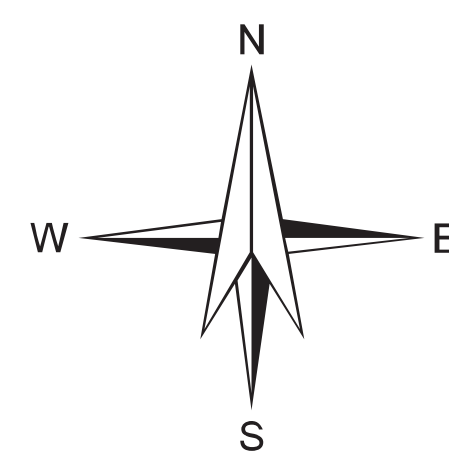


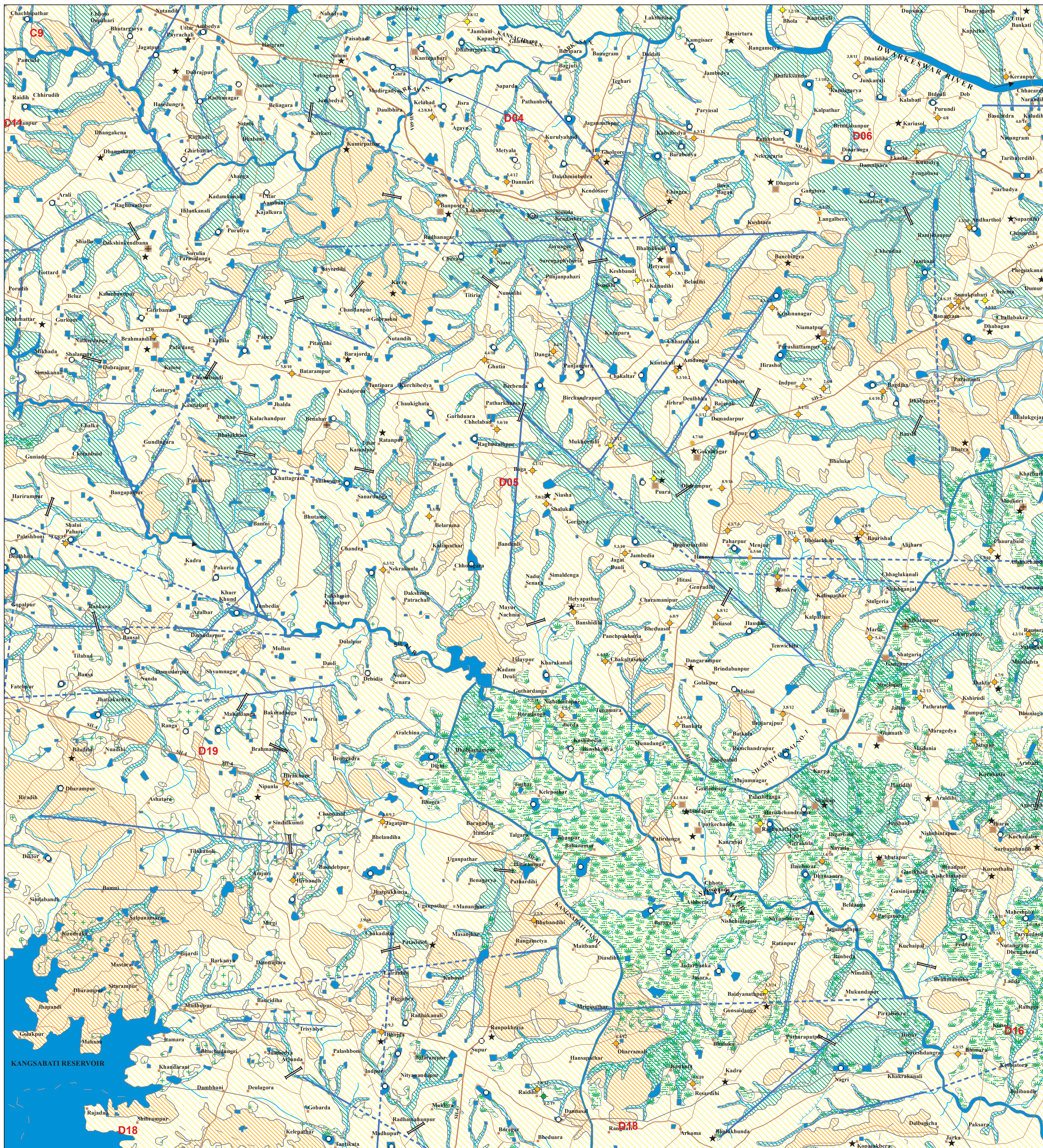
0 1 2 3 4 5 Kilometers

SCALE - 1 : 50,000



MAP SHEET NO. 73I/16

PURULIYA AND BANKURA DISTRICTS, WEST BENGAL



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DATA USED : IRS - P6 LISS III FCC dated February 2006, GROUND TRUTH & WELL OBSERVATION during April-May, 2009 & Jan-Feb, 2010, Published Geological maps & Literatures

Designed & Developed by Hydrogeology Division, NRSC, ISRC

MAP UNIT (HYDROGEOLOGIC UNIT) REPRESENTED IN THE MAP WITH ALPHANUMERIC CODE (COLOUR INDICATES YIELD RANGE AND MATCHING 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 WATER (RAINFALL & OTHER SOURCES)	GROUND WATER PROSPECTS							RECHARGE STRUCTURES SUITABLE & PRIORITY	REMARKS (FACILITIES / LIMITATIONS)		
					AQUIFER MATERIAL LS = LOOSE SEDIMENTS PR = PERMEABLE ROCK FR = FRACTURED ROCK RM = HEAVILY ROCK RW = WEATHERED MORTAL R = INTERVENOUS ROCK	TYPE OF WELLS SUITABLE DW = DUG WELL RW = RIGID WELL TW = TUBE WELL DSW = DOG CUN EISE WELL DTW = DOG CUN-TURE WELL	DEPTH RANGE OF WELLS (IRRGATED) (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)	QUALITY OF WATER POTABLE (P) NON-POTABLE (NP) (INDICATE RESERVE IF NON-POTABLE)	GROUND WATER IRRIGATED AREA (APPROX. RANGE IN PERCENTAGE)			P1 + PRECIPITATION FROM CD + CHECK DAM NO. + CANAL SUDG DP + RECHARGE WELLS OF + CELESTIAL OF TANK SD + RECHARGE OF SO + SUBSURFACE DYKE RS + RECHARGE SHAFT ST + TRUNK LINE BCR + SOL CONSERVATION MEASURES	
		Alluvium (Sand Dominant) (T11)	6 1	Very Good	LS	RW TW	5-10	300-500	Very High	P	7%	Not Required	Groundwater prospects very high with high recharge potential. Recharge structures not required.		
		Lalgah-Bambazai Formation (Below 50m below present)	Laterite (Ferricrete - Hard crust, lateritic nodules and lithomarge clay) (Z11)	Valley Fill Shallow (VFS)	No wells observed	Moderate	LS Underlain by WM + FR	TW / BW	40 - 50	50 - 100 LPM	Moderate	P	Nil	DT Moderate	Recharge structures will increase the sustainability of ground water prospects
			Lateralitic Plain (LP) (Lithomerge Clay)	No wells observed	Limited	WM+FR	DW TW / BW	15 - 20 50 - 60	25 - 50 m ³ /day 50 - 100 LPM	Moderate	P	Nil	Not Required	Very small units,no settlements, recharge structures not required	
		Chhotagapur Gneiss Complex (Lower Pleistocene-200-240meters)	Granitoid Gneiss (832)	Valley Fill Shallow (VFS)	No wells observed	Moderate	LS Underlain by WM+FR	TW / BW	30 - 50	150 - 175 LPM	Moderate	P	Negligible	CD/DT Moderate	Prospects inferred as no wells observed. Recharge condition is moderate with moderate groundwater prospects
				Buried Pediplain Moderate (BPM)	4.35 - 4.44 DW - 3	Moderate	WM+FR	DW TW / BW	5 - 10 40 - 50	15 - 25 m ³ /day 150 - 175 LPM	Moderate	P	Negligible	RP Moderate	Recharge structures will improve ground water prospects
				Buried Pediplain Shallow (BPS)	1.29 - 8.93 DW - 66 HP - 3	Limited	WM+FR	DW TW / BW	5 - 10 40 - 60	10 - 15 m ³ /day 75 - 100 LPM	Low	P	5%	RP/DT High	Recharge structures will improve sustainability of groundwater sources
				Weathered Pediplain Shallow (PPS)	2.42 - 6.43 DW - 7	Poor	FR	DW TW / BW	5 - 10 40 - 60	5 - 10 m ³ /day 30 - 50 LPM	Low	P	Negligible	RP High	Due to high run off and poor infiltration, recharge structures are required to maintain sustainability of groundwater sources
		Unclassified Metamorphics(Older Metamorphites) (Recent)	Mica Schist (923)	Valley Fill Shallow (VFS)	7.8 DW - 1	Moderate	LS Underlain by WM+FR	TW / BW	30 - 50	100 - 125 LPM	Moderate	P	10%	CD/DT Moderate	Prospects inferred as no well observed. Recharge condition is moderate with moderate groundwater prospects
				Buried Pediplain Moderate (BPM)	No wells observed	Moderate	WM+FR	DW TW / BW	15 - 20 40 - 50	10 - 15 m ³ /day 100 - 125 LPM	Moderate	P	Negligible	Not Required	Very small units,sparse settlements, recharge structures not required
	Buried Pediplain Shallow (BPS)			3.93 - 5.67 DW - 3 HP - 1	Limited	WM+FR	DW TW / BW	5 - 10 40 - 60	5 - 10 m ³ /day 50 - 75 LPM	Low	P	20%	RP/DT High	Recharge structures will improve sustainability of groundwater sources. Presence of Kangsabati reservoir also recharges groundwater	
	Weathered Pediplain Shallow (PPS)			3.23 DW - 1	Poor	FR	DW TW / BW	5 - 10 40 - 60	5 - 10 m ³ /day 30 - 50 LPM	Low	P	5%	RP High	Due to high run-off and poor infiltration, recharge structures are required to maintain sustainability of ground water resources.Presence of Kangsabati reservoir also recharges groundwater	
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.															
N.B.-The depth range and yield range of wells may vary within the unit because of certain inhomogenities. Fractures/Linaments 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]

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