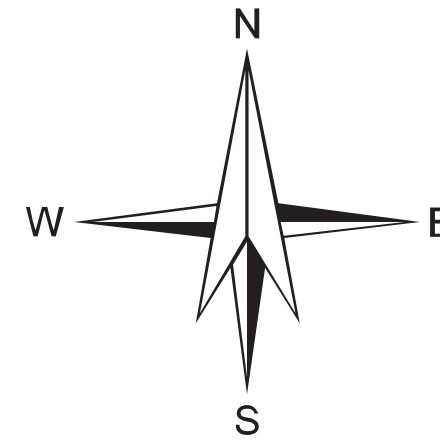
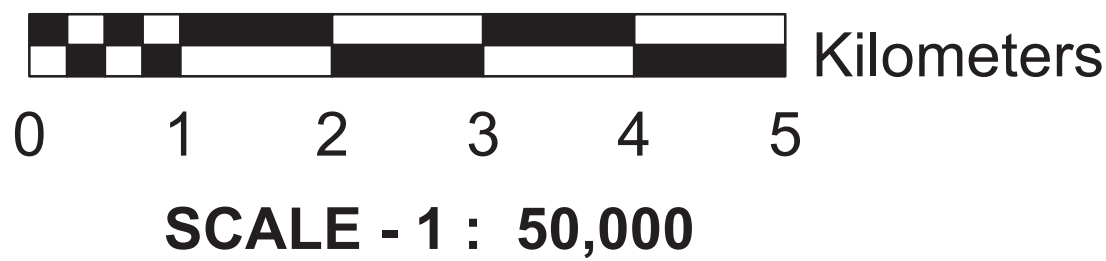


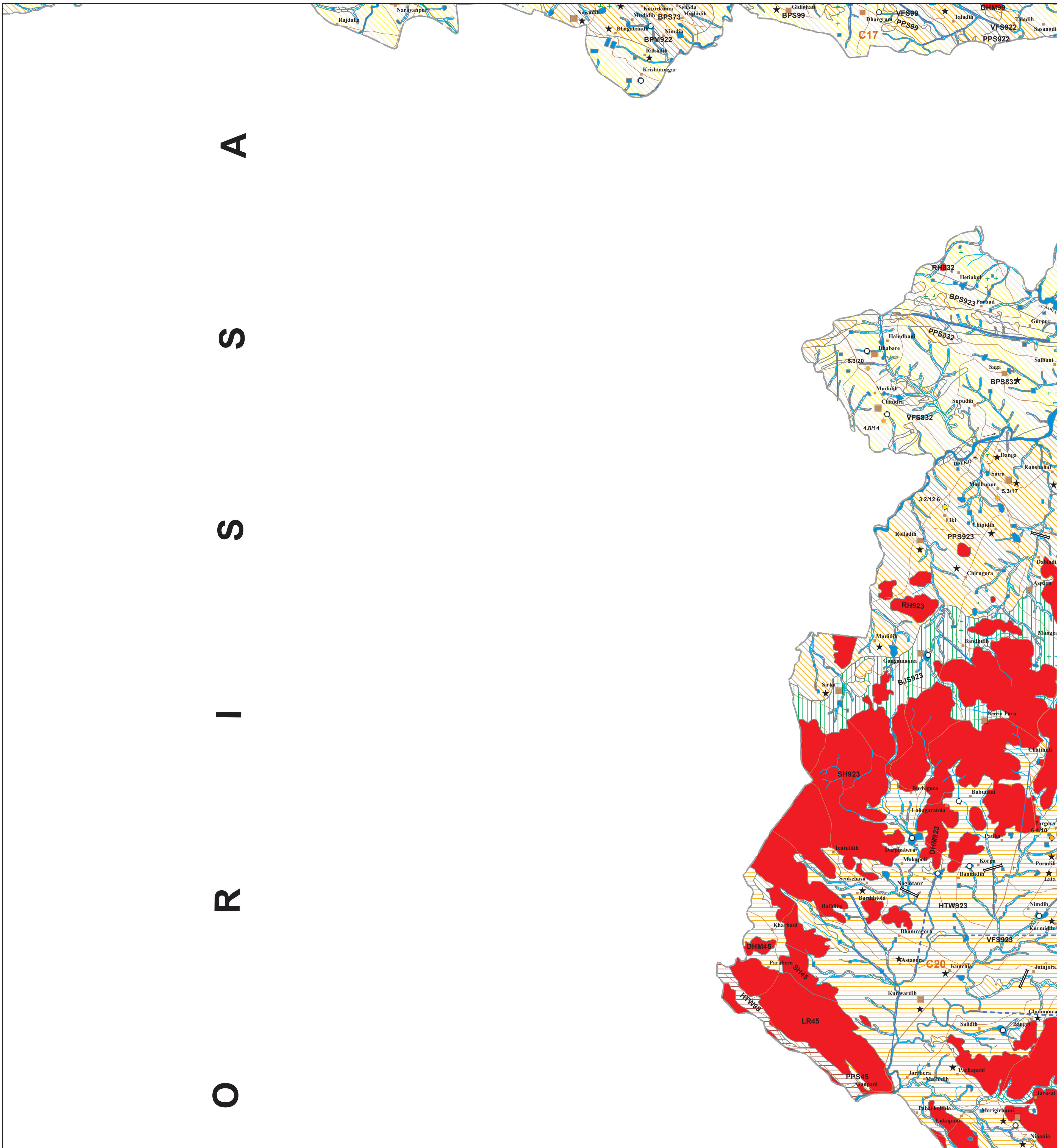
GROUND WATER PROSPECTS MAP

(PREPARED FROM SATELLITE IMAGE INTERPRETATION WITH LIMITED FIELD CHECKS)



MAP SHEET NO. 73J/5

PURULIYA DISTRICT, WEST BENGAL



LEGEND

MAP UNIT (HYDROGEOLOGICAL UNIT) REPRESENTED IN THE MAP WITH ALPHABETIC CODE	GEOLOGICAL SEQUENCE / ROCK TYPE (REPRESENTED IN THE MAP WITH ALPHABETIC 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 (PROBLEMS / LIMITATIONS)
					AQUIFER MATERIAL LS = LOOSE SEDIMENTS FR = FRACTURED ROCK WM = WEATHERED ROCK IM = IMPERVIOUS MATERIAL M = IMPERVIOUS MATERIAL	TYPE OF WELLS SUITABLE DW = DIG WELL PW = PUMP WELL SW = SINK WELL TW = TUBE WELL DTW = DIG CUM TUBE WELL	DEPTH RANGE OF WELLS (SUGGESTED) (IN METERS)	YIELD RANGE OF WELLS (EXPECTED) (IN LPM OR m ³ /day)	HOMOGENEITY IN THE UNIT & SUCCESS RATE OF WELLS (PROBABILITY) VERY HIGH MODERATE LOW	QUALITY OF WATER POTABLE (P) NON-POTABLE (NP) (RECHARGE QUALITY) NON-POTABLE	GROUND WATER IRRIGATED AREA (APPROX. RANGE IN PERCENTAGE)		
BPS73	Anorthosite and Gabbroic Anorthosite (73)	Buried Pediplain Shallow (BPS)	2.6 - 8.69 DW - 20 HP - 1	Limited	WM+FR	DW TW / BW	5 - 10 40 - 60	< 3 m ³ /day 30 - 50 LPM	Low	P	20%	RP High	Limited groundwater resources. Priority of recharge structures is high.
PPS45	Quartzite (45)	Weathered Pediplain Shallow (PPS)	No wells observed	Poor	FR	DW TW / BW	5 - 10 40 - 60	5 - 10 m ³ /day 30 - 50 LPM	Low	P	Nil	Not Required	Small units, recharge structures not required.
LR45		Linear Ridge (LR)	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.
DHM45		Denudational Hill/ Moderately dissected (DHM)	No wells observed	-	-	-	-	-	-	-	-	-	Mainly run-off zone. Prospects limited to valley and fracture zones only.
YFS922	Epidiorite, Hornblende Schist (922)	Valley Fill Shallow (VFS)	No wells observed	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.
BPM922		Buried Pediplain Shallow (BPM)	No wells observed	Moderate	WM+FR	DW TW / BW	5 - 10 40 - 50	10 - 15 m ³ /day 100 - 125 LPM	Moderate	P	Nil	Not Required	Very small units, recharge structures not required.
VFS832		Valley Fill Shallow (VFS)	No wells observed	Moderate	LS Underlain by WM+FR	TW / BW	30 - 50	150 - 175 LPM	Moderate	P	Negligible	DT Moderate	Prospects inferred as no well observed. Recharge condition is moderate with moderate groundwater prospects.
BPS832		Buried Pediplain Shallow (BPS)	4.8 - 5.3 HP - 2	Limited	WM+FR	DW TW / BW	5 - 10 40 - 60	10 - 15 m ³ /day 75 - 100 LPM	Low	P	20%	RP High	Recharge structures will improve sustainability of groundwater sources.
PPS832	Granitoid Gneiss (832)	Weathered Pediplain Shallow (PPS)	No wells observed	Poor	FR	DW TW / BW	5 - 10 40 - 60	5 - 10 m ³ /day 30 - 50 LPM	Low	P	Nil	Not Required	Small units, sparse settlements, recharge structures not required.
RH832		Residual Hill (RH)	No wells observed	-	-	-	-	-	-	-	-	-	Run-off zone. Not suitable for groundwater development.
VFS923		Valley Fill Shallow (VFS)	No wells observed	Moderate	LS Underlain by WM+FR	TW / BW	30 - 50	150 - 175 LPM	Moderate	P	Nil	DT Moderate	Prospects inferred as no well observed. Recharge condition is moderate with moderate groundwater prospects.
BPS923		Buried Pediplain Shallow (BPS)	No wells observed	Limited	WM+FR	DW TW / BW	5 - 10 40 - 60	5 - 10 m ³ /day 50 - 75 LPM	Low	P	Negligible	RP High	Limited groundwater resources. Priority of recharge structures is high.
PPS923	Mica Schist (923)	Weathered Pediplain Shallow (PPS)	No wells observed	Poor	FR	DW TW / BW	5 - 10 40 - 60	5 - 10 m ³ /day 30 - 50 LPM	Low	P	Nil	Not Required	Very small units, recharge structures not required.
BJS923		Bajada Shallow (BJS)	No wells observed	Moderate	LS Underlain by WM+FR	DW TW / BW	10 - 15 90 - 100	10 - 15 m ³ /day 100 - 125 LPM	Moderate	P	5%	Not Required	Recharge is moderate. Better yields at greater depths within fractured rocks.
HTW923		Hill Top Weathered (HTW)	6.4 DW - 1	Limited	WM+FR	DW TW / BW	< 5 25 - 30	< 5 m ³ /day 30 - 50 LPM	Low	P	20%	Not Required	Prospects limited. Better prospects along fracture zones.
RH923		Residual Hill (RH)	No wells observed	-	-	-	-	-	-	-	-	-	Run-off zone, not suitable for ground water development.
SH923	Unclassified Metamorphics (923)	Structural Hill (SH)	No wells observed	-	-	-	-	-	-	-	-	-	Run-off zone, not suitable for ground water development.
DHM923		Denudational Hill/ Moderately dissected (DHM)	No wells observed	-	-	-	-	-	-	-	-	-	Mainly run-off zone. Prospects limited to valley and fracture zones only.
VFS99		Valley Fill Shallow (VFS)	No wells observed	Moderate	LS Underlain by WM+FR	TW / BW	30 - 50	50 - 75 LPM	Moderate	P	Nil	DT High	Loose sediments and mostly weathered zone form the aquifer recharge structure will enhance sustainability of groundwater prospects.
BPS99		Buried Pediplain Shallow (BPS)	No wells observed	Limited	WM+FR	DW TW / BW	5 - 10 40 - 60	< 5 m ³ /day 30 - 50 LPM	Low	P	10%	RP High	Priority of recharge structures is high since yield is low. Dug wells preferred.
PPS99	Shale, Slate and Phyllite Metamorphics (99)	Weathered Pediplain Shallow (PPS)	No wells observed	Poor	FR	DW TW / BW	5 - 10 40 - 60	< 5 m ³ /day 20 - 30 LPM	Low	P	Nil	RP High	Priority of recharge structures is high since yield is low. Dug wells preferred.
HTW99		Hill Top Weathered (HTW)	No wells observed	Limited	WM+FR	DW TW / BW	< 5 25 - 30	< 5 m ³ /day 20 - 30 LPM	Low	P	5%	Not Required	Small units, recharge structures not required.
DHM99		Denudational Hill/ Moderately dissected (DHM)	No wells observed	-	-	-	-	-	-	-	-	-	Mainly run-off zone. Prospects limited to valley and fracture zones only.

GROUND WATER PROSPECTS INFORMATION			HYDROLOGICAL INFORMATION			STRUCTURAL INFORMATION			BASE MAP INFORMATION			LOCATION INFORMATION		
YIELD RANGE OF WELLS	COLOR CODE	DEPTH RANGE OF WELLS	DESCRIPTION	SYMBOL		DIPS	BEDDING	SCHISTOSITY/ FOLIATION	SYMBOL	DESCRIPTION		STATE INDEX	DISTRICT INDEX	
		SHALLOW < 10 METERS	CANAL / TANK IRRIGATED AREA			GENTLE (< 15°)			NH-2	NATIONAL HIGHWAY		INDIA		
> 600 LPM	VIOLET	MODERATE 10 - 40 METERS	RIVER / STREAM (with sand)			MODERATE (15 - 45°)			SH-3	STATE HIGHWAY				
400 - 600 LPM	INDIGO	DEEP > 40 METERS	WATER BODY / SPRING			STEEP (45 - 80°)				METALLED ROAD				
200 - 400 LPM	BLUE		CANAL			SUB-VERTICAL TO VERTICAL (> 80°)				OTHER ROAD				
100 - 200 LPM	GREEN		RAIN GAUGE STATION (Wm average annual rainfall in mm)		800	ANTICLINE / ANTIFORM				RAILWAY				
50 - 100 LPM	YELLOW		RECHARGE STRUCTURES SUGGESTED			SYNCLINE / SYNFORM				CITY / VILLAGE				
30 - 50 LPM	ORANGE		PERCOLATION TANK			TREND LINE				HABITATIONS : NON - COVERED (NC) PARTIALLY COVERED (PC)				
20 - 30 LPM	BROWN		WATER BODY / SPRING			ESCARPMENT				BOUNDARY :				
10 - 20 LPM	RED		RAIN GAUGE STATION (Wm average annual rainfall in mm)		800	LITHOLOGY / GEOMORPHIC UNIT BOUNDARY				INTERNATIONAL STATE DISTRICT BLOCK				
Prospects based on very little field observation			RECHARGE STRUCTURES SUGGESTED			FAULT				OTHER INFORMATION				
Run-off zone/ Barrier for D.W. movement			PERCOLATION TANK			THRUST				Rainfall : 1322 mm (Source IMD)				
			RAIN GAUGE STATION (Wm average annual rainfall in mm)		800	FRACUTURE / LINEAMENT (Inferred)								
			RECHARGE STRUCTURES SUGGESTED			SHEAR ZONE (Confirmed / Inferred)								
			PERCOLATION TANK			DYKE (Confirmed / Inferred)								
			WATER BODY / SPRING			QUARTZ REEF (Confirmed / Inferred)								
			RAIN GAUGE STATION (Wm average annual rainfall in mm)		800	PEGMATITE VEIN (Confirmed / Inferred)								
			RECHARGE STRUCTURES SUGGESTED			Lithologic contacts are inferred at places & Geomorphic boundaries are gradational								
			PERCOLATION TANK											
			WATER BODY / SPRING											
			RAIN GAUGE STATION (Wm average annual rainfall in mm)		800									
			RECHARGE STRUCTURES SUGGESTED											
			PERCOLATION TANK											
			WATER BODY / SPRING											
			RAIN GAUGE STATION (Wm average annual rainfall in mm)		800									
			RECHARGE STRUCTURES SUGGESTED											
			PERCOLATION TANK											
			WATER BODY / SPRING											
			RAIN GAUGE STATION (Wm average annual rainfall in mm)		800									
			RECHARGE STRUCTURES SUGGESTED											
			PERCOLATION TANK											
			WATER BODY / SPRING											
			RAIN GAUGE STATION (Wm average annual rainfall in mm)		800									
			RECHARGE STRUCTURES SUGGESTED											
			PERCOLATION TANK											
			WATER BODY / SPRING											
			RAIN GAUGE STATION (Wm average annual rainfall in mm)		800									
			RECHARGE STRUCTURES SUGGESTED											
			PERCOLATION TANK											
			WATER BODY / SPRING											
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			PERCOLATION TANK											
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