



Office of the Senior Geologist
Groundwater Surveys and Development Agency, GoM.
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No. SG/GSDA/Pune/Tech/PMRDA/ 1522/2025

Date- 09 DEC 2025

To,
Advika Constructions Pvt Ltd
Shri Sudhir Seth
Survey no. 32/5 क, Village Pisoli,
Tal Haveli, Dist. Pune

Sub: Regarding Hydrogeological Survey at Survey no. 32/5 क of Village, Pisoli, Tal Haveli, Dist Pune.

Ref: Your application dated 24/11/2025

With reference to the above subject hydro-geological survey was carried out in the presence of concern personnel at the Survey no. 32/5 क of Village, Pisoli, Tal Haveli, Dist Pune. At the time of Hydrogeological survey, the concern personnel Shri. H. Bhavar was present.

The details of the proposed site are as below.

Name of Village	Pisoli, Tal Haveli, Dist Pune	
Co-ordinates	Lat - 18.445991"N ; 18.444974 "N	
	Long - 73.898310 "E ; 73.898358 "E	
Elevation (msl)	678.0 m	
Toposheet & Quadrant No	47F/15 and 1B	
Watershed No.	BM-52; 3/9	
Morphozone	A; Aa	
Category	Safe (As per Groundwater Assessment 2023-24)	
Rock Type	Basalt	
Aquifer (Water bearing Zone)	Shallow Aquifer (Jointed and Fractured Basalt)	

Location:

Located close to Katraj – Hadapsar bypass, Southern Metropolitan corridor of Pune, Pisoli is an area which has developed into a growing residential market. The area under study is located towards east direction of the bypass at approx. 150 m.

Geomorphology:

The village area has undulating topography with slope mainly towards Northwest direction. The drainage of Pisoli, Tal. Haveli, Dist. Pune village shows dendritic drainage pattern.

Geology:

The area of the village Pisoli, Tal. Haveli, Dist. Pune consists of solidified layers of basalt and thickness of each layer varies from 10.00 to 15.00 meters and formed during upper Cretaceous to lower Eocene period of Geological time scale. The basalts are dark grey to black in color, fine to medium grained, medium jointed and fractured in nature. For the proposed area the geological as well as lithological data is considered as per field observations and reported data.

Lithology	Greyish to brownish coarse-grained soil	0.50 – 1.00 m
	Highly to moderately weathered Basalt.	1.00 – 3.00 m
	Greyish black coloured, fine to medium grained, jointed and fractured Basalt.	3.00 – 8.00 m
	Greyish black coloured partly jointed and fractured Massive Basalt	8.00 – 15.00 m
	Greyish black coloured compact Massive Basalt	Below 15.00 m.

Rainfall:- Pisoli, Tal. Haveli, Dist. Pune village receives rain from south-west Monsoon. On average the area has low to moderate rainfall. The average mean annual rainfall in the taluka is 708.80 mm.

Hydrogeological Conditions:

At the proposed area the Soil thickness is up to 1.0 m, the weathered basalt thickness ranges 1.0 - 3.0 m, jointed and fractured basalt ranges 3.00 – 8.00 m., greyish black coloured partly jointed and fractured massive basalt ranges 8.00 – 15.00 m and below 15.00 m the Greyish black coloured compact massive basalt. The entire area of the studied Survey no. Survey no. 32/5 क is underlain by the basaltic lava flows of upper Cretaceous to lower Eocene age. Geologically the area is covered by jointed and fractured basalt.

Ground water in Deccan trap basalt occurs mostly in the upper weathered and fractured parts down to 1.00 - 15.00 m bgl under unconfined conditions. The water bearing strata at deeper depth exists under semi confined to confined conditions at a depth of about 30-45 m and 50-55 m. From the groundwater availability point of view, the area has moderate yielding groundwater potential zone. According to the groundwater prospects maps the area has been classified as PLM (Plateau Moderately Dissected) where in groundwater prospect are good along Lineaments but area is not suitable for

scale groundwater development. The groundwater sources in the area would yield 20-30 LPM/day/source.

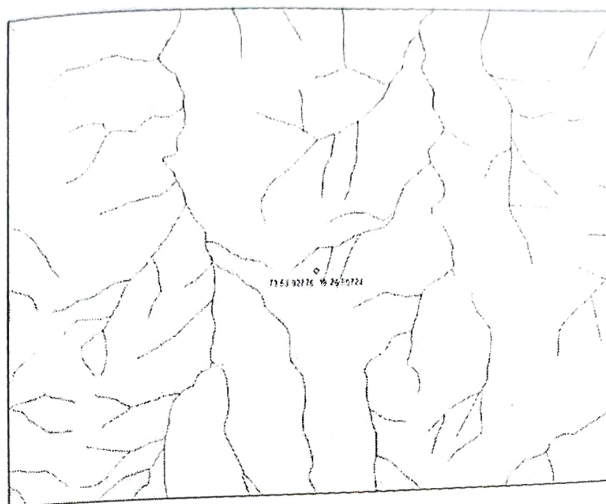


Fig Drainage Map of the Area

The availability of groundwater as a source depends largely upon surface and subsurface geology, geomorphology, natural drainage pattern, depth of weathering and fractures present. Actual annual rainfall, groundwater extraction from other sources in the surrounding area, urbanization, topography modification are also the factors which control and affect the availability of groundwater.

Presently, at the said Survey no. 32/5 क seven groundwater sources (borewell) are present and currently lifting device ranging from 1 hp to 2 hp are installed on the bore wells. The details of existing groundwater source are given as below.

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Sr. No	Source	Details of GW Source				Lifting Device	Water availability
		Diameter in m	Depth in ft	Water Level in m.			
				Winter	Summer		
1	Bore Well	150 mm	300 (R)	10.00 m (R)	25.0 m. (R)	1.5 hp.	20 - 30 LPM /Source
2	Bore Well	150 mm	250 (R)			1 hp	
3	Bore Well	150 mm	250 (R)			2 hp	
4	Bore Well	150 mm	300 (R)			1.5 hp	
5	Bore Well	150 mm	250 (R)			1 hp	
6	Bore Well	150 mm	300 (R)			1.5 hp	
7	Bore Well	150 mm	250 (R)			2 hp	



Observations:

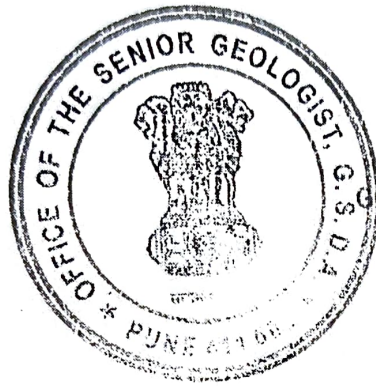
On the basis of Hydrogeological survey done by this office, seven groundwater sources (Bore wells) are present in Survey no. 32/5 क and are currently in use for domestic purposes. From the groundwater availability point of view, the surveyed area is classified as PLM (Plateau Moderately Dissected) and has low to moderate yielding groundwater potential zone. Considering the existing sources and the sources in the adjoining area, about 20-30 LPM of water may be available from each source during the fair season. It is also observed that the area is presently supplied through nine one-inch municipal water supply connections.

Nevertheless, deficit in normal rainfall, increase in population density, excess groundwater extraction from surrounding areas and lack of groundwater recharge may create stress on the availability of groundwater. Following measures are recommended and are mandatory to the applicant.

Recommendations:

1. The scheme has been developed for residential purposes at Survey No. 32/5, Pisoli, Tal. Haveli. The groundwater availability indicated in the report is dynamic and temporal and is subject to change depending upon hydrogeological and environmental influencing factors.
2. To meet the projected water demand, it is necessary to implement conjunctive use of groundwater and surface/municipal water sources. The Builder/Developer shall arrange for additional groundwater sources, if required, in proportion to the projected population of the scheme, subject to statutory permissions.
3. During any stage of development, the applicant/company/landholder shall ensure that the natural drainage pattern, aquifer characteristics, and local recharge conditions are not disturbed. All precautions shall be taken to prevent any adverse impact on the groundwater regime.
4. The available groundwater shall be used strictly for drinking and domestic purposes only. For future infrastructure development, water requirements shall be met through tanker water/untreated raw water, so as to regulate and minimize groundwater extraction.
5. If, in the future, additional water is required for drinking or domestic purposes, the applicant shall obtain the required quantity from the local authority's water supply system, which shall be mandatory.
6. To ensure sustainable groundwater availability, Roof-Top Rainwater Harvesting measures on all existing and proposed groundwater sources shall be mandatory.
7. All rainwater harvesting structures shall be implemented under the technical guidance of this office (G.S.D.A. Pune) and shall be subject to periodic inspection and verification.
8. The applicant/firm shall regularly analyze the water quality of all existing sources at their own cost through a recognized water quality laboratory. For drinking purposes, only treated water shall be supplied to residents.
9. The topographical setting, hydrogeological formation, and rainfall pattern play a crucial role in meeting the drinking and domestic water demand. Therefore, the applicant shall ensure that

- groundwater recharge equivalent to the quantity of groundwater extracted from existing sources is mandatorily achieved through appropriate rainwater harvesting/recharge measures.
10. In view of sustainable water management, it is strongly recommended that a minimum of 70% of the extracted groundwater shall be recycled and reused for permissible secondary uses.
 11. During the scarcity period, the provisions of the Maharashtra Groundwater (Development and Management) Act, 2009 and its rules shall be strictly binding on the applicant.




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