTLE (+ 15)	/	/	NATIONAL HIGHWAY
> 800 LPM	VIOLET					Moderate (15 - 45)	/	/	STATE HIGHWAY
400 - 800 LPM	INDIGO					Steep (45 - 80)	/	/	METALLED ROAD
200 - 400 LPM	BLUE					Sub-Vertical To Vertical (1 > 80)	X	X	OTHER ROAD
100 - 200 LPM	GREEN					ANTICLINE / ANTRIFORM	↔		RAILWAY
50 - 100 LPM	YELLOW					SYNCLINE / SYFORM	↔↔		CITY / VILLAGE
30 - 50 LPM	ORANGE					TREND LINE		HABITATIONS: NON-COVERED (NC) PARTIALLY-COVERED (PC)
20 - 30 LPM	BROWN					ESCARPMENT			INTERNATIONAL STATE DISTRICT BLOCK
10 - 20 LPM	PINK					LITHOLOGY / GEOMORPHIC UNIT / BOUNDARY			MAPSHEET INDEX
RECHARGE STRUCTURES SUGGESTED		WELLS OBSERVED DURING FIELD SURVEY		WELLS YIELD IN LPM		DIPS		SYMBOL	
PERCOLATION TANK		CANAL TANK / IRRIGATED AREA		GENTLE (+ 15)		GENTLE (+ 15)		NH - 2	
SUBSURFACE DYE		GROUND WATER IRRIGATED AREA		MODERATE (15 - 45)		MODERATE (15 - 45)		SH - 9	
SOIL CONSERVATION MEASURES		RIVER / STREAM (with sand)		STEEP (45 - 80)		STEEP (45 - 80)		METALLED ROAD	
WATER BODY / SPRING		CANAL		SUB-VERTICAL TO VERTICAL (1 > 80)		SUB-VERTICAL TO VERTICAL (1 > 80)		OTHER ROAD	
RAIN GAUGE STATION		SYNCLINE / SYFORM		SYNCLINE / SYFORM		SYNCLINE / SYFORM		RAILWAY	
(WATER AVERAGE RAINFALL & RECHARGE (mm))		TREND LINE		TREND LINE		TREND LINE		CITY / VILLAGE	
RECHARGE STRUCTURES SUGGESTED		ESCARPMENT		ESCARPMENT		ESCARPMENT		HABITATIONS: NON-COVERED (NC) PARTIALLY-COVERED (PC)	
PERCOLATION TANK		LITHOLOGY / GEOMORPHIC UNIT / BOUNDARY		LITHOLOGY / GEOMORPHIC UNIT / BOUNDARY		LITHOLOGY / GEOMORPHIC UNIT / BOUNDARY		STATE INDEX	
SUBSURFACE DYE		SYNCLINE / SYFORM		SYNCLINE / SYFORM		SYNCLINE / SYFORM		DISTRICT INDEX	
SOIL CONSERVATION MEASURES		TREND LINE		TREND LINE		TREND LINE		BLOCK INDEX	
WATER BODY / SPRING		ESCARPMENT		ESCARPMENT		ESCARPMENT		MAPSHEET INDEX	
SYNCLINE / SYFORM		LITHOLOGY / GEOMORPHIC UNIT / BOUNDARY		LITHOLOGY / GEOMORPHIC UNIT / BOUNDARY		LITHOLOGY / GEOMORPHIC UNIT / BOUNDARY		LOCATION INFORMATION	
TREND LINE		SYNCLINE / SYFORM		SYNCLINE / SYFORM		SYNCLINE / SYFORM		STATE INDEX	
ESCARPMENT		TREND LINE		TREND LINE		TREND LINE		DISTRICT INDEX	
LITHOLOGY / GEOMORPHIC UNIT / BOUNDARY		SYNCLINE / SYFORM		SYNCLINE / SYFORM					