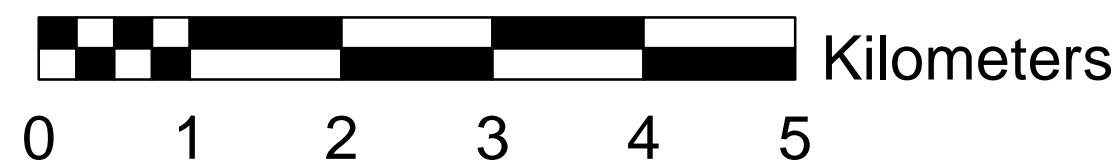


# GROUND WATER PROSPECTS MAP

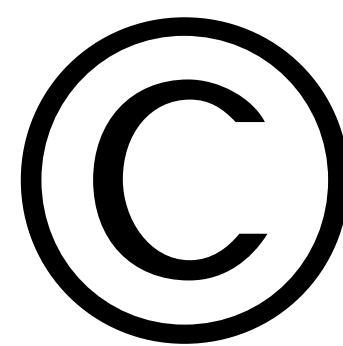
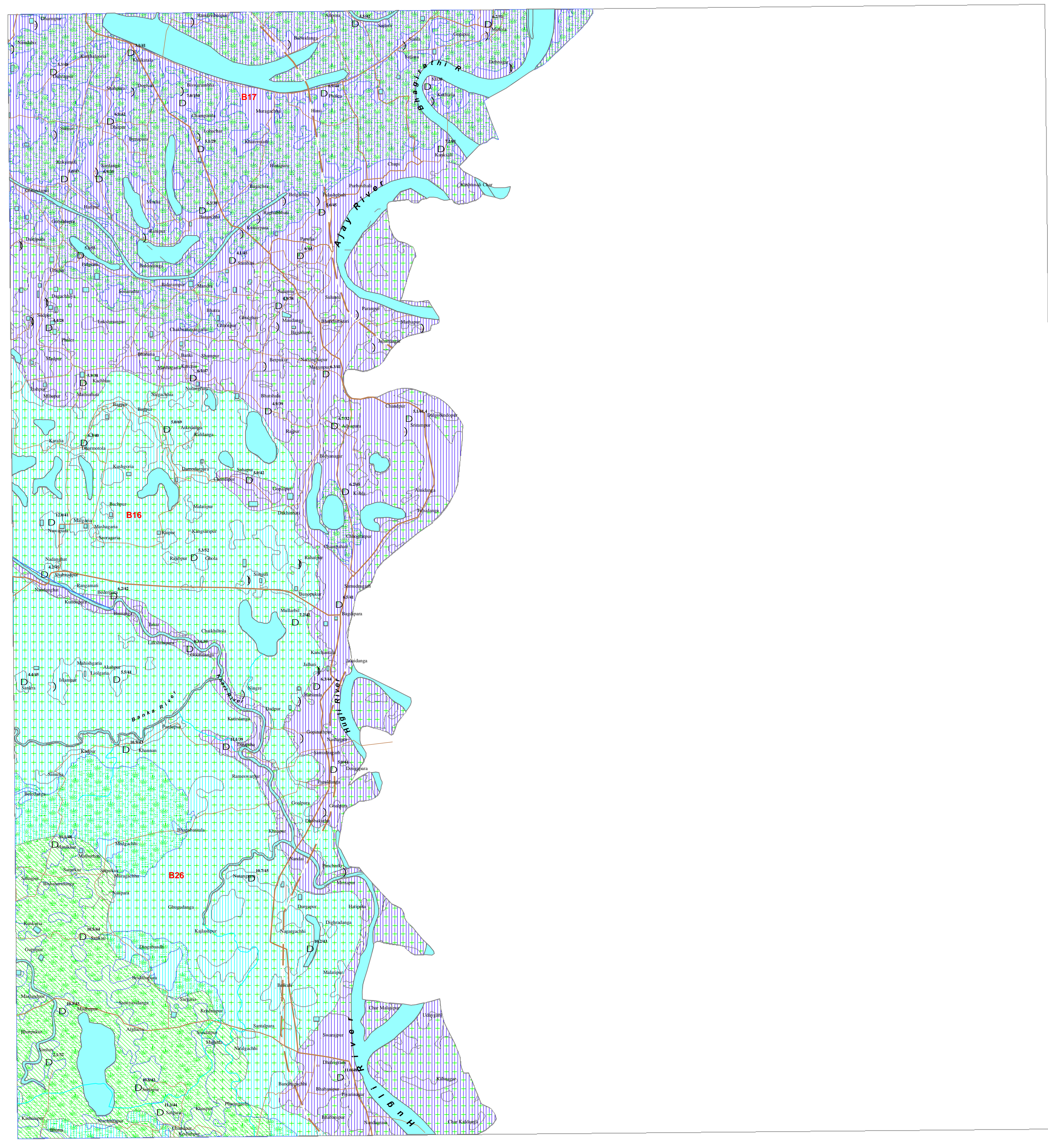
(PREPARED FROM SATELLITE IMAGE INTERPRETATION WITH LIMITED FIELD CHECKS)



SCALE - 1 : 50,000

MAP SHEET NO. 79 A/7

BARDHAMAN DISTRICT, WEST BENGAL



## LEGEND

MAP UNIT (HYDROGEOLOGIC UNIT) REPRESENTED IN THE MAP WITH ALPHABETIC CODE	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 (PROBLEMS / OBSERVATIONS)	
					AQUIFER MATERIAL	TYPE OF WELLS SUITABLE	DEPTH RANGE OF WELLS (SUGGESTED) (IN METERS)	YIELD RANGE OF WELLS (EXPECTED) (IN LPM or m <sup>3</sup> /day)	HOMOGENEITY IN THE UNIT & SUCCESS RATE OF WELLS (PROBABILITY)	QUALITY OF WATER (SUITABLE/P, NON-SUITABLE/NS) (BASED ON REASONS #)			GROUND WATER IRRIGATED AREA (APPROX. RANGE IN PERCENTAGE)
APY11	Alluvium (Sand Dominant) (11)	Alluvial Plain Younger (APY)	3.1-11.1 PW-4 HP-29	Excellent	LS	DW TW	10-12 100-120	100-125 m <sup>3</sup> /day 450-500 LPM	Very High	NP (As & Fe)	40%	Not Required	At depth range of 20m to 80m, ground water is non-potable due to Arsenic contamination primarily. At depth range of above 80m, Arsenic free ground water may be available.
AOM13	Alluvium (Sand with Silt and Clay) (13)	Alluvial Plain Older - Moderate (AOM)	4.2-12 PW-1 HP-11	Good	LS	DW TW	10-15 100-120	50-75 m <sup>3</sup> /day 250-300 LPM	High	NP (As & Fe)	70%	Not Required	At depth range of 20m to 80m, ground water is non-potable due to Arsenic contamination primarily. At depth range of above 80m, Arsenic free ground water may be available.
AOD13	Alluvium (Sand with Silt and Clay) (13)	Alluvial Plain Older - Deep (AOD)	2.1-11.2 HP-4	Good	LS	DW TW	15-20 30-50	50-75 m <sup>3</sup> /day 175-200 LPM	High	P	10%	Not Required	Aquifer is formed of sandy part of alluvium. Recharge structures are not required as good recharge condition prevails.

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 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.

<b>GROUND WATER PROSPECTS INFORMATION</b> <table border="1"> <thead> <tr> <th>YIELD RANGE OF WELLS</th> <th>COLOR CODE</th> <th>DEPTH RANGE OF WELLS</th> </tr> <tr> <th>SHALLOW (0-30 METERS)</th> <th>MODERATE (30-60 METERS)</th> <th>DEEP (&gt;60 METERS)</th> </tr> </thead> <tbody> <tr> <td>&gt; 800 LPM</td> <td>VIOLET</td> <td></td> </tr> <tr> <td>400-800 LPM</td> <td>INDIGO</td> <td></td> </tr> <tr> <td>200-400 LPM</td> <td>BLUE</td> <td></td> </tr> <tr> <td>100-200 LPM</td> <td>GREEN</td> <td></td> </tr> <tr> <td>50-100 LPM</td> <td>YELLOW</td> <td></td> </tr> <tr> <td>30-50 LPM</td> <td>ORANGE</td> <td></td> </tr> <tr> <td>20-30 LPM</td> <td>BROWN</td> <td></td> </tr> <tr> <td>10-20 LPM</td> <td>PINK</td> <td></td> </tr> <tr> <td>Prospects (Indicate only the presence)</td> <td>RED</td> <td></td> </tr> </tbody> </table>	YIELD RANGE OF WELLS	COLOR CODE	DEPTH RANGE OF WELLS	SHALLOW (0-30 METERS)	MODERATE (30-60 METERS)	DEEP (>60 METERS)	> 800 LPM	VIOLET		400-800 LPM	INDIGO		200-400 LPM	BLUE		100-200 LPM	GREEN		50-100 LPM	YELLOW		30-50 LPM	ORANGE		20-30 LPM	BROWN		10-20 LPM	PINK		Prospects (Indicate only the presence)	RED		<b>HYDROLOGICAL INFORMATION</b> <table border="1"> <thead> <tr> <th>DESCRIPTION</th> <th>SYMBOL</th> </tr> </thead> <tbody> <tr> <td>CANAL/TANK IRRIGATED AREA</td> <td></td> </tr> <tr> <td>GROUND WATER IRRIGATED AREA</td> <td></td> </tr> <tr> <td>RIVER / STREAM (with sand)</td> <td></td> </tr> <tr> <td>WATER BODY / SPRING</td> <td></td> </tr> <tr> <td>CANAL</td> <td></td> </tr> <tr> <td>RAIN GAUGE STATION</td> <td></td> </tr> <tr> <td>PERCOLATION TANK</td> <td></td> </tr> <tr> <td>NALA BUND</td> <td></td> </tr> <tr> <td>SUBSURFACE DYKE</td> <td></td> </tr> <tr> <td>SOIL CONSERVATION MEASURES</td> <td></td> </tr> </tbody> </table>	DESCRIPTION	SYMBOL	CANAL/TANK IRRIGATED AREA		GROUND WATER IRRIGATED AREA		RIVER / STREAM (with sand)		WATER BODY / SPRING		CANAL		RAIN GAUGE STATION		PERCOLATION TANK		NALA BUND		SUBSURFACE DYKE		SOIL CONSERVATION MEASURES		<b>STRUCTURAL INFORMATION</b> <table border="1"> <thead> <tr> <th>DIPS</th> <th>BEDDING</th> <th>SCHISTOSITY/FOLIATION</th> </tr> </thead> <tbody> <tr> <td>GENTLE (&lt; 15°)</td> <td></td> <td></td> </tr> <tr> <td>MODERATE (15-45°)</td> <td></td> <td></td> </tr> <tr> <td>STEEP (45-90°)</td> <td></td> <td></td> </tr> <tr> <td>SUB-VERTICAL TO VERTICAL (&gt; 80°)</td> <td></td> <td></td> </tr> </tbody> </table>	DIPS	BEDDING	SCHISTOSITY/FOLIATION	GENTLE (< 15°)			MODERATE (15-45°)			STEEP (45-90°)			SUB-VERTICAL TO VERTICAL (> 80°)			<b>BASE MAP INFORMATION</b> <table border="1"> <thead> <tr> <th>SYMBOL</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>NH-2</td> <td>NATIONAL HIGHWAY</td> </tr> <tr> <td>SH-9</td> <td>STATE HIGHWAY</td> </tr> <tr> <td></td> <td>METALLED ROAD</td> </tr> <tr> <td></td> <td>OTHER ROAD</td> </tr> <tr> <td></td> <td>RAILWAY</td> </tr> <tr> <td></td> <td>CITY / VILLAGE</td> </tr> <tr> <td></td> <td>HABITATIONS : NON-COVERED (NC) PARTIALLY COVERED (PC)</td> </tr> <tr> <td></td> <td>BOUNDARY : STATE DISTRICT BLOCK</td> </tr> </tbody> </table> <p>Other Information: Rainfall : 1348mm (Source IMD)</p>	SYMBOL	DESCRIPTION	NH-2	NATIONAL HIGHWAY	SH-9	STATE HIGHWAY		METALLED ROAD		OTHER ROAD		RAILWAY		CITY / VILLAGE		HABITATIONS : NON-COVERED (NC) PARTIALLY COVERED (PC)		BOUNDARY : STATE DISTRICT BLOCK	<b>LOCATION INFORMATION</b> <table border="1"> <thead> <tr> <th>STATE INDEX</th> <th>DISTRICT INDEX</th> </tr> </thead> <tbody> <tr> <td>INDIA</td> <td>BARDHAMAN</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>BLOCK INDEX</th> <th>MAPSHEET INDEX</th> </tr> </thead> <tbody> <tr> <td>B17</td> <td>79A/2 79A/5 79A/8</td> </tr> <tr> <td>B16</td> <td>79A/3 79A/7 79A/11</td> </tr> <tr> <td>B26</td> <td>79A/4 79A/8 79A/12</td> </tr> </tbody> </table>	STATE INDEX	DISTRICT INDEX	INDIA	BARDHAMAN	BLOCK INDEX	MAPSHEET INDEX	B17	79A/2 79A/5 79A/8	B16	79A/3 79A/7 79A/11	B26	79A/4 79A/8 79A/12
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