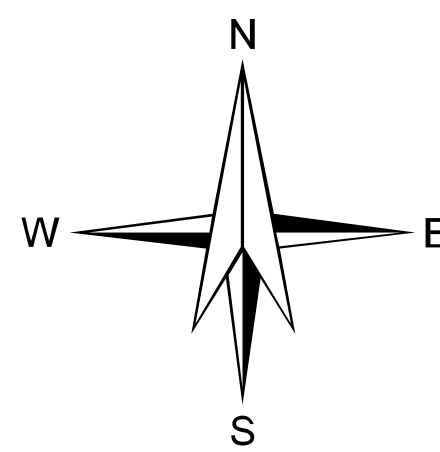
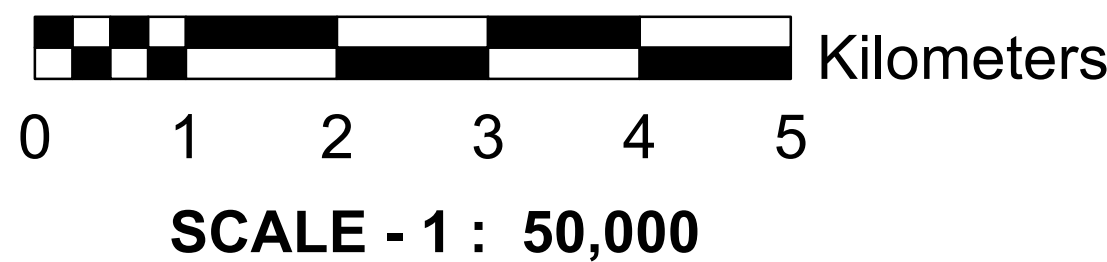


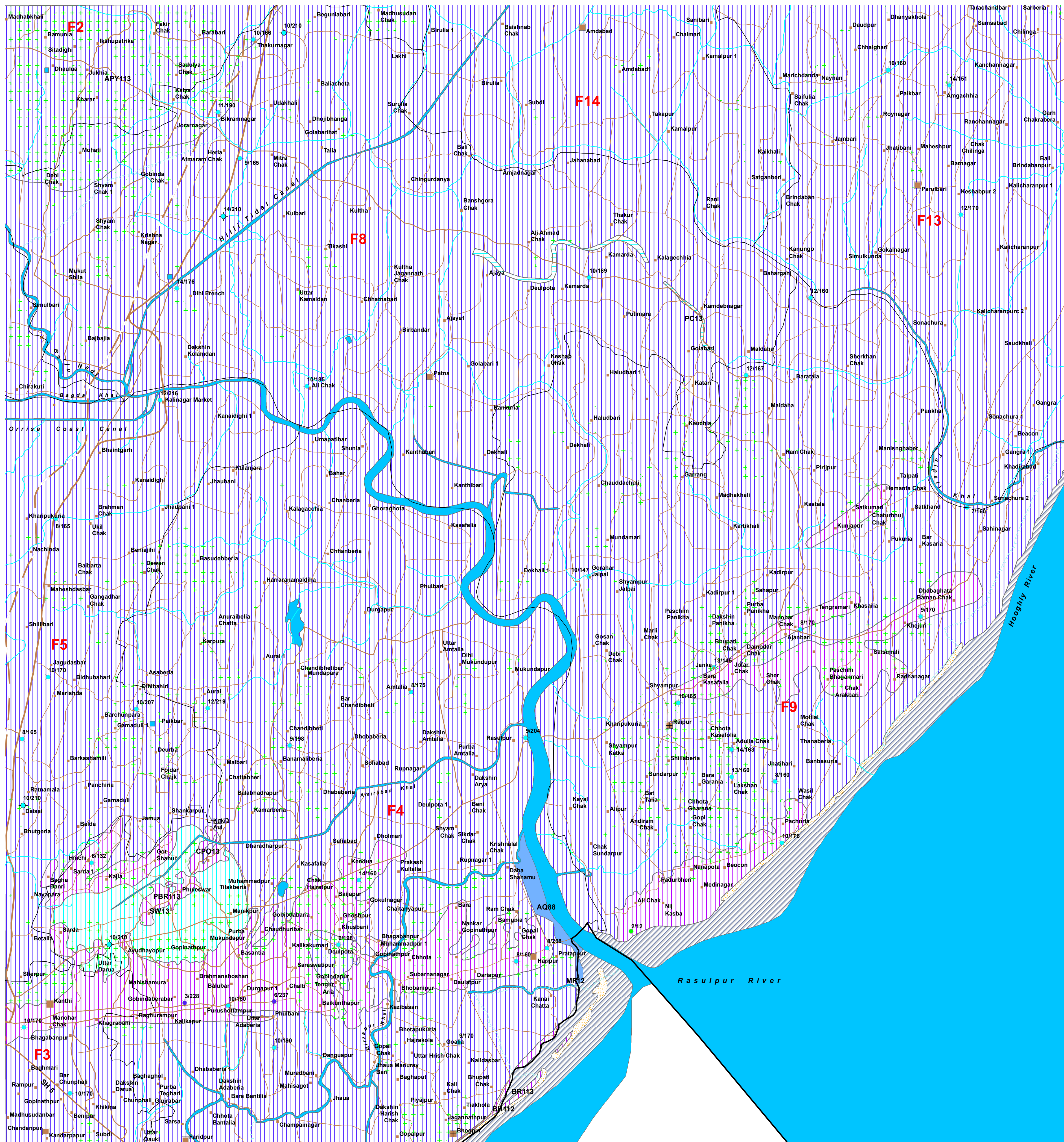
GROUND WATER PROSPECTS MAP

(PREPARED FROM SATELLITE IMAGE INTERPRETATION WITH LIMITED FIELD CHECKS)



MAP SHEET NO. 730/13

PURBA MEDINIPUR DISTRICT, WEST BENGAL



LEGEND

MAP UNIT (HYDROGEO MORPHIC 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 RATES (RAINFALL & OTHER SOURCES)	GROUND WATER PROSPECTS							RECHARGE STRUCTURES SUITABLE & PRIORITY PT = PNEUMATIC TANK CD = CHECK DAM ND = NAKA DUNE PW = RECHARGE WELL DT = DIETS DUNE OF TANK DP = RECHARGE PIT SD = SUBSURFACE DYKE BS = RECHARGE BARRI F = FRACTURE PCM = SOL CONSOLIDATION MEASURES	REMARKS (PROBLEMS / LIMITATIONS)	
					AQUIFER MATERIAL LS = LOOSE SEDIMENTS PS = PERMEABLE ROCK PR = PORED ROCK FR = FRACTURED ROCK RW = WEATHERED ROCK RM = WEATHERED MATERIAL R = INTERVIOUS ROCK	TYPE OF WELLS SUITABLE DW = DUG WELL RW = RISE WELL TW = TUBE WELL DWB = DUG CONCRETE WELL DTW = DUG CONCRETE WELL	DEPTH RANGE OF WELLS (SUGGESTED) MIN. MAX (IN METERS)	YIELD RANGE OF WELLS (EXPECTED) (IN LPM OR m ³ / day)	HOMOGENEITY IN THE UNIT & SUCCESS RATE OF WELLS (PROBABILITY) VERY POOR POOR MODERATE LOW	QUALITY OF WATER POSSIBLE PI NON-PORTABLE INP (INDICATE REASONS IF NON-PORTABLE)	GROUND WATER IRRIGATED AREA (APPROX. RANGE IN PERCENTAGE)			
	Panskura/Arambagh/Chinsura Formation (Early to Late Miocene)	Alluvium (Sand,Silt & Clay) (13)	Paleo-channel (PC)	No well observed	Very Good	LS	RW TW	10-15 m	200-250 LPM	Very High	P	4	Not Required	Areas of very high groundwater potential at shallow depth.Most suitable for extraction of groundwater.
		Alluvium (Sand and Silt) (113)	Alluvial Plain Younger (APY)	12 / 8 2	Good	LS	TW	>150 m	500-600 LPM	High	NP (Salinity) [At shallow depth]	82	RW Low	Areas affected bySalinity.Potable water available at depth range above 150 m.
		Alluvium (Sand and Silt) (113)	Beach Ridge (BR)	No well observed	Very Good	LS	TW	150-250 m	>800 LPM	Very High	NP (Salinity) [At shallow depth]	1	Not Required	Areas affected bySalinity. Fresh water available at depth ranges of 150-250m
			Paleo Beach Ridge (PBR)	10 / 6 11	Good	LS	TW	150-250 m	>800 LPM	High	NP (Salinity) [At shallow depth]	17	Not Required	Areas affected bySalinity. Fresh water available at depth ranges of 150-250m
			Swale (SW)	11 / 8 1	Moderate to Good	LS	TW	150-250 m	300-400 LPM	Moderate to High	NP (Salinity) [At shallow depth]	39	Not Required	Fresh water aquifers found at depth ranges of 150-250 m.
	Alluvium (Sand,Silt & Clay) (13)	Coastal Plain Older (CPO)	13 / 8 34	Good	LS	TW	150-250 m	600-800 LPM	High	NP (Salinity) [At shallow depth]	6	Not Required	Areas affected by Salinity intrusion.Fresh water aquifers found at depth ranges of 150m and above.	
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 D --- D / Q --- Q / P --- P These are dykes, quartz reefs and pegmatite veins, which generally act as barriers for ground water movement.														
Mud Flat (MF12), Beach (BH112) & Aquaculture (AQ88) are not used for groundwater extraction.														
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 hydrological/geophysical surveys.														

© 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

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		SYMBOL	DESCRIPTION	STATE INDEX		BLOCK INDEX	MAPSHEET INDEX	INDIA		
		SHALLOW < 10 METERS	MODERATE 10-15 METERS			GENTLE (< 15°)	MODERATE (15-45°)													
> 800 LPM	VIOLET			CANAL / TANK IRRIGATED AREA		STEEP (45-85°)	TO VERTICAL (> 85°)			ANTICLINE / ANTIFORM			NATIONAL HIGHWAY	INDIA		WEST BENGAL				
400 - 800 LPM	INDIGO			GROUND WATER IRRIGATED AREA						SYNCLINE / SYNFORM			STATE HIGHWAY							
200 - 400 LPM	BLUE			WATER BODY / SPRING						TREND LINE			METALLED ROAD							
100 - 200 LPM	GREEN			CANAL						ESCARPMENT			OTHER ROAD							
50 - 100 LPM	YELLOW			RAIN GUAGE STATION (With average annual rainfall in mm)	800								RAILWAY							
30 - 50 LPM	ORANGE			RECHARGE STRUCTURES SUGGESTED									HABITATIONS : NON - COVERED (NC) PARTIALLY COVERED (PC)							
20 - 30 LPM	BROWN			PERCOLATION TANK									BOUNDARY :							
10 - 20 LPM	PINK			NALA BUND									INTERNATIONAL							
Prospects (with limited field checks only) (P/L)	RED			DESIGNING OF TANK									STATE							
Recharge (with limited field checks only) (R/L)				WATER BODY / SPRING									DISTRICT							
Recharge (with limited field checks only) (R/L)				80% CONSERVATION									BLOCK							
Recharge (with limited field checks only) (R/L)				RECHARGE PITS									OTHER INFORMATION							
Recharge (with limited field checks only) (R/L)				STORAGE TANK									Rainfall : 1703 mm (Source IMD)							
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