

ATAL BHUJAL YOJANA (AtalJal)

State : HARYANA

**Department : IRRIGATION & WATER
RESOURCE DEPARTMENT**

BLOCK : SAMALKHA

DISTRICT : PANIPAT

YEAR : 2024-2025

*Towards partial fulfilment of requirements for Disbursement of
Incentive under DLI -1*

HYDROGEOLOGICAL REPORT

(YEAR: 2024-25)

STATE	:	HARYANA
DISTRICT	:	PANIPAT
BLOCK/TALUK	:	SAMALKHA
BLOCK/TALUK HQs	:	SAMALKHA

A	GENERAL INFORMATION				
1.	Geographical area (Ha)	:	22558.16		
2.	No. of Gram Panchayats	:	31		
3.	No. of towns	:	1		
4.	No. of villages	:	32		
5.	Population (2011)	:	Male	Female	Total
			73766	62412	136178
6	Rainfall (mm) (2023)	:	Monsoon	Non-monsoon	Annual
			360	252	611
7.	River basin	:	Yamuna river basin		
8.	Major soil types	:	Loamy to Sandy loamy in texture		

B	LAND USE (2023-24)			
1.	Forest area (Ha)	:	600	
2.	Cultivable area (Ha)	:	17849	
3.	Net sown area (Ha)	:	17849	
4.	Gross cropped area (Ha)	:	34065	

C	CROPPING PATTERN (As in 2023-24)					
1.	Major crops grown	:	Kharif	Rabi	Summer	Perennial
			Paddy	Wheat	NA	Sugar cane

D	IRRIGATION FACILITIES (As in 2023-24)						
1.	Net irrigated area (Ha)	:	17857				
2.	Gross irrigated area (Ha)	:	35714				
3.	Area under irrigation (Ha) (Source-wise)	:	DW	BW/TW	Tanks/Ponds	Canals	Others
			0	17849	0	0	0

E	GEOLOGY & HYDROGEOLOGY			
1.	Predominant rock type	:	Sand, Silt mixed with Kankar	
2.	Major geological formations	:	Older & Newer Alluvium	
3.	Important water-bearing formations	:	Sand & Silt mixed with Kankar at some places	
4.	Status of coverage under NAQUIM	:	Covered	

G	GROUND WATER QUALITY								
1	No. of wells used for Water Quality (WQ) monitoring.	Open Wells				BW/TW/ PZ			
		CGWB	SGWB	Atal Jal	Total	CGWB	SGWB	Atal Jal	Total
		0	0	0	0	6	13	29	48
2	Monitoring frequency	Agency	No. of times monitored/year						
		CGWB	1 time/year						
		SGWB	1 time/year						
		Atal Jal	1 time/year						
3	Period of water quality data availability	Agency	Period of WQ data availability (Years)						
		CGWB	2015 to 2024						
		SGWB	2020 to 2024						
		Atal Jal	2023 to 2024						
4	Parameters analysed	Agency	Parameters Analysed						
		CGWB	pH,EC,TH,Ca,Mg,Na,K,CO ₃ ,HCO ₃ , SO ₄ ,Cl,F,NO ₃						
		SGWB	EC						
		Atal Jal	pH,EC,TDS,TH,Ca,Mg,Na,K,CO ₃ ,HCO ₃ , SO ₄ ,Cl,F,NO ₃						
5	Known ground water quality issues, if any	No Such Issue							

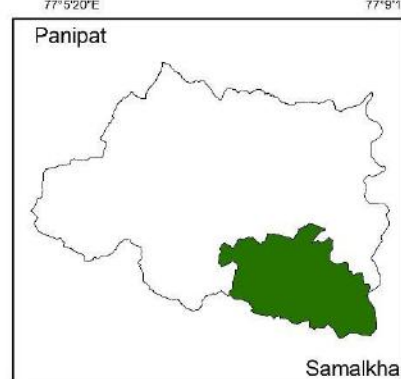
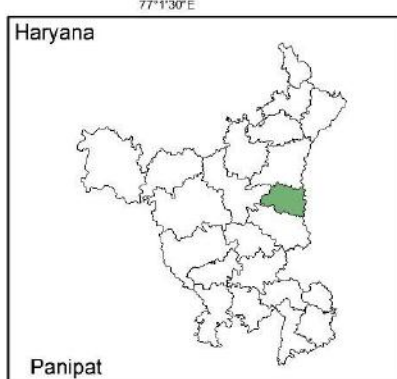
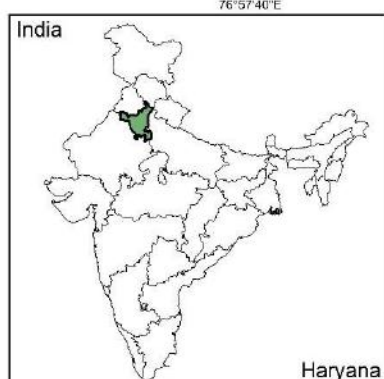
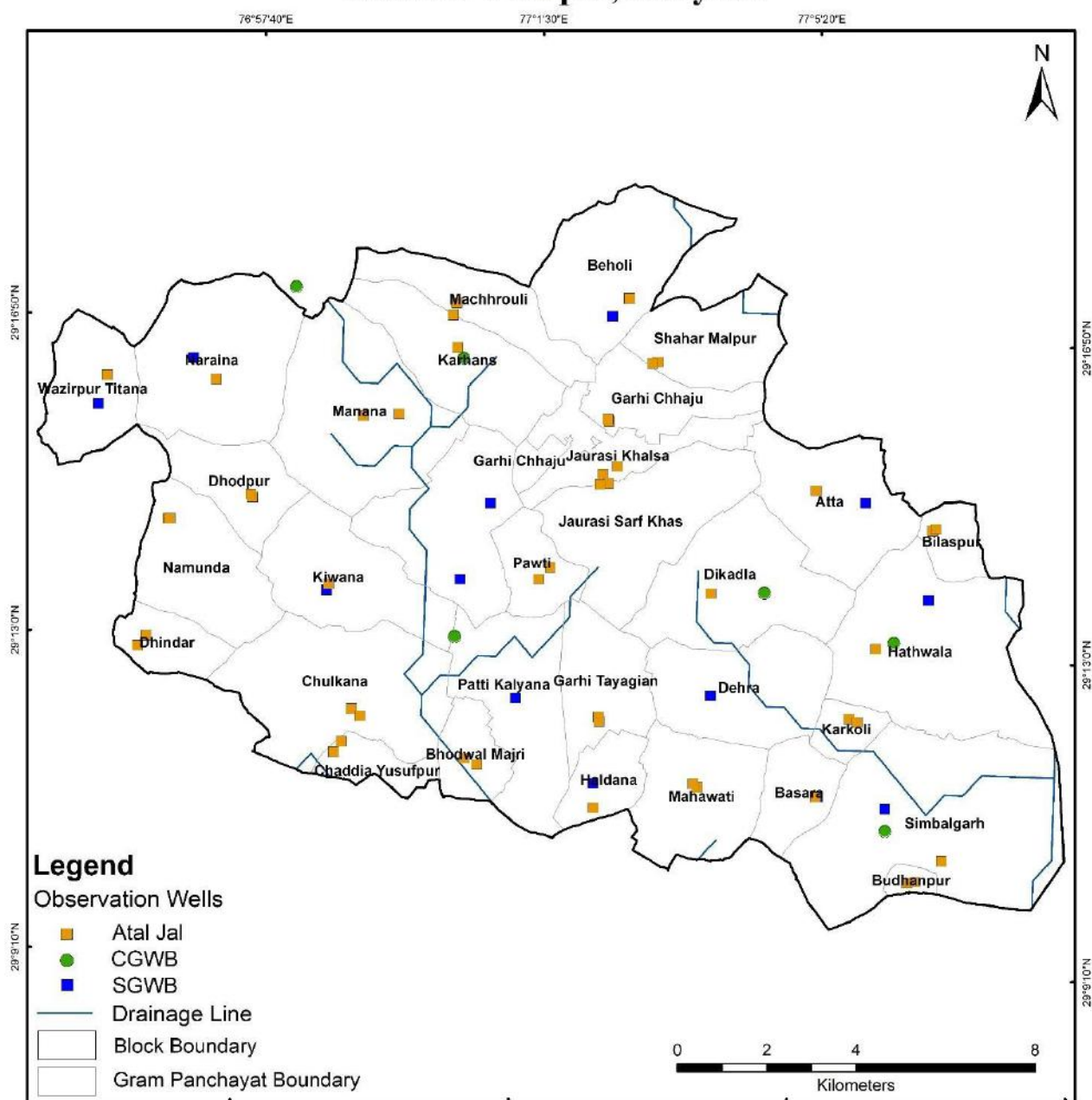
H. GROUND WATER RESOURCES								
1.	Latest assessment year	:	2023					
2.	Assessment Unit	:	Block					
3.	Annual extractable GW resource (ha.m)	:	2411.0					
4.	Current annual GW extraction (ha.m)	:	6019.0					
5.	Net GW availability for future use (ha.m)	:	0.0					
6.	Stage of GW extraction (%)	:	226.17 %					
7.	Category of block/taluk/(2023)	:	Over Exploited					
8.	Category of block/taluk/ in previous assessments		2023	2020	2017	2013	2011	2009
			Over Exploited	Over Exploited	Over Exploited	Over Exploited	Over Exploited	Over Exploited

I. WATER-RELATED SCHEMES				
1.	Schemes with a bearing on ground water, being implemented in the block / taluk.			
	Centrally Sponsored /Central Sector Schemes	i)	PMKSY	
		ii)	JJM	
		iii)	MGNREGA	
		iv)	RKVY	
		v)	NHP	
	State Schemes	vi)	NAQUIM	
		i)	State Plan Scheme (Head 2402)	
		ii)	MPMV	

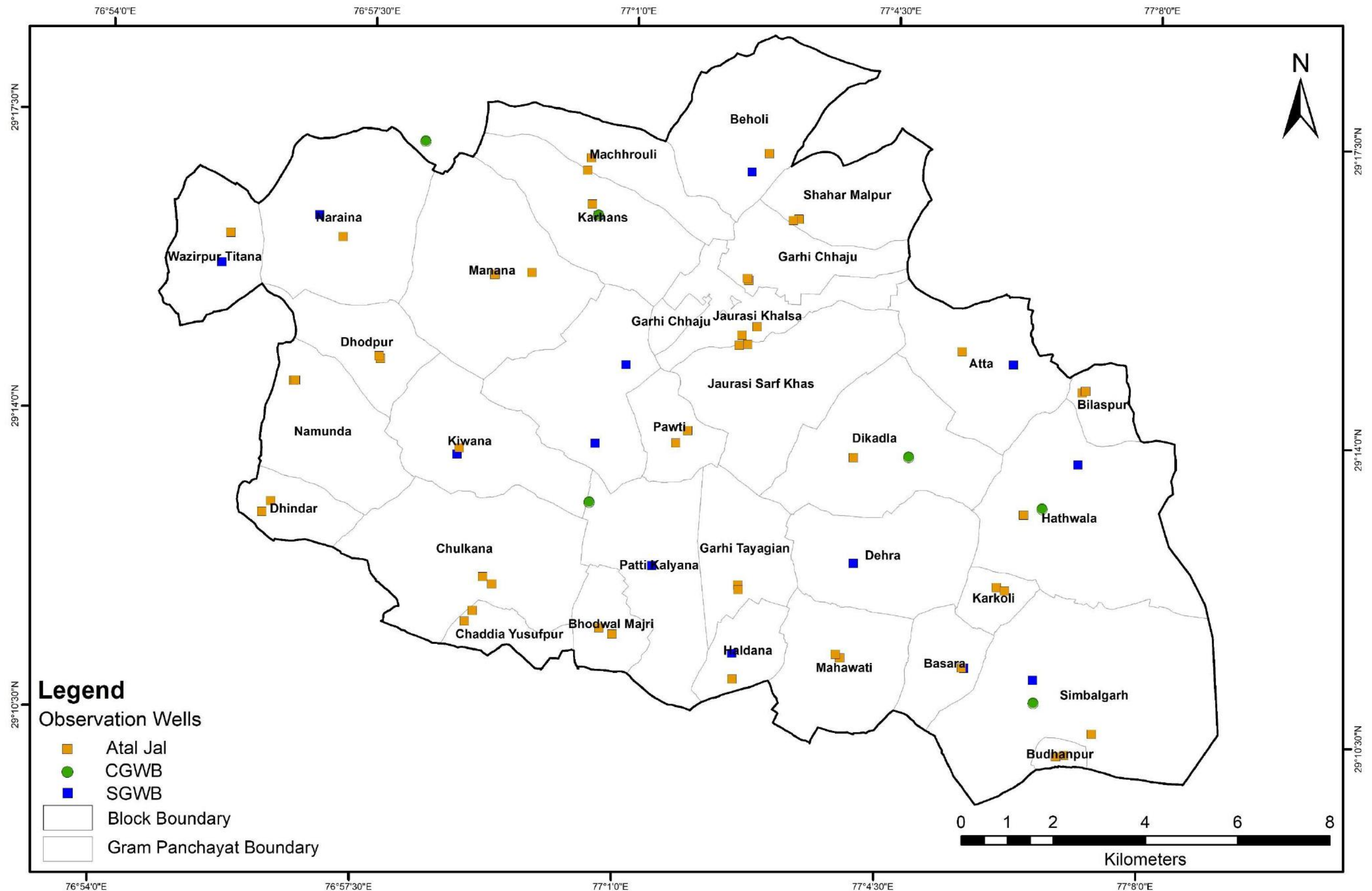
J. GROUND WATER RELATED ISSUES		
1.	Ground water related issues of the block/	
	i) Issues related to GW availability	: Block under Over Exploited Category & Showing declining water level trend in last decades.
	ii) Issues related to GW quality	: Ground water is alkaline in nature and is fresh to moderately saline with higher calcium and magnesium content in nature
	iii) Other issues if any.	: No

K. ANNEXURES	
I.	Basic data of observation wells – Attached
II.	Historical water level data – Attached
III.	Historical water quality data – Attached

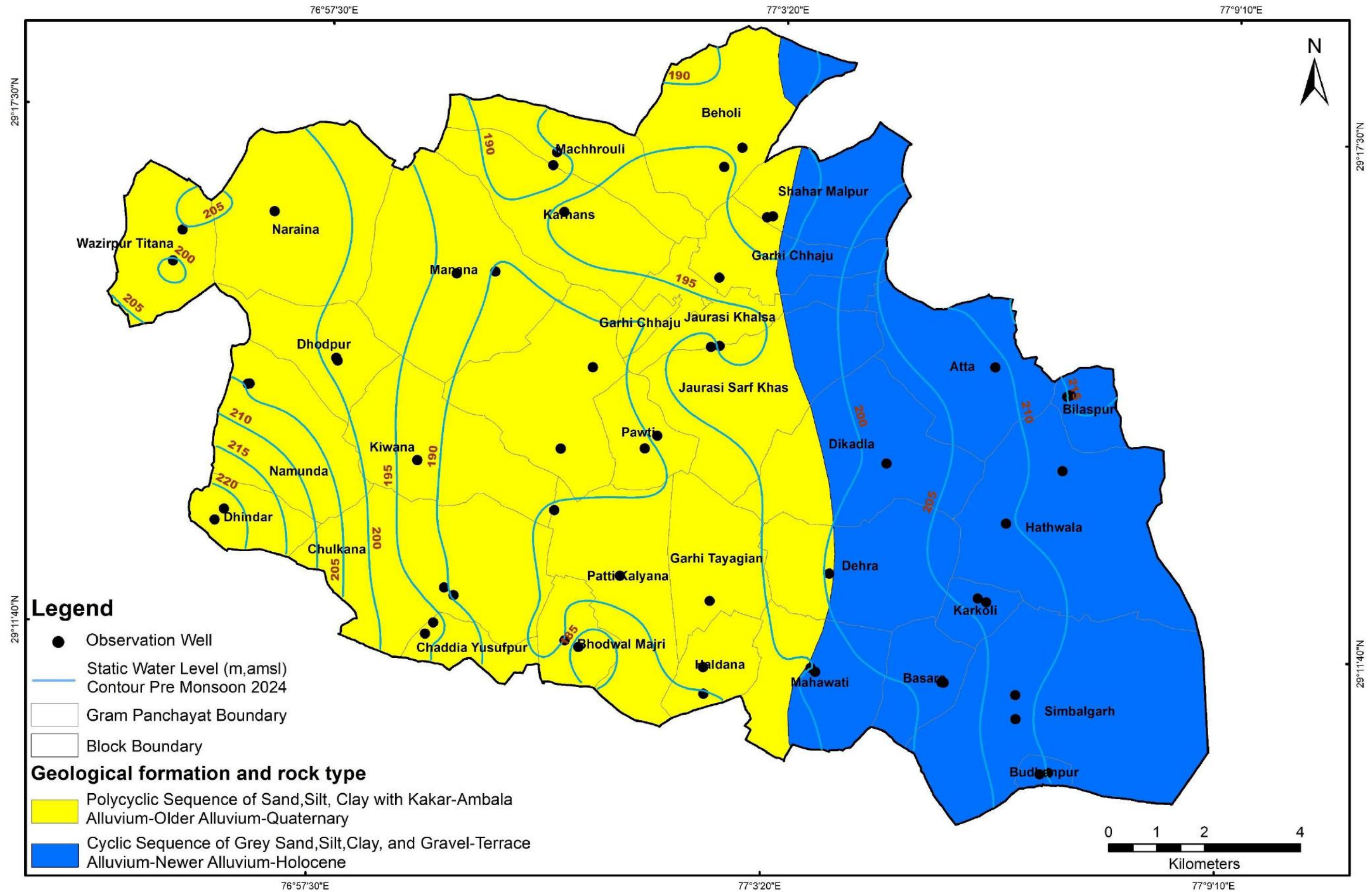
Location Map of Block-Samalkha, District- Panipat, Haryana



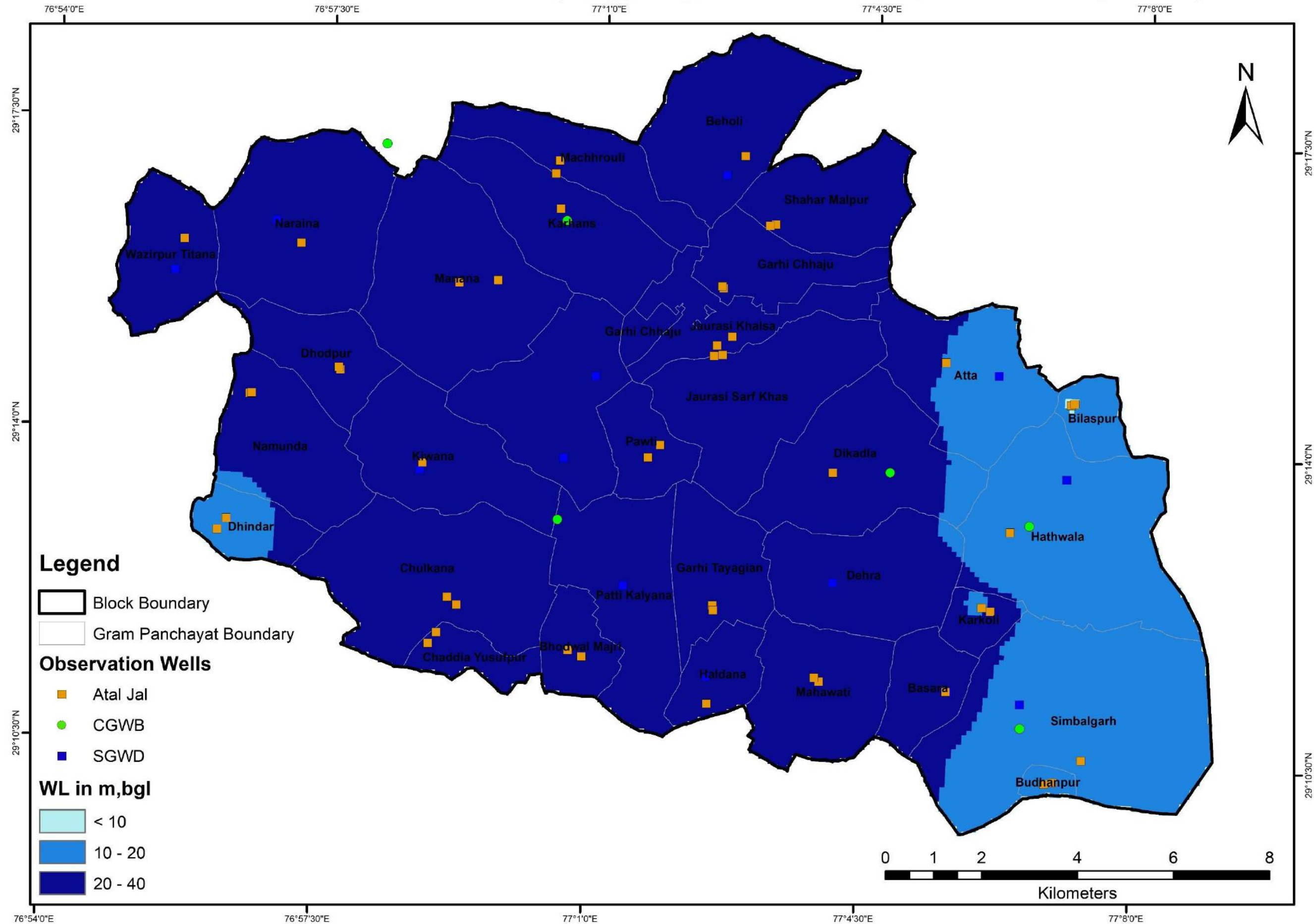
Location of Observation Wells for Monitoring Water Levels and Water Quality, Block- Samalkha, District- Panipat, Haryana



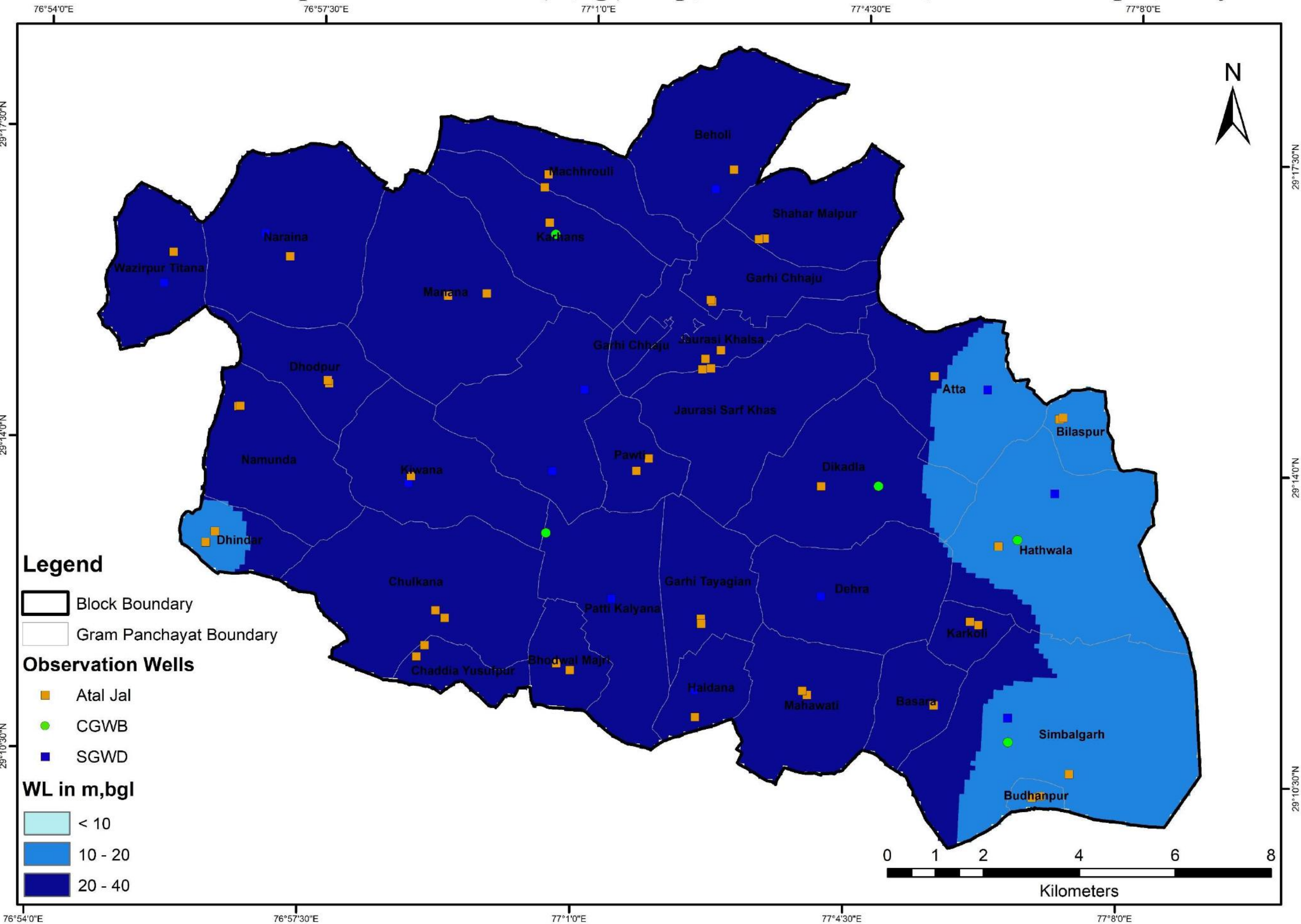
Hydrogeological Map, Block- Samalkha, District- Panipat, Haryana



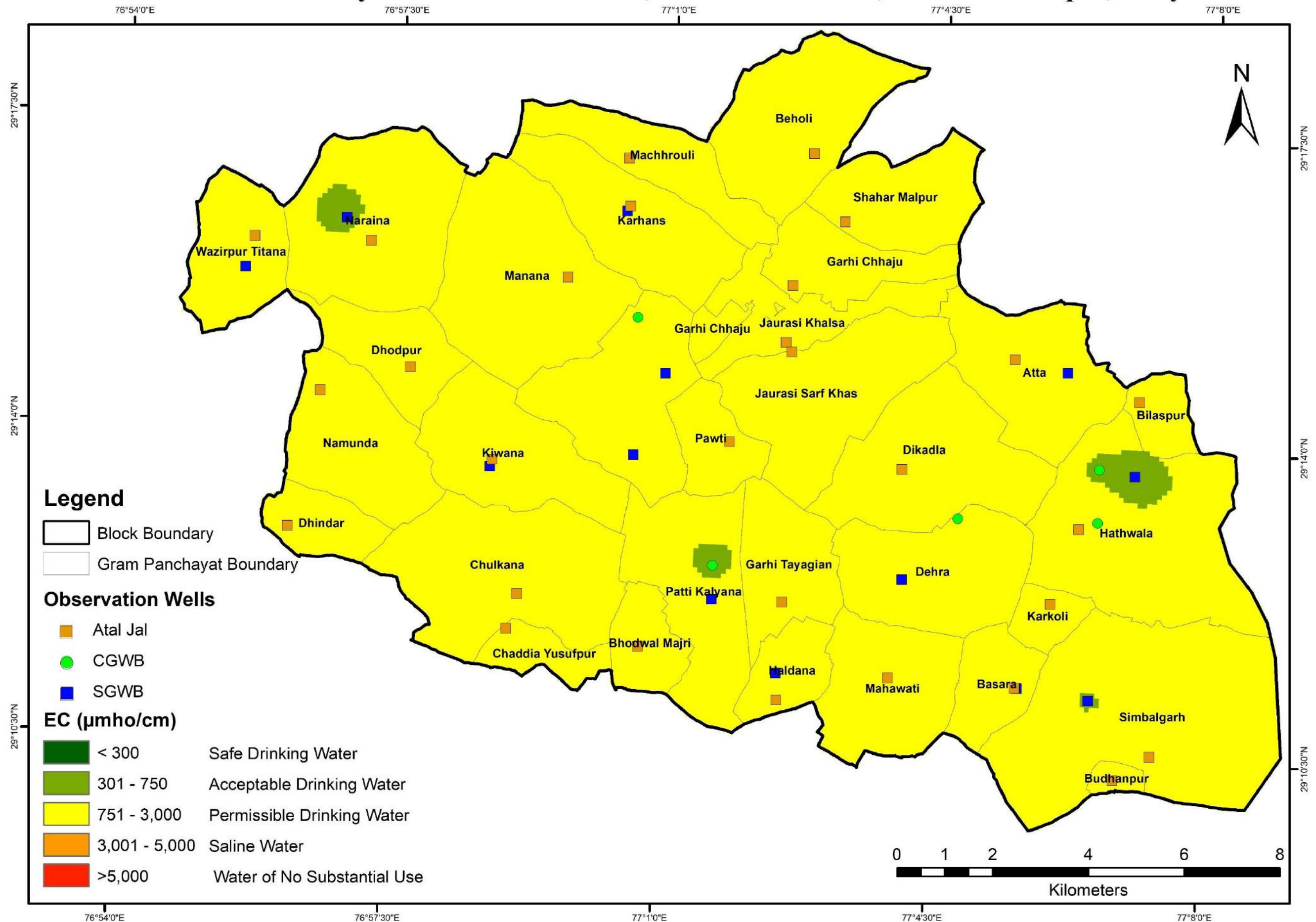
Pre Monsoon 2024 Depth to Water Level (m,bgl) Map, Block - Samalkha, District - Panipat, Haryana



Post Monsoon 2024 Depth to Water Level (m,bgl) Map, Block - Samalkha, District - Panipat, Haryana



Electrical Conductivity of Groundwater-2024, Block - Samalkha, District - Panipat, Haryana



ANNEXURE: 1
BASIC DATA OF MONITORING WELLS

State	Haryana			District	Panipat				Block	Samalkha					
S.No	Well ID	Gram Panchayat	Name of the village	Site Name	Latitude	Longitude	Type of Well	Reduced Level	Aquifer Type/Lithology	Height of Measuring (m, agl)	Depth (m,bgl)	Diameter (m)	Purpose of Monitoring (WL/WQ)	Monitoring Mechanism	Agency
1.	PAN_SAM_ATT_A_1	Atta_31999	Atta	Phe Tw	29.2503	77.0911	Tube Well	227	Unconfined to Semi-confined / Sand, Silt, Clay.	0.50	244	0.10	WQ	Manual	Atal Jal
2.	HR_GW_779	Basara_32000	Basara	Govt. Primary School, Basara	29.1885	77.0933	Piezometer	224	Unconfined to Semi-Confined	0.50	86	0.10	Both	Telemetric	Atal Jal
3.	HR_GW_780	Beholi_32001	Beholi	Govt. Girls Sr. Sec. School, Beholi	29.2877	77.0467	Piezometer	230	Unconfined to Semi-Confined	0.50	92	0.10	Both	Telemetric	Atal Jal
4.	HR_GW_781	Bhodwal Majri_32002	Bhodwal Majri	Govt. High School, Bhodwal Majri	29.1940	77.0123	Piezometer	228	Unconfined to Semi-Confined	0.50	88	0.10	Both	Telemetric	Atal Jal
5.	GWL-06-071-00535-00032002-001	Bhodwal Majri_32002	Bhodwal Majri	Phed Well	29.1928	77.0152	Tube Well	220	Unconfined to Semi-Confined	0.00	198	0.25	WL	Manual	Atal Jal-Private
6.	HR_GW_782	Bilaspur_32003	Bilaspur	Govt. Primary School, Bilaspur	29.2430	77.1182	Piezometer	223	Unconfined to Semi-Confined	0.50	81	0.10	Both	Telemetric	Atal Jal
7.	GWL-06-071-00535-00032003-001	Bilaspur_32003	Bilaspur	Bilaspur	29.2433	77.1189	Tube Well	228	Unconfined to Semi-Confined	0.00	91	0.30	WL	Manual	Atal Jal-Private
8.	HR_GW_783	Budhanpur_32004	Budhanpur	Govt. Primary School, Budhanpur	29.1718	77.1149	Piezometer	221	Unconfined to Semi-Confined	0.50	78	0.10	Both	Telemetric	Atal Jal
9.	GWL-06-071-00535-00032004-001	Budhanpur_32004	Budhanpur	Budhanpur	29.1721	77.1167	Tube Well	224	Unconfined to Semi-Confined	0.00	46	0.23	WL	Manual	Atal Jal-Private
10.	HR_GW_784	Chaddia Yusufpur_32005	Chaddia Yusufpur	Govt. Primary School, Chaddia Yusufpur	29.1965	76.9840	Piezometer	230	Unconfined to Semi-Confined	0.50	96	0.10	Both	Telemetric	Atal Jal
11.	GWL-06-071-00535-00032005-001	Chaddia Yusufpur_32005	Chaddia Yusufpur	Chaddia Yusufur	29.1944	76.9823	Tube Well	229	Unconfined to Semi-Confined	0.00	305	0.24	WL	Manual	Atal Jal-Private
12.	HR_GW_785	Chulkana_32006	Chulkana	Govt. Girls Sr. Sec. School In Front Stadium, Chulkana	29.2032	76.9860	Piezometer	227	Unconfined to Semi-Confined	0.50	92	0.10	Both	Telemetric	Atal Jal
13.	GWL-06-071-00535-00032006-001	Chulkana_32006	Chulkana	Chulkana	29.2018	76.9881	Tube Well	227	Unconfined to Semi-Confined	0.60	305	0.30	WL	Manual	Atal Jal-Private
14.	HR_GW_786	Dhindar_32008	Dhindar	Govt. Middle School, Dhindar	29.2145	76.9364	Piezometer	236	Unconfined to Semi-Confined	0.50	69	0.10	Both	Telemetric	Atal Jal
15.	GWL-06-071-00535-00032008-001	Dhindar_32008	Dindhar	Dindhar	29.2166	76.9383	Tube Well	236	Unconfined to Semi-Confined	0.91	151	0.30	WL	Manual	Atal Jal-Private
16.	HR_GW_787	Dhodpur_32010	Dhodpur	Community Centre, Dhodpur	29.2451	76.9616	Piezometer	230	Unconfined to Semi-Confined	0.50	96	0.10	Both	Telemetric	Atal Jal
17.	GWL-06-071-00535-00032010-001	Dhodpur_32010	Dhodpur	Farmer Tuble	29.2457	76.9613	Tube Well	231	Unconfined to Semi-Confined	0.15	91	0.22	WL	Manual	Atal Jal-Private
18.	PAN_SAM_DIK_1	Dikadla_32009	Dikadla	Phe Tw	29.2289	77.0677	Tube Well	228	Unconfined to Semi-confined / Sand, Silt, Clay.	0.45	305	0.30	WQ	Manual	Atal Jal

S.No	Well ID	Gram Panchayat	Name of the village	Site Name	Latitude	Longitude	Type of Well	Reduced Level	Aquifer Type/Lithology	Height of Measuring (m, agl)	Depth (m,bgl)	Diameter (m)	Purpose of Monitoring (WL/WQ)	Monitoring Mechanism	Agency
19.	GWL-06-071-00535-00032011-001	Garhi Chhaju_32011	Garhi Chajju	Garhi Chajju	29.2632	77.0427	Tube Well	226	Unconfined to Semi-Confined	0.00	305	0.30	WL	Manual	Atal Jal-Private
20.	PAN_SAM_GAR_CHH_1	Garhi Chhaju_32011	Garhi Chhaju	Phe Tw	29.2628	77.0430	Tube Well	231	Unconfined to Semi-confined / Sand, Silt, Clay.	0.00	213	0.30	WQ	Manual	Atal Jal
21.	GWL-06-071-00535-00245447-001	Garhi Tayagian_245447	Garhi Tayagian	Garhi Tayagian	29.2023	77.0430	Bore Well	227	Unconfined to Semi-Confined	0.60	138	0.30	WL	Manual	Atal Jal-Private
22.	PAN_SAM_GAR_TAY_1	Garhi Tayagian_245447	Garhi Tayagian	Phe Tw	29.2033	77.0429	Tube Well	225	Unconfined to Semi-confined / Sand, Silt, Clay.	0.60	366	0.30	WQ	Manual	Atal Jal
23.	HR_GW_788	Haldana_32012	Haldana	Govt. Middle School, Haldana	29.1848	77.0423	Piezometer	226	Unconfined to Semi-Confined	0.50	85	0.10	Both	Telemetric	Atal Jal
24.	HR_GW_789	Hathwala_32013	Hathwala	Gram Panchayat Stadium, Hathwala	29.2187	77.1060	Piezometer	226	Unconfined to Semi-Confined	0.50	92	0.10	Both	Telemetric	Atal Jal
25.	GWL-06-071-00535-00032014-001	Jaurasi Khalsa_32014	Jaurasi Khalsa	Jaurasi Khalsa	29.2538	77.0453	Tube Well	230	Unconfined to Semi-Confined	0.91	244	0.30	WL	Manual	Atal Jal-Private
26.	PAN_SAM_JAU_KHA_1	Jaurasi Khalsa_32014	Jaurasi Khalsa	Phe Tw	29.2521	77.0420	Tube Well	224	Unconfined to Semi-confined / Sand, Silt, Clay.	0.71	366	0.20	WQ	Manual	Atal Jal
27.	HR_GW_790	Jaurasi Sarf Khas_32015	Jaurasi Khalsa	Govt. Girls High School, Jaurasi Khalsa	29.2503	77.0433	Piezometer	228	Unconfined to Semi-Confined	0.50	90	0.10	Both	Telemetric	Atal Jal
28.	GWL-06-071-00535-00032015-001	Jaurasi Sarf Khas_32015	Jurasi Saraf Khas	Jurasi Saraf Khas	29.2501	77.0414	Bore Well	232	Unconfined to Semi-Confined	0.00	212	0.30	WL	Manual	Atal Jal-Private
29.	PAN_SAM_KARH_1	Karhans_32016	Karhans	Phe Tw	29.2767	77.0076	Tube Well	236	Unconfined to Semi-confined / Sand, Silt, Clay.	0.00	305	0.30	WQ	Manual	Atal Jal
30.	HR_GW_796	Karkoli_32017	Karkoli	Shamshan Ghat, Karkoli	29.2045	77.1004	Piezometer	225	Unconfined to Semi-Confined	0.50	98	0.10	Both	Telemetric	Atal Jal
31.	GWL-06-071-00535-00032017-001	Karkoli_32017	Karkoli	Karkoli	29.2038	77.1023	Tube Well	227	Unconfined to Semi-Confined	0.00	244	0.30	WL	Manual	Atal Jal-Private
32.	PAN_SAM_KIW_1	Kiwana_32018	Kiwana	Phe Tw	29.2282	76.9798	Tube Well	230	Unconfined to Semi-confined / Sand, Silt, Clay.	0.40	60	0.10	WQ	Manual	Atal Jal
33.	HR_GW_791	Machhrouli_32019	Machhrouli	Govt. Sr. Sec. School, Machhrouli	29.2857	77.0070	Piezometer	236	Unconfined to Semi-Confined	0.50	76	0.10	Both	Telemetric	Atal Jal
34.	GWL-06-071-00535-00032019-001	Machhrouli_32019	Machhroli	Near Samshan	29.2832	77.0064	Tube Well	233	Unconfined to Semi-Confined	0.00	152	0.30	WL	Manual	Atal Jal-Private
35.	HR_GW_795	Mahawati_32020	Mahawati	Govt. Sr. Sec. School, Mahawati	29.1897	77.0661	Piezometer	230	Unconfined to Semi-Confined	0.50	74	0.10	Both	Telemetric	Atal Jal
36.	GWL-06-071-00535-00032020-001	Mahawati_32020	Mahawati	Gsss	29.1904	77.0651	Bore Well	227	Unconfined to Semi-Confined	0.00	69	0.30	WL	Manual	Atal Jal-Private
37.	HR_GW_792	Manana_32021	Manana	Govt. Girls Sr. Sec. School In Front Stadium, Manana	29.2629	76.9947	Piezometer	225	Unconfined to Semi-Confined	0.50	71	0.10	Both	Telemetric	Atal Jal
38.	GWL-06-071-00535-00032021-001	Manana_32021	Manana	Jal Ghar No. 3	29.2623	76.9864	Tube Well	230	Unconfined to Semi-Confined	0.76	366	0.30	WL	Manual	Atal Jal-Private

S.No	Well ID	Gram Panchayat	Name of the village	Site Name	Latitude	Longitude	Type of Well	Reduced Level	Aquifer Type/Lithology	Height of Measuring (m, agl)	Depth (m,bgl)	Diameter (m)	Purpose of Monitoring (WL/WQ)	Monitoring Mechanism	Agency
39.	HR_GW_797	Namunda_32022	Namunda	Govt. Sr. Sec. School, Namunda	29.2402	76.9424	Piezometer	230	Unconfined to Semi-Confined	0.50	64	0.10	Both	Telemetric	Atal Jal
40.	PAN_SAM_NAR_1	Naraina_32023	Naraina	Phe Tw	29.2687	76.9524	Tube Well	234	Unconfined to Semi-confined / Sand, Silt, Clay.	0.00	244	0.30	WQ	Manual	Atal Jal
41.	HR_GW_793	Pawti_32025	Pawti	Govt. Sr. Sec. School, Pawti	29.2330	77.0306	Piezometer	228	Unconfined to Semi-Confined	0.50	63	0.10	Both	Telemetric	Atal Jal
42.	GWL-06-071-00535-00032025-001	Pawti_32025	Pawati	Phed Tubewell-03	29.2306	77.0280	Tube Well	227	Unconfined to Semi-Confined	0.00	244	0.30	WL	Manual	Atal Jal-Private
43.	HR_GW_798	Shahar Malpur_32027	Shahar Malpur	Govt. Middle School, Shahar Malpur	29.2751	77.0538	Piezometer	229	Unconfined to Semi-Confined	0.50	68	0.10	Both	Telemetric	Atal Jal
44.	GWL-06-071-00535-00032027-001	Shahar Malpur_32027	Shahar Malpur	Phed Tubewell-01	29.2748	77.0526	Tube Well	227	Unconfined to Semi-Confined	0.00	76	0.30	WL	Manual	Atal Jal-Private
45.	PAN_SAM_SIM_1	Simbalgarh_264991	Simbalgarh	Phe Tw	29.1764	77.1227	Tube Well	225	Unconfined to Semi-confined / Sand, Silt, Clay.	0.00	122	0.23	WQ	Manual	Atal Jal
46.	HR_GW_794	Wazirpur Titana_32028	WAZIRPUR TITANA	Govt. Sr. Sec. School, Wazirpur Titana	29.2687	76.9274	Piezometer	236	Unconfined to Semi-confined	0.50	68	0.10	Both	Telemetric	Atal Jal
47.	W291325077040002	Dikadla_32009	Dakadla S	Dakadla S	29.2292	77.0799	Piezometer	224	Unconfined to Semi Confined	1.13	85	0.10	Both	Manual	CGWB
48.	W282210076514501	Hathwala_32013	Bilaspur	Bilaspur	29.2300	77.1100	Tube Well	226	Alluvium	0.25	97	0.20	Both	Manual	CGWB
49.	W291335077070501	Hathwala_32013	Hathwale	Hathwale	29.2200	77.1100	Tube Well	228	Alluvium	0.25	97	0.20	WQ	Manual	CGWB
50.	W291521077003601	Karhans_32016	Karhansh Pzm	Karhansh Pz	29.2745	77.0090	Piezometer	235	Unconfined to Semi Confined	1.00	87	0.15	Both	Manual	CGWB
51.	W291235077014001	Patti Kalyana_32024	Patti Kalyana M	Patti Kalyana M	29.2184	77.0091	Piezometer	226	Unconfined to Semi Confined	1.85	187	0.10	Both	Manual	CGWB
52.	W291235077014002	Patti Kalyana_32024	Patti Kalyana S	Patti Kalyana S	29.2184	77.0091	Piezometer	226.7	Unconfined to Semi Confined	1.95	68	0.10	WL	Manual	CGWB
53.	W291118077062501	Simbalgarh_264991	Rakshera	Rakshera-Pz	29.1821	77.1094	Piezometer	224	Unconfined to Semi Confined	0.50	432	0.10	WL	Manual	CGWB
54.	Kha_29.287_76.97	Khallilshahlalpur	Khallilshahlalpur	Khallilshahlalpur	29.2878	76.9700	Hand Pump	236	Alluvium	0.83	NA	0.12	WQ	Manual	CGWB
55.	At_29.2481_77.1026	Atta_31999	Atta	Govt Sr. Sec School Atta	29.2481	77.1026	Piezometer	227.38	Unconfined to Semi Confined	0.65	60	0.10	WL	Manual	SGWD
56.	Ba_29.1885_77.0937	Basara_32000	Bashera	Dehra To Rakshera Road	29.1885	77.0937	Tube Well	222.7	Unconfined to Semi Confined	0.70	90	0.25	WL	Manual	SGWD
57.	Bi_29_284_77.043	Beholi_32001	Biholi	Bapoli To Smalakha Road	29.2840	77.0430	Tube Well	235	Unconfined to Semi Confined	0.25	100	0.20	WL	Manual	SGWD
58.	De_29.2082_77.0684	Dehra_32007	Dehra	Govt. Primary School	29.2082	77.0684	Tube Well	222.85	Unconfined to Semi Confined	0.70	70	0.25	WL	Manual	SGWD
59.	Ha_29.1899_77.042	Haldana_32012	Haldana	In West Of Village	29.1899	77.0420	Tube Well	224.6	Unconfined to Semi Confined	0.70	80	0.25	WL	Manual	SGWD

S.No	Well ID	Gram Panchayat	Name of the village	Site Name	Latitude	Longitude	Type of Well	Reduced Level	Aquifer Type/Lithology	Height of Measuring (m, agl)	Depth (m,bgl)	Diameter (m)	Purpose of Monitoring (WL/WQ)	Monitoring Mechanism	Agency
60.	Ha_29.2289_77.1177	Hathwala_32013	Hathwala	Near Veternary Hospital.	29.2289	77.1177	Piezometer	227	Unconfined to Semi Confined	0.65	90	0.10	WL	Manual	SGWD
61.	Ka_29_275_777.007	Karhans_32016	Karhans	Govt. Middle School.	29.2745	77.0090	Tube Well	227.3	Unconfined to Semi Confined	0.70	110	0.25	WL	Manual	SGWD
62.	Ki_29.2269_76.9794	Kiwana_32018	Kiwana	Govt. Primary School.	29.2269	76.9794	Piezometer	227.83	Unconfined to Semi Confined	0.65	60	0.10	WL	Manual	SGWD
63.	Na_29.2728_76.947	Naraina_32023	Naryana	Near Govt. School.	29.2728	76.9470	Tube Well	233.4	Unconfined to Semi Confined	0.70	90	0.25	WL	Manual	SGWD
64.	Pa_29.2065_77.0236	Patti Kalyana_32024	Pattikalyana	In The Primary School.	29.2065	77.0236	Tube Well	224.3	Unconfined to Semi Confined	0.70	100	0.25	WL	Manual	SGWD
65.	Ra_29.1865_77.1092	Simbalgarh_264991	Rakshera	North Of Village On Yamuna Side	29.1865	77.1092	Tube Well	225.5	Unconfined to Semi Confined	0.70	100	0.25	WL	Manual	SGWD
66.	Wa_29.2629_76.9256	Wazirpur Titana_32028	Wazirpurtitana	East Of Village On Road Just Enter To Village.	29.2629	76.9256	Tube Well	227.72	Unconfined to Semi Confined	0.70	80	0.25	WL	Manual	SGWD
67.	Bh_29.2455_77.0163	Bhapura	Bhapura	Samalkha To Biholi Road	29.2455	77.0163	Tube Well	231.37	Unconfined to Semi Confined	0.70	90	0.25	WL	Manual	SGWD
68.	Sa_29.23_77.01	Samalkha	Samalkha	B.D.P.O. Office.	29.2300	77.0100	Piezometer	230.31	Unconfined to Semi Confined	0.65	60	0.10	WL	Manual	SGWD

ANNEXURE: 2
WATER LEVEL (WL) DATA OF MONITORING WELLS

State	Haryana	District	Panipat	Block	Samalkha
Month of Pre-monsoon Water Level Measurement					May/June
Month of Post-monsoon water Level measurement					October/November

S.No.	Observation Point	Source	Well Types	Co-ordinate		Water Level (m)																				
				Latitude	Longitude	2015		2016		2017		2018		2019		2020		2021		2022		2023		2024		
						Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	
1	Wazirpur Titana_32028	Atal Jal	Piezometer	29.2687	76.9274	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.53	34.48	31.43	37.26	
2	Basara_32000	Atal Jal	Piezometer	29.1885	77.0933	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	22.71	24.7	
3	Beholi_32001	Atal Jal	Piezometer	29.2877	77.0467	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36.56	39.9	
4	Bhodwal Majri_32002	Atal Jal	Piezometer	29.1940	77.0123	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	37.22	41.2	
5	Bhodwal Majri_32002	Atal Jal	Tube Well	29.1928	77.0152	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.98	36.82	37.88	40.66
6	Bilaspur_32003	Atal Jal	Piezometer	29.2430	77.1182	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.81	10.95
7	Bilaspur_32003	Atal Jal	Tube Well	29.2433	77.1189	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.31	10.27	9.98	11.08
8	Budhanpur_32004	Atal Jal	Piezometer	29.1718	77.1149	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	13.1	14.6
9	Budhanpur_32004	Atal Jal	Tube Well	29.1721	77.1167	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10.05	14.77	13.27	14.98
10	Chaddia Yusufpur_32005	Atal Jal	Piezometer	29.1965	76.9840	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.04	37.94
11	Chaddia Yusufpur_32005	Atal Jal	Tube Well	29.1944	76.9823	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.32	38.04	33.47	37.51
12	Chulkana_32006	Atal Jal	Piezometer	29.2032	76.9860	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36.1	40.95
13	Chulkana_32006	Atal Jal	Tube Well	29.2018	76.9881	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	38.6	41.64	37.41	40.83
14	Dhindar_32008	Atal Jal	Piezometer	29.2145	76.9364	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	14.03	15.6
15	Dhindar_32008	Atal Jal	Tube Well	29.2166	76.9383	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	17.64	17.94	14.37	16.94
16	Dhodpur_32010	Atal Jal	Piezometer	29.2451	76.9616	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30.62	34.87
17	Dhodpur_32010	Atal Jal	Tube Well	29.2457	76.9613	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.35	34.2	31.57	34.68
18	Garhi Chhaju_32011	Atal Jal	Tube Well	29.2632	77.0427	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.3	35.1	33.17	37.33
19	Garhi Tayagian_245447	Atal Jal	Bore Well	29.2023	77.0430	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	38.42	40.9	35.22	38.42
20	Haldana_32012	Atal Jal	Piezometer	29.1848	77.0423	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36.27	40.6
21	Hathwala_32013	Atal Jal	Piezometer	29.2187	77.1060	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16.23	17.9
22	Jaurasi Khalsa_32014	Atal Jal	Tube Well	29.2538	77.0453	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32	36.42	Dry	38.51
23	Jaurasi Sarf Khas_32015	Atal Jal	Piezometer	29.2503	77.0433	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.53	39.25
24	Jaurasi Sarf Khas_32015	Atal Jal	Bore Well	29.2501	77.0414	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.05	36.97	33.27	37.72
25	Karkoli_32017	Atal Jal	Piezometer	29.2045	77.1004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	19.18	21.45
26	Karkoli_32017	Atal Jal	Tube Well	29.2038	77.1023	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	19.92	22.19	21.29	21.65
27	Machhrouli_32019	Atal Jal	Piezometer	29.2857	77.0070	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	45.72	48.76
28	Machhrouli_32019	Atal Jal	Tube Well	29.2832	77.0064	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	44.19	45.86	46.69	48.27
29	Mahawati_32020	Atal Jal	Piezometer	29.1897	77.0661	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.41	34.8
30	Mahawati_32020	Atal Jal	Bore Well	29.1904	77.0651	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.58	34.51	32.34	35.38
31	Manana_32021	Atal Jal	Piezometer	29.2629	76.9947	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.22	37.1
32	Manana_32021	Atal Jal	Tube Well	29.2623	76.9864	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	47.8	41.66	36.72	37.88
33	Namunda_32022	Atal Jal	Piezometer	29.2403	76.9428	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21.75	23.7	25.11	31
34	Pawti_32025	Atal Jal	Piezometer	29.2330	77.0306	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	37.12	39.1
35	Pawti_32025	Atal Jal	Tube Well	29.2306	77.0280	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36.7	37.22	37.92	38.97
36	Shahar Malpur_32027	Atal Jal	Piezometer	29.2751	77.0538	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.84	40.04
37	Shahar Malpur_32027	Atal Jal	Tube Well	29.2748	77.0526	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	37.84	38.33	36.09	40.32
38	Dikadla_32009	CGWB	Piezometer	29.2292	77.0799	20.6	NA	24.45	NA	23.72	25.42	24.42	26.28	24.47	23.77	24.87	NA	25.17	NA	25.09	27.7	NA	27.7	25	27.64	
39	Karhans_32016	CGWB	Piezometer	29.2745	77.0090	34.94	34.1	33.1	35	34.16	35.88	36.1	37.34	NA	NA	NA	NA	41.36	41.36	41.08	NA	NA	NA	NA	NA	

S.No.	Observation Point	Source	Well Types	Co-ordinate		Water Level (m)																			
				Latitude	Longitude	2015		2016		2017		2018		2019		2020		2021		2022		2023		2024	
						Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
40	Patti Kalyana_32024	CGWB	Piezometer	29.2184	77.0091	29.08	31.34	30.66	NA	32.1	34.25	34.5	35.56	37.47	38.66	39.3	35.01	35.45	36.65	33.95	37.7	38.52	37.03	36.65	38.09
41	Patti Kalyana_32024	CGWB	Piezometer	29.2184	77.0091	32.94	32.72	29.45	33.25	34	34.3	NA	35.97	33.62	NA	36.15	35.02	34.32	38.85	33.95	37.7	38.36	38.06	36.3	37.89
42	Simbalgarh_264991	CGWB	Piezometer	29.1821	77.1094	13.16	13.6	15.42	NA	14.83	15.83	16.97	16.09	18.31	17.85	19.41	18.71	18.71	17.86	17.55	16.19	16.15	14.84	15.35	15.98
43	Atta_31999	SGWD	Piezometer	29.2481	77.1026	16.01	16.44	17.35	16.99	17.58	16.79	18.73	18.35	17.78	19.3	17.11	18.95	17.5	17.5	18.4	17.41	17.4	17.52	17.82	18.56
44	Basara_32000	SGWD	Tube Well	29.1885	77.0937	20.89	21.54	21.88	21.64	22.77	22.1	24.23	25.2	25.27	22.31	23.77	23.15	24.01	23.3	24.05	24.12	21.9	23.3	22.46	22.86
45	Beholi_32001	SGWD	Tube Well	29.2840	77.0430	32.04	31.12	33.54	33.15	34.01	33.1	35.18	33.5	37.08	36.37	15.85	17.32	37.65	36.12	39.64	38.48	37.5	39	39	39.09
46	Dehra_32007	SGWD	Tube Well	29.2082	77.0684	25.91	26.83	27.87	25.91	27.35	26.94	29.2	30.15	30.01	NA	NA	NA	28.65	28.45	27.6	27.59	26.5	26.53	26.52	27.15
47	Haldana_32012	SGWD	Tube Well	29.1899	77.0420	31.02	32.34	33.23	32.05	33.76	33.25	34.89	34.1	35.88	37.05	35.71	37.59	35.93	35.76	35.08	35.83	36.76	35.75	35.8	36.48
48	Hathwala_32013	SGWD	Piezometer	29.2289	77.1177	13.77	14.37	15.19	14.75	15.51	14.83	16.06	16.78	18.04	13.85	11.34	12.9	11.65	11.65	13.57	13.38	14.79	11.65	16.73	18.22
49	Karhans_32016	SGWD	Tube Well	29.2745	77.0090	34.93	35.63	35.16	34.37	36.25	35.74	37.82	38.65	39.38	NA	NA	NA	41.36	41.36	41.08	41.44	41.38	41.36	38.12	40.36
50	Kiwana_32018	SGWD	Piezometer	29.2269	76.9794	28.37	35.56	29.54	29.13	30.22	30.49	31.35	32.25	34.36	30.6	35.35	34.47	36.6	36.6	37	39.08	36.03	36.13	37.83	38.02
51	Naraina_32023	SGWD	Tube Well	29.2728	76.9470	17.97	18.77	19.26	18.92	19.77	20.17	21.36	20.7	21.7	23.05	NA	NA	27.7	28.2	26.95	27.18	28.8	29	30.78	31.57
52	Patti Kalyana_32024	SGWD	Tube Well	29.2065	77.0236	31.46	32.41	33.05	32.86	33.36	32.87	34.63	35.65	36.2	37.65	NA	NA	35.75	33.75	34.3	34.49	33.05	32.53	31.21	30.8
53	Simbalgarh_264991	SGWD	Tube Well	29.1865	77.1092	13.16	13.6	14.57	14.83	15.6	14.98	16.97	16.09	18.31	17.85	18.56	18.71	18.71	17.86	17.55	17.26	18.86	17.87	18.73	17.87
54	Wazirpur Titana_32028	SGWD	Tube Well	29.2629	76.9256	19.29	19.85	20.51	20.62	21.23	20.76	22.35	24.05	24.57	25.33	NA	NA	25.81	25.81	25.2	25.44	26.81	25.81	32.31	36.04
55	Bhapura	SGWD	Tube Well	29.2455	77.0163	32.91	29.07	34.31	33.88	34.84	35.27	35.98	36	36.43	35.75	NA	NA	37.4	37.4	37.75	37.82	37.4	37.5	37.76	37.53
56	Samalkha	SGWD	Piezometer	29.2300	77.0100	32.88	34.64	33.5	36.37	35.48	35.9	36.78	38.95	34.75	36.7	34.88	36.83	35.38	36.12	36.48	37.81	36.88	37.02	38.15	37.16

ANNEXURE: 3
HISTORICAL WATER QUALITY (WQ) DATA OF MONITORING WELLS

State	Haryana	District	Panipat	Block	Samalkha														
Month of Collection of sample for WQ monitoring*															May/June				
Gram Panchayat	Source	Type of well	Latitude	Longitude	Year	pH	EC	TDS	TH	Ca	Mg	Na	K	CO ₃	HCO ₃	SO ₄	Cl	F	NO ₃
Atta_31999	Atal Jal	Tubewell	29.2503	77.0911	2024	5.83	797	444	200.2	56.11	14.58	72	5	0.011	180	109	55.59	0.41	23.5
Basara_32000	Atal Jal	Pizeometer	29.1885	77.0933	2024	8.05	1332	785	360.3	96.19	29.17	127	8	3.375	316.6	174.2	99.26	0.72	39.75
Beholi_32001	Atal Jal	Pizeometer	29.2877	77.0467	2024	7.88	996	551	250.2	68.13	19.45	89	6	1.569	218.4	128.1	69.48	0.5	28.75
Bhodwal Majri_32002	Atal Jal	Pizeometer	29.194	77.0123	2024	8.32	1200	666	300.2	80.16	24.3	107	7	5.303	264.7	158.7	83.38	0.61	34.25
Bilaspur_32003	Atal Jal	Pizeometer	29.243	77.1182	2024	7.31	1274	747	340.3	92.18	26.74	120	8	0.576	299.4	165.3	93.3	0.68	38
Budhanpur_32004	Atal Jal	Pizeometer	29.1718	77.1149	2024	7.58	1250	766	350.3	92.18	29.17	124	8	1.108	308.9	163.4	97.27	0.7	38.75
Chaddia Yusufpur_32005	Atal Jal	Pizeometer	29.1965	76.984	2024	8.41	1225	771	350.3	92.18	29.17	124	8	7.49	302.6	163.8	97.27	0.71	39
Chulkana_32006	Atal Jal	Pizeometer	29.2032	76.986	2024	8.27	1343	870	390.3	104.2	31.6	140	9	6.126	343.9	172.8	109.2	0.8	43.75
Dehra_32007	CGWB	Hand Pump	29.22	77.08	2015	8.56	2025	ND	195.0	37.0	25.0	418.0	6.0	70.0	333.2	570.0	73.0	0.98	BDL
Dehra_32007	CGWB	Hand Pump	29.22	77.08	2016	8.3	1482	ND	508.0	61.0	86.0	127.0	8.4	24.0	227.0	228.0	201.0	0.76	21.00
Dehra_32007	CGWB	Hand Pump	29.22	77.08	2017	8.58	1720	ND	300.0	8.0	68.0	345.0	10.0	24.0	220.0	672.0	99.0	0.83	1.00
Dehra_32007	CGWB	Hand Pump	29.22	77.08	2018	8.85	3010	ND	304.0	12.0	67.0	582.0	7.7	65.0	328.0	960.0	132.0	0.48	2.70
Dehra_32007	CGWB	Hand Pump	29.22	77.08	2019	8.87	1877	ND	390.0	44.0	68.0	271.0	15.0	24.0	317.0	527.0	92.0	0.61	0.20
Dehra_32007	CGWB	Hand Pump	29.22	77.08	2020	8.5	1560	ND	380.0	32.0	73.0	216.0	5.0	24.0	317.0	414.0	85.0	0.00	1.74
Dehra_32007	CGWB	Hand Pump	29.22	77.08	2021	8.69	1805	ND	320.0	21.0	65.0	287.0	5.0	62.0	206.0	508.0	90.0	0.83	0.00
Dehra_32007	CGWB	Hand Pump	29.22	77.08	2022	7.73	2760	ND	430.3	68.1	63.2	471.0	5.0	0.0	864.5	544.0	113.4	0.70	0.90
Dehra_32007	CGWB	Hand Pump	29.22	77.08	2023	7.8	2868	ND	380.0	48.0	63.0	490.0	8.0	0.0	757.0	576.0	121.0	0.82	24.00
Dehra_32007	CGWB	Hand Pump	29.22	77.08	2024	8.83	1586	0	200.2	19.84	36.6	275	4.65	36	244.1	433	61.9	0.95	BDL
Dhindar_32008	Atal Jal	Pizeometer	29.2145	76.9364	2024	7.88	1072	677	310.3	84.16	24.31	109	7	1.925	268.1	141.8	85.36	0.62	34.75
Dhodpur_32010	Atal Jal	Pizeometer	29.2451	76.9616	2024	7.54	1292	773	350.3	96.19	26.73	125	8	1.01	309	176.6	97.27	0.71	39.25
Dikadla_32009	Atal Jal	Tubewell	29.2289	77.0677	2024	6.12	1186	748	340.3	92.18	26.74	121	8	0.037	300	152.1	95.29	0.68	38
Garhi Chhaju_32011	Atal Jal	Tubewell	29.2628	77.043	2024	7.22	1347	829	380.3	100.2	31.59	134	9	0.515	329.5	173.3	105.2	0.76	42
Garhi Tayagian_245447	Atal Jal	Tubewell	29.2033	77.0429	2024	7.75	1015	607	280.2	72.14	24.3	98	6	1.269	238.7	132.3	77.42	0.56	31.25
Haldana_32012	Atal Jal	Pizeometer	29.1848	77.0423	2024	8.06	1091	644	290.2	80.16	21.87	104	7	2.806	257.2	142.2	81.39	0.59	33
Hathwala_32013	CGWB	Tube Well	29.23	77.11	2015	Sample not collected from this location													
Hathwala_32013	CGWB	Tube Well	29.23	77.11	2016	7.89	1283	ND	473.0	89.0	61.0	66.0	9.0	0.0	245.0	26.0	286.0	0.22	1.28
Hathwala_32013	CGWB	Tube Well	29.23	77.11	2017	8.21	835	ND	310.0	40.0	51.0	25.0	7.0	0.0	207.0	28.0	121.0	1.01	0.20
Hathwala_32013	CGWB	Tube Well	29.23	77.11	2018	8.12	1109	ND	402.0	63.0	60.0	78.0	6.2	0.0	131.0	114.0	250.0	0.05	0.20
Hathwala_32013	CGWB	Tube Well	29.23	77.11	2019	8.85	826	ND	270.0	40.0	41.0	83.2	3.5	24.0	195.0	45.0	135.0	0.53	1.70
Hathwala_32013	CGWB	Tube Well	29.23	77.11	2020	8.17	870	ND	320.0	56.0	44.0	50.0	7.0	0.0	195.0	13.0	184.0	1.00	1.23
Hathwala_32013	CGWB	Tube Well	29.23	77.11	2021	8.73	723	ND	206.0	21.0	38.0	84.0	6.1	47.0	190.0	14.0	97.0	0.64	0.11
Hathwala_32013	CGWB	Tube Well	29.23	77.11	2022	7.92	945	ND	360.3	68.1	46.2	71.0	7.0	0.0	416.8	0.0	120.5	0.51	0.30
Hathwala_32013	CGWB	Tube Well	29.23	77.11	2023	7.82	1050	ND	390.0	72.0	51.1	84.0	6.9	0.0	366.0	38.4	156.2	0.45	1.20
Hathwala_32013	CGWB	Tube Well	29.23	77.11	2024	8.65	710	0	180.1	16.03	34.05	80	5.4	28.8	230	BDL	77.99	0.61	BDL
Hathwala_32013	CGWB	Tube Well	29.22	77.11	2015	Sample not collected from this location													
Hathwala_32013	CGWB	Tube Well	29.22	77.11	2016	8.67	459	ND	151.0	28.0	20.0	51.0	4.0	36.0	184.0	19.0	21.0	0.73	0.00
Hathwala_32013	CGWB	Tube Well	29.22	77.11	2017	8.46	540	ND	160.0	24.0	24.0	70.0	5.0	12.0	244.0	74.0	14.0	0.16	0.20
Hathwala_32013	CGWB	Tube Well	29.22	77.11	2018	8.59	500	ND	128.0	24.0	17.0	67.0	2.6	26.0	223.0	24.0	14.0	0.89	0.20
Hathwala_32013	CGWB	Tube Well	29.22	77.11	2019	8.92	559	ND	160.0	32.0	19.0	72.0	1.4	36.0	256.0	BDL	28.0	0.71	0.20
Hathwala_32013	CGWB	Tube Well	29.22	77.11	2020	8.37	545	ND	180.0	48.0	15.0	61.0	5.0	24.0	195.0	57.0	43.0	0.00	0.34
Hathwala_32013	CGWB	Tube Well	29.22	77.11	2021	8.8	559	ND	165.0	12.0	33.0	80.0	5.5	62.0	206.0	0.0	56.0	0.62	0.00

Gram Panchayat	Source	Type of well	Latitude	Longitude	Year	pH	EC	TDS	TH	Ca	Mg	Na	K	CO ₃	HCO ₃	SO ₄	Cl	F	NO ₃
Hathwala_32013	CGWB	Tube Well	29.22	77.11	2022	7.96	840	ND	330.3	48.1	51.1	58.0	6.0	0.0	401.4	0.0	92.2	0.67	0.00
Hathwala_32013	CGWB	Tube Well	29.22	77.11	2023	7.85	800	ND	350.0	64.0	46.2	40.0	5.0	0.0	353.8	43.2	56.8	0.71	18.00
Hathwala_32013	CGWB	Tube Well	29.22	77.11	2024	8.45	825		230.2	15.87	46.31	90	6.85	36	158.7	90	103.2	0.58	0.22
Hathwala_32013	Atal Jal	Pizeometer	29.2187	77.106	2024	7.64	1260	795	360.3	96.19	29.17	128	8	1.313	318.7	165.3	101.3	0.73	40.25
Jaurasi Khalsa_32014	Atal Jal	Tubewell	29.2521	77.042	2024	7.02	984	612	280.2	76.15	21.87	99	6	0.246	249.7	130	77.42	0.56	31.5
Jaurasi Sarf Khas_32015	Atal Jal	Pizeometer	29.2503	77.0433	2024	8.11	1184	718	330.3	88.17	26.74	116	7	3.512	286.5	161	91.32	0.66	36.5
Karhans_32016	Atal Jal	Tubewell	29.2767	77.0076	2024	7.71	895	498	230.2	60.12	19.44	80	5	0.964	199	124.9	63.53	0.45	26.25
Karhansh	CGWB	Hand Pump	29.2558	77.01	2015	Sample not collected from this location													
Karhansh	CGWB	Hand Pump	29.2558	77.01	2016	8.3	1482	ND	508.0	61.0	86.0	127.0	8.4	24.0	227.0	228.0	201.0	0.45	21.00
Karhansh	CGWB	Hand Pump	29.2558	77.01	2017	8.55	1610	ND	500.0	40.0	97.0	180.0	15.0	24.0	171.0	351.0	241.0	0.69	28.00
Karhansh	CGWB	Hand Pump	29.2558	77.01	2018	8.8	1003	ND	294.0	20.0	60.0	96.0	5.4	26.0	156.0	170.0	111.0	0.69	0.20
Karhansh	CGWB	Hand Pump	29.2558	77.01	2019	8.91	387	ND	130.0	28.0	15.0	47.3	2.1	24.0	207.5	BDL	14.2	1.00	0.20
Karhansh	CGWB	Hand Pump	29.2558	77.01	2020	8.46	480	ND	170.0	16.0	32.0	35.0	5.0	12.0	230.0	0.0	29.0	1.00	1.21
Karhansh	CGWB	Hand Pump	29.2558	77.01	2021	8.72	396	ND	155.0	12.0	30.0	40.0	5.6	62.0	127.0	0.0	21.0	1.20	2.40
Karhansh	CGWB	Hand Pump	29.2558	77.01	2022	8.19	544	ND	240.2	40.1	34.0	25.0	4.4	0.0	231.6	0.0	70.9	1.14	6.00
Karhansh	CGWB	Hand Pump	29.2558	77.01	2023	7.62	1000	ND	525.0	100.0	66.9	20.0	7.4	0.0	305.0	48.0	177.5	0.95	10.00
Karhansh	CGWB	Hand Pump	29.2558	77.01	2024	8.42	1065	0	300.2	35.71	51.29	114	5.9	48	183.1	158	103.2	0.92	5.08
Karkoli_32017	Atal Jal	Pizeometer	29.2045	77.1004	2024	7.71	1245	798	360.3	96.19	29.17	129	8	1.543	318.4	159.2	101.3	0.73	40.25
Khallilshahlapur	CGWB	Hand Pump	29.2878	76.97	2015	Sample not collected from this location													
Khallilshahlapur	CGWB	Hand Pump	29.2878	76.97	2016	8.45	1180	ND	254.0	45.0	35.0	170.0	6.0	48.0	539.0	28.0	38.0	0.40	15.00
Khallilshahlapur	CGWB	Hand Pump	29.2878	76.97	2017	8.08	2580	ND	480.0	24.0	102.0	435.0	15.0	0.0	342.0	696.0	298.0	0.94	22.00
Khallilshahlapur	CGWB	Hand Pump	29.2878	76.97	2018	8.2	1115	ND	167.0	24.0	26.0	190.0	4.4	0.0	564.0	7.0	62.0	0.67	21.00
Khallilshahlapur	CGWB	Hand Pump	29.2878	76.97	2019	Sample not collected from this location													
Khallilshahlapur	CGWB	Hand Pump	29.2878	76.97	2020	Sample not collected from this location													
Khallilshahlapur	CGWB	Hand Pump	29.2878	76.97	2021	8.71	1120	ND	114.0	16.0	18.0	229.0	4.0	78.0	523.0	0.0	42.0	3.41	16.00
Khallilshahlapur	CGWB	Hand Pump	29.2878	76.97	2022	Sample not collected from this location													
Khallilshahlapur	CGWB	Hand Pump	29.2878	76.97	2023	Sample not collected from this location													
Khallilshahlapur	CGWB	Hand Pump	29.2878	76.97	2024	8.24	1230	0	160.1	19.84	26.87	225	5.02	Nil	573.6	91	48.14	2.5	18
Kiwana_32018	Atal Jal	Tubewell	29.2282	76.9798	2024	5.98	1242	755	340.3	92.18	26.74	122	8	0.027	300	154.9	95.29	0.69	38.25
Machhrouli_32019	Atal Jal	Pizeometer	29.2857	77.007	2024	7.53	1429	830	380.3	100.2	31.59	134	9	1.051	328.9	193	105.2	0.76	42
Mahawati_32020	Atal Jal	Pizeometer	29.1897	77.0661	2024	8.56	1352	823	370.3	100.2	29.16	133	8	11.26	318.9	170.4	103.2	0.76	41.5
Manana_32021	Atal Jal	Pizeometer	29.2629	76.9947	2024	7.93	1340	784	360.3	96.19	29.17	126	8	2.48	307.5	173.3	99.26	0.72	39.75
Namunda_32022	Atal Jal	Pizeometer	29.2402	76.9424	2024	7.7	796	491	220.2	60.12	17.01	79	5	0.942	199	96.56	61.54	0.45	25.75
Naraina_32023	Atal Jal	Tubewell	29.2687	76.9524	2024	7.66	1922	1246	570.5	152.3	46.18	201	13	2.148	497.8	253.8	156.8	1.14	61.75
Patti Kalyana_32024	CGWB	Tube Well	29.2097	77.0278	2015	8.59	544	ND	205.0	29.0	32.0	46.0	3.5	35.0	154.7	60.0	28.0	0.90	20.00
Patti Kalyana_32024	CGWB	Tube Well	29.2097	77.0278	2016	8.85	743	ND	163.0	28.0	22.0	109.0	2.6	24.0	270.0	60.0	38.0	0.89	12.00
Patti Kalyana_32024	CGWB	Tube Well	29.2097	77.0278	2017	8.35	860	ND	170.0	24.0	27.0	116.0	4.0	12.0	268.0	107.0	43.0	1.60	14.00
Patti Kalyana_32024	CGWB	Tube Well	29.2097	77.0278	2018	8.32	1502	ND	177.0	27.0	26.0	277.0	2.1	0.0	315.0	276.0	160.0	0.30	2.90
Patti Kalyana_32024	CGWB	Tube Well	29.2097	77.0278	2019	8.84	985	ND	160.0	24.0	24.0	173.0	4.2	24.0	305.0	149.0	50.0	1.50	15.00
Patti Kalyana_32024	CGWB	Tube Well	29.2097	77.0278	2020	8.55	970	ND	200.0	16.0	39.0	166.0	6.0	12.0	281.0	212.0	57.0	1.14	18.00
Patti Kalyana_32024	CGWB	Tube Well	29.2097	77.0278	2021	8.68	952	ND	412.0	21.0	87.0	51.0	5.3	62.0	159.0	72.0	62.0	0.47	141.00
Patti Kalyana_32024	CGWB	Tube Well	29.2097	77.0278	2022	8.36	1539	ND	260.2	48.1	34.0	250.0	5.0	60.7	277.9	0.0	326.1	1.57	9.00
Patti Kalyana_32024	CGWB	Tube Well	29.2097	77.0278	2023	7.78	978	ND	430.0	44.0	78.0	30.0	5.0	0.0	452.0	20.0	42.0	1.00	40.00
Patti Kalyana_32024	CGWB	Tube Well	29.2097	77.0278	2024	8.37	579	0	230.2	28.06	38.91	43	3.59	36	256.3	8	21.27	1.1	16
Pawti_32025	Atal Jal	Pizeometer	29.233	77.0306	2024	7.54	1335	825	370.3	100.2	29.16	133	9	1.076	328.9	168.6	103.2	0.76	41.75
Shahar Malpur_32027	Atal Jal	Pizeometer	29.2751	77.0538	2024	7.79	1064	614	280.2	76.15	21.87	99	6	1.449	248.5	142.2	77.42	0.56	31.75

Gram Panchayat	Source	Type of well	Latitude	Longitude	Year	pH	EC	TDS	TH	Ca	Mg	Na	K	CO ₃	HCO ₃	SO ₄	Cl	F	NO ₃
Simbalgarh_264991	Atal Jal	Tubewell	29.1764	77.1227	2024	7.62	1721	1043	470.4	128.3	36.46	168	11	1.646	418.3	233	131	0.95	52
Wazirpur Titana_32028	Atal Jal	Piezometer	29.2687	76.9274	2023	8.05	1690	1133	487.4	136	35.9	210	35	0.0	419.9	55.49	375.3	1.67	41.93
Wazirpur Titana_32028	Atal Jal	Piezometer	29.2687	76.9274	2024	8.05	1690	1108	500.4	136.3	38.89	179	11	4.7	445.2	134.7	55.25	1.02	139

Name of District	Name of Block	Source	Name of village/ OW data	Latitude	Longitude	EC June 2020	EC June-2021	EC June-2022	EC June-2023	EC June-2024
Panipat_71	Samalkha_535	SGWB	Atta	29.2481	77.1026	900	900	1200	1100	1050
Panipat_71	Samalkha_535	Atal Jal	Atta_31999	29.2503	77.0911	ND	ND	ND	ND	797
Panipat_71	Samalkha_535	Atal Jal	Basara_32000	29.1885	77.0933	ND	ND	ND	ND	1332
Panipat_71	Samalkha_535	SGWB	Bashera	29.1885	77.0937	1200	1220	1450	1550	1400
Panipat_71	Samalkha_535	Atal Jal	Beholi_32001	29.2877	77.0467	ND	ND	ND	ND	996
Panipat_71	Samalkha_535	SGWB	Bhapura	29.2455	77.0163	1050	950	900	950	800
Panipat_71	Samalkha_535	Atal Jal	Bhodwal Majri_32002	29.194	77.0123	ND	ND	ND	ND	1200
Panipat_71	Samalkha_535	Atal Jal	Bilaspur_32003	29.243	77.1182	ND	ND	ND	ND	1274
Panipat_71	Samalkha_535	Atal Jal	Budhanpur_32004	29.1718	77.1149	ND	ND	ND	ND	1250
Panipat_71	Samalkha_535	Atal Jal	Chaddia Yusufpur_32005	29.1965	76.984	ND	ND	ND	ND	1225
Panipat_71	Samalkha_535	Atal Jal	Chulkana_32006	29.2032	76.986	ND	ND	ND	ND	1343
Panipat_71	Samalkha_535	SGWB	Dehra	29.2082	77.0684	1500	1550	1400	1500	1450
Panipat_71	Samalkha_535	Atal Jal	Dhindar_32008	29.2145	76.9364	ND	ND	ND	ND	1072
Panipat_71	Samalkha_535	Atal Jal	Dhodpur_32010	29.2451	76.9616	ND	ND	ND	ND	1292
Panipat_71	Samalkha_535	Atal Jal	Dikadla_32009	29.2289	77.0677	ND	ND	ND	ND	1186
Panipat_71	Samalkha_535	Atal Jal	Garhi Chhaju_32011	29.2628	77.043	ND	ND	ND	ND	1347
Panipat_71	Samalkha_535	Atal Jal	Garhi Tayagian_245447	29.2033	77.0429	ND	ND	ND	ND	1015
Panipat_71	Samalkha_535	SGWB	Haldana	29.1899	77.0421	850	850	800	1400	1200
Panipat_71	Samalkha_535	Atal Jal	Haldana_32012	29.1848	77.0423	ND	ND	ND	ND	1091
Panipat_71	Samalkha_535	SGWB	Hathwala	29.2289	77.1177	900	900	450	400	500
Panipat_71	Samalkha_535	Atal Jal	Hathwala_32013	29.2187	77.106	ND	ND	ND	ND	1260
Panipat_71	Samalkha_535	Atal Jal	Jaurasi Khalsa_32014	29.2521	77.042	ND	ND	ND	ND	984
Panipat_71	Samalkha_535	Atal Jal	Jaurasi Sarf Khas_32015	29.2503	77.0433	ND	ND	ND	ND	1184
Panipat_71	Samalkha_535	SGWB	Karhans	29.2757	77.007	950	900	900	900	800
Panipat_71	Samalkha_535	Atal Jal	Karhans_32016	29.2767	77.0076	ND	ND	ND	ND	895
Panipat_71	Samalkha_535	Atal Jal	Karkoli_32017	29.2045	77.1004	ND	ND	ND	ND	1245
Panipat_71	Samalkha_535	SGWB	Kiwana	29.2269	76.9794	2000	2050	1900	2000	1950
Panipat_71	Samalkha_535	Atal Jal	Kiwana_32018	29.2282	76.9798	ND	ND	ND	ND	1242
Panipat_71	Samalkha_535	Atal Jal	Machhrouli_32019	29.2857	77.007	ND	ND	ND	ND	1429
Panipat_71	Samalkha_535	Atal Jal	Mahawati_32020	29.1897	77.0661	ND	ND	ND	ND	1352
Panipat_71	Samalkha_535	Atal Jal	Manana_32021	29.2629	76.9947	ND	ND	ND	ND	1340
Panipat_71	Samalkha_535	Atal Jal	Namunda_32022	29.2402	76.9424	ND	ND	ND	ND	796
Panipat_71	Samalkha_535	Atal Jal	Naraina_32023	29.2687	76.9524	ND	ND	ND	ND	1922
Panipat_71	Samalkha_535	SGWB	Naryana	29.2728	76.947	350	450	400	300	350
Panipat_71	Samalkha_535	SGWB	Pattikalyana	29.2033	77.0278	1550	1550	1600	1200	1100
Panipat_71	Samalkha_535	Atal Jal	Pawti_32025	29.233	77.0306	ND	ND	ND	ND	1335
Panipat_71	Samalkha_535	SGWB	Rakshera	29.1866	77.1092	950	950	900	600	700
Panipat_71	Samalkha_535	SGWB	Samalkha	29.23	77.01	1250	1150	1200	1100	1050
Panipat_71	Samalkha_535	Atal Jal	Shahar Malpur_32027	29.2751	77.0538	ND	ND	ND	ND	1064
Panipat_71	Samalkha_535	Atal Jal	Simbalgarh_264991	29.1764	77.1227	ND	ND	ND	ND	1721
Panipat_71	Samalkha_535	SGWB	Wazirpur Titana	29.2629	76.9256	300	450	950	800	850

Name of District	Name of Block	Source	Name of village/ OW data	Latitude	Longitude	EC June 2020	EC June-2021	EC June-2022	EC June-2023	EC June-2024
Panipat_71	Samalkha_535	Atal Jal	Wazirpur Titana_32028	29.2687	76.9274	ND	ND	ND	1690	#N/A