

## LEGEND

MAP UNIT	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 &	REMARKS
( HYDROGEOMORPHIC UNIT )  REPRESENTED IN THE MAP WITH ALPHANUMERIC CODE  ( COLOUR INDICATES YIELD RANGE AND HATCHING INDICATE DEPTH RANGE)					AQUIFER MATERIAL  LS = LOOSE SEDIMENTS PR = PERMEABLE ROCK FIR = FISSURED ROCK FR = FRACTURED ROCK WR /= WEATHERED ROCK / WM WEATHERED MATERIAL IR = IMPERVIOUS ROCK IM = IMPERVIOUS MATERIAL	TYPE OF WELLS SUITABLE  DW = DUG WELL RW = RING WELL BW = BORE WELL TW = TUBE WELL DBW /= DUG CUM-BORE WELL / DTW DUG CUM-TUBE WELL	DEPTH RANGE OF WELLS (SUGGESTED) MIN - MAX (IN METERS)	YIELD RANGE OF WELLS (EXPECTED) (in LPM or m <sup>3</sup> / day)	HOMOGENEITY IN THE UNIT & SUCCESS RATE OF WELLS (PROBABILITY)  VERY HIGH HIGH MODERATE LOW	QUALITY OF WATER POTABLE (P) NON - POTABLE (NP) (INDICATE REASONS IF NON POTABLE)	GROUND WATER IRRIGATED AREA (APPROX . RANGE IN PERCENTAGE)	PRIORITY  PT = PERCOLATION TANK CD = CHECK DAM NB = NALA BUND RW = RECHARGE WELL DT = DESILTING OF TANK RP = RECHARGE PIT SD = SUBSURFACE DYKE RS = RECHARGE SHAFT ST = STORAGE TANK SCM = SOIL CONSERVATION MEASURES	( PROBLEMS / LIMITATIONS )
VFS84	n @	Valley Fill Shallow (VFS)	No wells observed	Moderate	LS Underlain by WM+FR	TW / BW	30 - 50	100 - 125 LPM	Moderate	Р	Nil	Not Required	Small unit,recharge structures not required
BJS81	Granite  Granite	Bajada Shallow (BJS)	No wells observed	Moderate	LS Underlain by WM+FR	DW TW / BW	10 - 15 90 - 100	10 - 15 m <sup>3</sup> /day 100 - 125 LPM	Moderate	Р	Nil	Not Required	Material deposited along slope and underlying rock form the aquifer. Better yield at greater depths
HTW81	Protezoio (81)	Hill Top Weathered (HTW)	No wells observed	Limited	WM+FR	DW TW / BW	< 5 25 - 30	3 < 5 m /day 30 - 50 LPM	Low	Р	Nil	RP Moderate	Prospects limited.Better prospects along fracture controlled valleys
SH81	Kuilah	Structural Hill (SH)	No wells observed	-	-	-	-	-	-	-	-	-	Run-off zone.Not suitable for groundwater development
VFS45		Valley Fill Shallow (VFS)	No wells observed	Moderate	LS Underlain by WM+FR	TW / BW	30 - 50	100 - 125 LPM	Moderate	Р	Nil	Not Required	Small unit,recharge structures not required
ITW45	anics -2400 mill. yrs)	Hill Top Weathered (HTW)	No wells observed	Limited	WM+FR	DW TW / BW	<5 20 - 30	<5 m <sup>3</sup> /day 20 - 30 LPM	Low	Р	Nil	RP Moderate	Prospect limited. Better prospects ale fracture zones. Priority of recharge structures is moderate since few settlements are present
CR 45	Quartzite (45)	Curvilinear Ridge (CR)	No wells observed	-	-	-	-	-	-	-	-	-	Run-off zone.Not suitable for groundwater development
LR 45	(Lr. Proter	Linear Ridge (LR)	No wells observed	-	-	-	-	-	-	-	-	-	Run-off zone.Not suitable for groundwater development
RH45		Residual Hill (RH)	No wells observed	-	-	-	-	-	-	-	-	-	Run-off zone.Not suitable for groundwater development
SH45		Structural Hill (RH)	No wells observed	-	-	-	-	-	-	-	-	-	Run-off zone.Not suitable for groundwater development
/FS922		Valley Fill Shallow (VFS)	No wells observed	Moderate	LS Underlain by WM+FR	TW / BW	30 - 50	100 - 125 LPM	Moderate	Р	5%	CD/DT Moderate	Prospects inferred as no well obse Recharge condition is moderate wi moderate groundwater prospects
PS922	Epidiorite, Hornblende Schist	Weathered Pediplain Shallow (PPS)	No wells observed	Poor	FR	DW TW / BW	5 - 10 40 - 60	5 - 10 m <sup>3</sup> /day 30 - 50 LPM	Low	Р	Nil	RP High	Due to high run-off and poor infiltal recharge structures are required to maintain sustainability of groundwas sources
TW922	(922)	Hill Top Weathered (HTW)	No wells observed	Limited	WM+FR	DW TW / BW	<5 25 - 30	<5 m <sup>3</sup> /day	Low	Р	Negligible	Not Required	Prospects limited. Better prospects along fracture zones
RH 922	Sin (Lr. Proterc	Residual Hill (RH)	No wells observed	-	-	-	-	-	-	-	-	-	Run-off zone.Not suitable for groundwater development
SH 922		Structural Hill (SH)	No wells observed	-	-	-	-	-	-	-	-	-	Run-off zone.Not suitable for groundwater development
F\$923	phics)	Valley Fill Shallow (VFS)	No wells observed	Moderate	LS Underlain by WM+FR	TW / BW	30 - 50	100 - 125 LPM	Moderate	Р	5%	CD/DT Moderate	Prospects inferred as no well obse Recharge condition is moderate w moderate groundwater prospects
PS923	r Metamol	Weathered Pediplain Shallow (PPS)	No wells observed	Poor	FR	DW TW / BW	5 - 10 40 - 60	5 - 10 m <sup>3</sup> /day 30 - 50 LPM	Low	Р	Nil	RP High	Due to high run-off and poor infiltal recharge structures are required to maintain sustainability of groundwasources
JS923	Mica Schist (923)	Bajada Shallow (BJS)	No wells observed	Moderate	LS Underlain by WM+FR	DW TW / BW	10 - 15 90 - 100	10 - 15 m <sup>3</sup> /day 100 - 125 LPM	Moderate	Р	Nil	Not Required	Recharge is moderate. Better yiel greater depths within fractured roo
TW923	Metanioi p	Hill Top Weathered (HTW)	2 - 5.1 DW - 3 HP - 1	Limited	WM+FR	DW TW / BW	<5 25 - 30	<5 m³/day	Low	Р	Negligible	Not Required	Prospects limited. Better prospects along fracture zones
6Н923	lassified N	Structural Hill (SH)	No wells observed	-	-	-	-	-	-	-	-	-	Run-off zone, not suitable for groun water development
HM923	<u>ם</u>	Denudational Hill/ Moderately dissected (DHM)	No wells observed	-	-	-	-	-	-	-	-	-	Run-off zone, not suitable for groun water development

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 INF	STRUCTU	URAL INFORMAT	ION	BASE MA	P INFORMATION	LOCATION INFORMATION			
YIELD COLOUR	DEPTH RANGE OF WELLS	DESCRIPTION	SYMBOL	DIPS	BEDDING	SCHISTOSITY/ FOLIATION	SYMBOL	DESCRIPTION	STATE INDEX	DISTRICT IN	1DEX
RANGE CODE	SHALLOW   MODERATE   DEEP	CANAL / TANK IRRIGATED AREA	14	GENTLE (<15)	/	A	NH - 2	NATIONAL HIGHWAY			24.
OF WELLS	< 30 METERS 30 - 80 METERS > 80 METERS	GROUND WATER IRRIGATED AREA	+ + +	MODERATE ( 15 - 45 )	<i>.</i>	<u> </u>	NII-Z	NATIONAL HIGHWAT			1
> 800 LPM VIOLET		RIVER / STREAM (with sand)		STEEP (45 - 80)	*		SH - 9 STATE HIGHWAY			and the second	A
		WATER BODY / SPRING	<u></u>	SUB - VERTICAL TO VERTICAL ( > 80 )	X	×		METALLED ROAD			3
400 - 800 LPM INDIGO		CANAL		ANTICLINE / ANTIFORM		<b>←</b> ←			INDIA	C D	E
		RAIN GUAGE STATION ( With average annual rainfall in mm )	800	ANTICLINE / ANTII OKW				OTHER ROAD			- John
200 - 400 LPM BLUE		RECHARGE STRUCTURES	S SUGGESTED	SYNCLINE / SYNFORM		←		RAILWAY	₩EST		
		I lavara muum i i	CHECK DAM						BENGAL	A-BIRBHUM	
100 - 200 LPM GREEN		DESILTING OF TANK	RECHARGE WELL *	TREND LINE				CITY / VILLAGE		B-BARDDHAMAN C-PURULIYA D-BANKURA	F
		SOIL CONSERVATION	RECHARGE SHAFT △ STORAGE TANK	ESCARPMENT	7	THE				E-PASCHIM MEDINIPUR	
50 - 100 LPM YELLOW		MEASURES  WELLS OBSERVED DURING FIE		LITHOLOGY (OF OMORPH)	/ / / / / / / / / / / / / / / / / / /		<b> </b>     H	ABITATIONS : NON - COVERED (NC) PARTIALLY COVERED (PC)		1	
		YIELD RANGE BORE / YIELD R. IN LPM TUBE WELL IN m <sup>3</sup> / d:		LITHOLOGY / GEOMORPH BOUNDARY	AIC UNIT			.,	DI GOV INDEX		
		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	m <sup>3</sup> / day 8/15	FAULT	MINOR	MAJOR		BOUNDARY:	BLOCK INDEX	MAPSHEET I	INDE
30 - 50 LPM ORANGE		400 - 800 LPM + 15/70 200 - 400	3		F——F	F		STATE			
		200 - 400 LPM	,	THRUST	TT	T		DISTRICT	C20 D20	73J/5 73J/9	73.
20 - 30 LPM BROWN		100 - 200 LPM	3	FRACTURE / LINEAMENT				BLOCK	E01		4
		30 - 50 LPM	3	FRACTURE / LINEAMENT (Inferred)				BLOCK		73J/6 73J/10	73.
10 - 20 LPM PINK		20 - 30 LPM 15/70 10 - 15 m	3		onfirmed / Inferred) S	s/s s	07//77 ////			759/10	,
		10 - 20 LPM	3		onfirmed / Inferred)	D/D-D	ОТН	ER INFORMATION			
Prospects limited to valley			n³ / day 8/15	7112	ommed / micrody		Painf	all : 1542mm		73J/7 73J/11	73.
portions only (Hills, Plateaus		Colour inside well symbol indicates yield rang	ge. The figures on the top right	QUARTZ REEF (Co	onfirmed / Inferred)	Q/Q- 'Q	Naiili	aii . 1942iiiii	C20 BANDOYAN E01 BINPUR - II D20 RANIBUNDH		
RED Run-off zone/		hand side of well indicate the depth to water lo	level and depth of well in meters  HAND PUMP WELL	PEGMATITIE VEIN (Co	onfirmed / Inferred)	P / P P	190	urce IMD)			
Barrier for G.W. movement	(Inselberg / Ridge / Dyke etc.)	ARTESIAN WELL	OBSERVATION WELL OF	Lithologic contacts are in	ferred at places & Ge	omorphic boundaries					
		1	G.W DEPT. / C.G.W.B.	are gradational					<del>                                     </del>		
PREPARED BY		TECHNICAL GUIDANCE & C	PARTICIPATING ORGANIZATIONS			METHODOLOGY	/ & PROJECT EXECUTION	SPONSORED BY			
	TICS & REMOTE SENSING CELL	इसरो ंडाव					इसरो ंडाव		RAJIV GANDHI NATIONAL I		R MIS
B. STATE COUNCIL OF SCIENCE AND TECHNOLOGY		NATIONAL REMOTE SEN	SURVEY OF INDIA GEOLOGICAL SURVEY OF INDIA			NATIONAL REM	OTE SENSING CENTRE	(PHASE III B) DEPARTMENT OF DRINKING WATER SUPPLY (DE			
DEPARTMENT OF SCIENCE AND TECHNOLOGY GOVERNMENT OF WEST BENGAL		INDIAN SPACE RESEARCH O	PHED, GOVT. OF WEST BENGAL				EARCH ORGANISATION (ISRO)	MINISTRY OF RURA		•	
	LOOR, BIKASH BHAVAN	DEPT. OF SPACE, GO	STATE WATER INVESTIGATION DIRECTORATE, GOWB				PACE, GOVT. OF INDIA	GOVERNME		••	
	AKE, KOLKATA 700 091	BALANAGAR, HYDERA	P.S.MAPS (LAND RECORD), GOVT OF WEST BENGAL				R, HYDERABAD - 500 625	NEW DELHI			