

LEGEND

MAP UNIT	GEOLOGICAL SEQUENCE / ROCK TYPE	GEOMORPHIC UNIT / LANDFORM	DEPTH TO WATER LEVEL	RECHARGE CONDITIONS	STRUCTURE							RECHARGE STRUCTURES	REMARKS
(HYDROGEOMORPHIC UNIT) REPRESENTED IN THE MAP WITH ALPHANUMERIC CODE (COLOUR INDICATES YIELD RANGE AND HATCHING INDICATE DEPTH RANGE)	(REPRESENTED IN THE MAP WITH NUMERIC CODE)	(REPRESENTED IN THE MAP WITH ALPHABETIC CODE)	PRE / POST- MONSOON (AVERAGE IN METERS) NO. OF WELLS OBSERVED	BASED ON AVAILABILITY OF WATER (RAINFALL & OTHER SOURCES)	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 ³ / 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)	SUITABLE & 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)
CB111	ugli/Bhagirathi Formation/ Present Day Formatio Present Day (1111) (turnimon pubby) (turnimon) (turnimon)	Channel Bar (CB)	<u>5 - 6</u> 2	Excellant	LS	RW TW	5-10	400-500	Very High	Р	42%	Not Required	Groundwater prospects very high with high recharge potential. Recharge structures not required.
PB111		Point Bar (PB)	<u>6</u> 1	Very Good	LS	RW TW	5-10	300-500	Very High	Р	7%	Not Required	Groundwater prospects very high with high recharge potential. Recharge structures not required.
VF\$832	Chhotanagpur Granite Gneiss Complex (Lower Proterozoic, 2300 - 2400 mill.yrs) (E8) (E8) (E8) (E8) (E8)	Valley Fill Shallow (VFS)	No wells observed	Moderate	LS Underlain by WM+FR	TW / BW	30 - 50	150 - 175 LPM	Moderate	Р	Nil	CD/DT Moderate	Prospects inferred as no wells obser Recharge condition is moderate with moderate groundwater prospects
		Buried Pediplain Moderate (BPM)	5.85 DW - 1	Moderate	WM+FR	DW TW / BW	5 - 10 40 - 50	15 - 25 m ³ /day 150 - 175 LPM	Moderate	Р	10%	RP Moderate	Recharge structure will improve grouwater prospects
DF3032		Buried Pediplain Shallow (BPS)	3.11 - 8.92 DW - 55	Limited	WM+FR	DW TW / BW	5 - 10 40 - 60	10 - 15 m ³ /day 75 - 100 LPM	Low	Р	15%	RP/DT High	Recharge structures will improve sustainability of groundwater source
PPS832		Weathered Pediplain Shallow (PPS)	4.82 - 5.9 DW - 2	Poor	FR	DW TW / BW	5 - 10 40 - 60	5 - 10 m ³ /day 30 - 50 LPM	Low	Р	Nil	RP High	Due to high run off and poor infiltration recharge structures are required to no sustainability of groundwater sources
RH832		Residual Hill (RH)	No wells observed	-	_	-	_	_	_	_	-	_	Run- off zone. Not suitable for groun water development
VFS923	Unclassified Metamorphics(Older Metamorphics) (Archaean) (Archaean)	Valley Fill Shallow (VFS)	No wells observed	Moderate	LS Underlain by WM+FR	TW / BW	30 - 50	100 - 125 LPM	Moderate	Р	Negligible	CD/DT Moderate	Prospects inferred as no well observ Recharge condition is moderate with moderate groundwater prospects
BPM923		Buried Pediplain Moderate (BPM)	7.55 DW - 1	Moderate	WM+FR	DW TW / BW	5 - 10 40 - 50	10 - 15 m ³ /day 100 - 125 LPM	Moderate	Р	Nil	Not Required	Few small units are present, recharge structures not required
BPS923		Buried Pediplain Shallow (BPS)	4.35 - 6.68 ———————————————————————————————————	Limited	WM+FR	DW TW / BW	5 -10 40 - 60	5 - 10 m ³ /day 50 - 75 LPM	Low	Р	8%	RP High	Recharge structures will improve sustainability of groundwater source
PPS923		Weathered Pediplain Shallow (PPS)	No wells observed	Poor	FR	DW TW / BW	5 - 10 40 - 60	5 - 10 m³/day 30 - 50 LPM	Low	Р	Negligible	RP High	Due to high run-off and poor infiltratio recharge structures are required to m sustainability of groundwater sources

STRUCTURAL INFORMATION BASE MAP INFORMATION GROUND WATER PROSPECTS INFORMATION HYDROLOGICAL INFORMATION LOCATION INFORMATION CANAL / TANK IRRIGATED AREA NATIONAL HIGHWAY < 30 METERS 30 - 80 METERS > 80 METERS GROUND WATER IRRIGATED AREA MODERATE (15 - 45) RIVER / STREAM (with sand) STATE HIGHWAY SUB - VERTICAL TO VERTICAL (> 80) METALLED ROAD (With average annual rainfall in mm) SYNCLINE / SYNFORM RECHARGE STRUCTURES SUGGESTED PERCOLATION TANK RECHARGE PIT SOIL CONSERVATION HABITATIONS : NON - COVERED (NC)
PARTIALLY COVERED (PC) LITHOLOGY / GEOMORPHIC UNIT BOUNDARY 50 - 100 LPM **BLOCK INDEX** MAPSHEET INDEX > 400 m³ / day 400 - 800 LPM + 15/70 200 - 400 m³ / day 30 - 50 LPM _--100 - 200 m³ / day THRUST 50 - 100 m³/day FRACTURE / LINEAMENT 20 - 30 LPM BROWN 25 - 50 m³ / day FRACTURE / LINEAMENT ____ 15 - 25 m³/ day <u>8/15</u> 10 - 20 LPM SHEAR ZONE (Confirmed / Inferred) S — S /S — S 10 - 15 m³/ day OTHER INFORMATION 10 - 20 LPM - 15/70 5 - 10 m³ / day (Confirmed / Inferred) Prospects limited to valley portions only (Hills, Plateaus etc.) < 5 m³ / day C02 PURULIYA II C08 KASHIPUR C03 PARA C09 HURA C05 RAGHUNATHPUR I (Confirmed / Inferred) Colour inside well symbol indicates yield range. The figures on the top right hand side of well indicate the depth to water level and depth of well in meters PEGMATITIE VEIN (Confirmed / Inferred) (Source IMD) DUG - CUM- BORE WELL Lithologic contacts are inferred at places & Geomorphic boundaries ARTESIAN WELL TECHNICAL GUIDANCE & QUALITY CHECK PARTICIPATING ORGANIZATIONS METHODOLOGY & PROJECT EXECUTION PREPARED BY SPONSORED BY RAJIV GANDHI NATIONAL DRINKING WATER MISSION GEOINFORMATICS & REMOTE SENSING CELL SURVEY OF INDIA (PHASE III B) W.B. STATE COUNCIL OF SCIENCE AND TECHNOLOGY NATIONAL REMOTE SENSING CENTRE NATIONAL REMOTE SENSING CENTRE DEPARTMENT OF DRINKING WATER SUPPLY (DDWS) GEOLOGICAL SURVEY OF INDIA DEPARTMENT OF SCIENCE AND TECHNOLOGY MINISTRY OF RURAL DEVELOPMENT **GOVERNMENT OF WEST BENGAL** INDIAN SPACE RESEARCH ORGANISATION (ISRO) PHED, GOVT. OF WEST BENGAL INDIAN SPACE RESEARCH ORGANISATION (ISRO) **GOVERNMENT OF INDIA** STATE WATER INVESTIGATION DIRECTORATE, GOWB 4TH FLOOR, BIKASH BHAVAN DEPT. OF SPACE, GOVT. OF INDIA DEPT. OF SPACE, GOVT. OF INDIA SALT LAKE, KOLKATA 700 091 BALANAGAR, HYDERABAD - 500 625 BALANAGAR, HYDERABAD - 500 625 **NEW DELHI** P.S.MAPS (LAND RECORD), GOVT OF WEST BENGAL