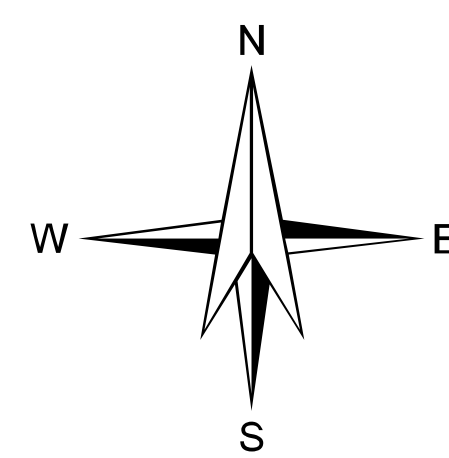


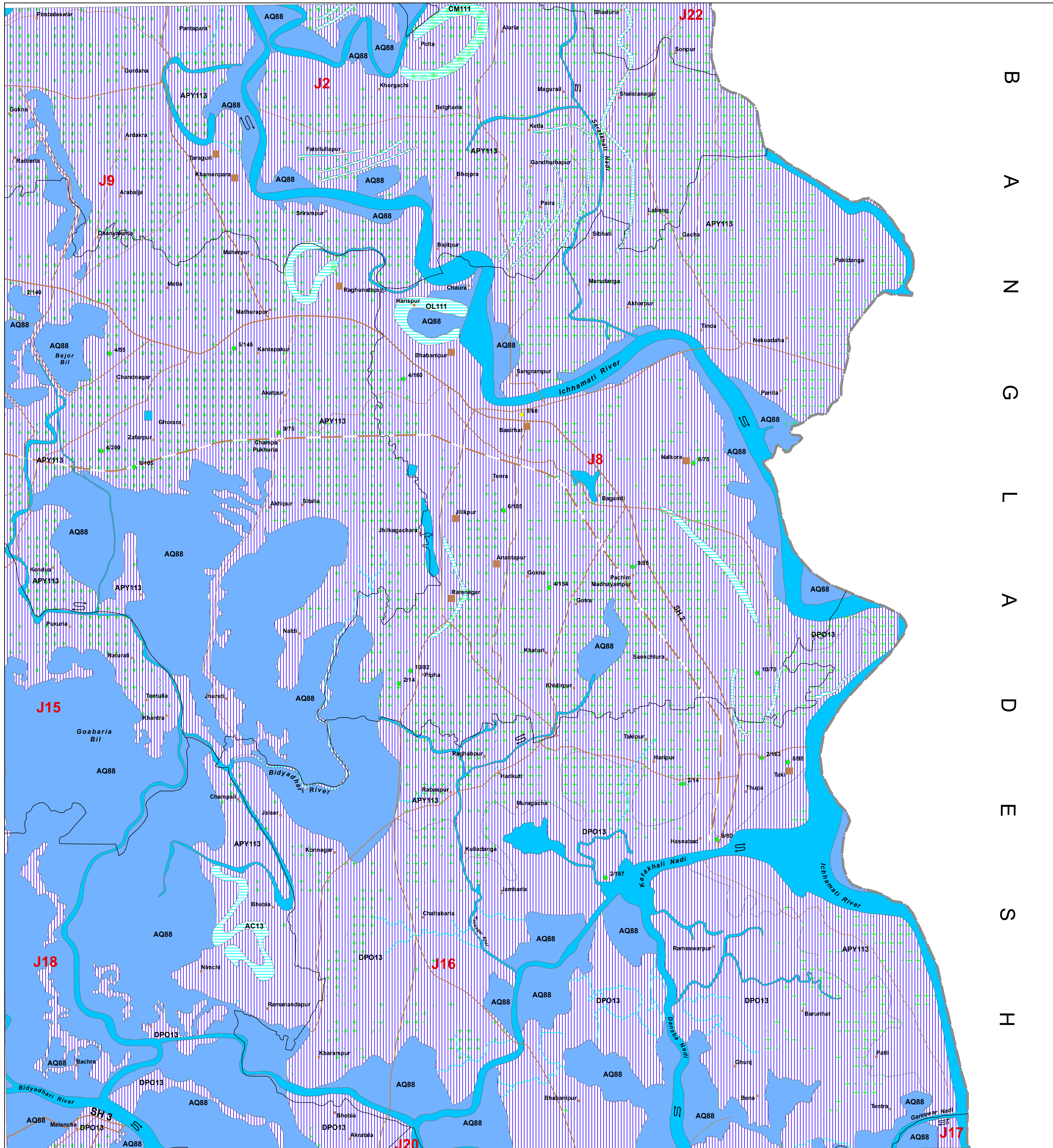
0 1 2 3 4 5 Kilometers

SCALE - 1 : 50,000



MAP SHEET NO. 79B/14

NORTH 24 PARGANAS DISTRICT, WEST BENGAL



© 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*

MAP UNIT (HYDROGEOLOGIC UNIT) REPRESENTED IN THE MAP WITH ALPHANUMERIC CODE (COLOUR INDICATES YIELD RANGE AND HYDRO 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)	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)	YIELD RANGE OF WELLS (EXPECTED)	HOMOGENEITY IN THE UNIT & SUCCESS RATE OF WELLS (PROBABILITY)	QUALITY OF WATER POTABLE (P) / NON-POTABLE (NP)			GROUND WATER IRRIGATED AREA (APPROX. RANGE IN PERCENTAGE)	
OL111		Hugli / Bhagmati Formation (Present Day)	Ox-bow Lake (OL)	No Well Observed	Very Good	LS	TW	10-15 m	200-300 LPM	Very High	P	Nil	Not Required	Limited potability of groundwater.	
CM111			Alluvium (Sand Dominant) (111)	Cut-off Meander (CM)	No Well Observed	Very Good	LS	RW TW	10-15 m	200-300 LPM	Very High	P	Nil	Not Required	Potable water available at shallow depth.
MS111			Meander Scar (MS)	No Well Observed	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.	
APY111S		Panskura (Chitaura) (Karna Formation Early to Late Holocene)	Alluvium (Sand and Silt) (113)	Alluvial Plain Younger (APY)	<div>8418</div>	Good	LS	TW	>150 m	400-500 LPM	High	NP (As&Fe) [At shallow depth]	44	Not Required	Areas with high Arsenic and Iron concentration.Potable water available at depth range above 150m
AC13		Ancient Estuarine Deposits (Early to Late Holocene)	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 groundwater.	
DPO13			Alluvium (Sand,Silt & Clay) (13)	Deltaic Plain Older (DPO)	<div>752</div>	Good	LS	TW	>250 m	400-450 LPM	High	NP (Salinity&As)	11	Not Required	Areas affected by salinity and arsenic contamination. Fresh water aquifers found at depth ranges of 250m and above.

F

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These are faults / 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

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Q

Q

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P

P

These are dykes, quartz reefs and pegmatite veins, which generally act as barriers for ground water movement.

Aquaculture (AQ88) is not used for groundwater exploitation.

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.

[illegible]