

ATAL BHUJAL YOJANA (AtalJal)

State : HARYANA

**Department : IRRIGATION & WATER
RESOURCE DEPARTMENT**

BLOCK : PALWAL

DISTRICT : PALWAL

YEAR : 2023-2024

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

HYDROGEOLOGICAL REPORT

(YEAR: 2023-24)

STATE	:	HARYANA
DISTRICT	:	PALWAL
BLOCK/TALUK	:	PALWAL
BLOCK/TALUK HQs	:	PALWAL

A GENERAL INFORMATION			
1.	Geographical area (Ha)	:	19946.27
2.	No. of Gram Panchayats	:	41
3.	No. of towns	:	1
4.	No. of villages	:	78
5.	Population (2022)	:	Male Female Total
			47794 42038 89832
6.	Rainfall (mm) (2022)	:	Monsoon Non-monsoon Annual
			435.65 240.1 675.75
7.	River basin	:	Yamuna river basin
8.	Major soil types	:	Tropical and Brown Soil

B LAND USE			
1.	Forest area (Ha)	:	0
2.	Cultivable area (Ha)	:	14107
3.	Net sown area (Ha)	:	12644
4.	Gross cropped area (Ha)	:	28506

C CROPPING PATTERN (As in 2022-22)						
1.	Major crops grown	:	Kharif	Rabi	Summer	Perennial
			Paddy	Wheat	Pulses	NA
			Pulses	Mustard	Tomato	
			Sesame			
			Vegetable			
			Cotton			

D IRRIGATION FACILITIES (As in 2020-22)							
1.	Net irrigated area (Ha)	:	12644				
2.	Gross irrigated area (Ha)	:	15842				
3.	Area under irrigation (Ha) (Source-wise)	:	DW	BW/TW	Tanks/Ponds	Canals	Others
			0	12162	0	3680	0

E GEOLOGY & HYDROGEOLOGY			
1.	Predominant rocktype	:	Coarse grained Sand, Silt and Clay
2.	Major geological formations	:	Older and Newer Alluvium
3.	Important water-bearing formations	:	Coarse grain sand
4.	Status of coverage under NAQUIM	:	Covered

F GROUND WATER CONDITIONS			
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1.	No. of wells used for WaterLevel (WL) monitoring.	:	Open wells			BW/TW/ PZ		
			CGWB	SGWB	Total	CGWB	SGWB	Total
			1	15	16	1	0	1
2.	Monitoring mechanism (Nos.)	:	Manual		DWLR		Telemetry	
			CGWB	SGWB	CGWB	SGWB	CGWB	SGWB
			2	15	0	0	0	0
3.	Monitoring frequency	:	Agency	No. of times monitored/year				
			CGWB	02 times/ year				
			SGWB	02 times/ year				
4.	Period of water level data availability.	:	Agency	Period of WL data availability (From - To)				
				From (year)		To (year)		
			CGWB	2015		2023		
			SGWB	2015		2023		
5.	Water level range (m.bgl)	:	Minimum/Village			Maximum/Village		
	Pre-monsoon (2023)		1.80 (Dehlaka Bhurja)			31.10 (Atarchata)		
	Post-monsoon (2023)		0.95 (Dehlaka Bhurja)			30.35 (Atarchata)		
6.	Seasonal WL fluctuation range (m)	:	Minimum/ Village			Maximum/ Village		
			-2.80 (Aherwa)			2.40 (Asawata)		

G GROUND WATER QUALITY								
1.	No. of wells used for Water Quality (WQ) monitoring.		Open Wells			BW/TW/ PZ		
			CGWB	SGWB	Total	CGWB	SGWB	Total
			8	15	23	2	0	2
2.	Monitoring frequency		Agency	No. of times monitored/year				
			CGWB	1 times/ year				
			SGWB	1 times/ year				
3.	Period of water quality data availability		Agency	Period of WQ data availability (Years)				
			CGWB	2015 to 2023				
			SGWB	2020 to 2023				
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				
5.	Known ground water quality issues, if any		Moderate to highly saline					

H. GROUND WATER RESOURCES								
1.	Latest assessment year		2022					
2.	Assessment Unit		Block					
3.	Annual extractable GW resource (ha.m)		7631.51					
4.	Current annual GW extraction (ha.m)		5191.73					
5.	Net GW availability for future use (ha.m)		2439.78					
6.	Stage of GW extraction (%)		68.03%					
7.	Category of block/taluk (2022)		Safe					
8.	Category of block/taluk/ in previous assessments		2020	2017	2013	2011	2009	2004
			Semi Critical	Over Exploited	Over Exploited	Over Exploited	Over Exploited	Safe

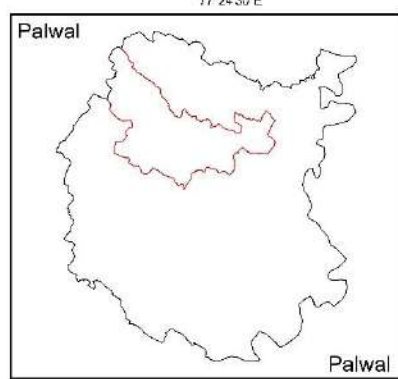
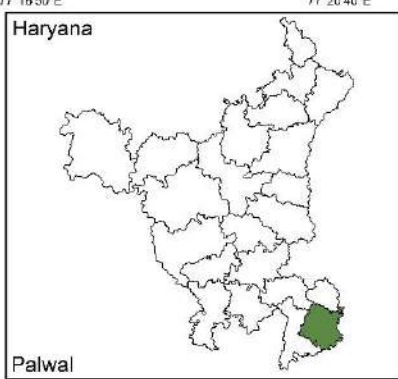
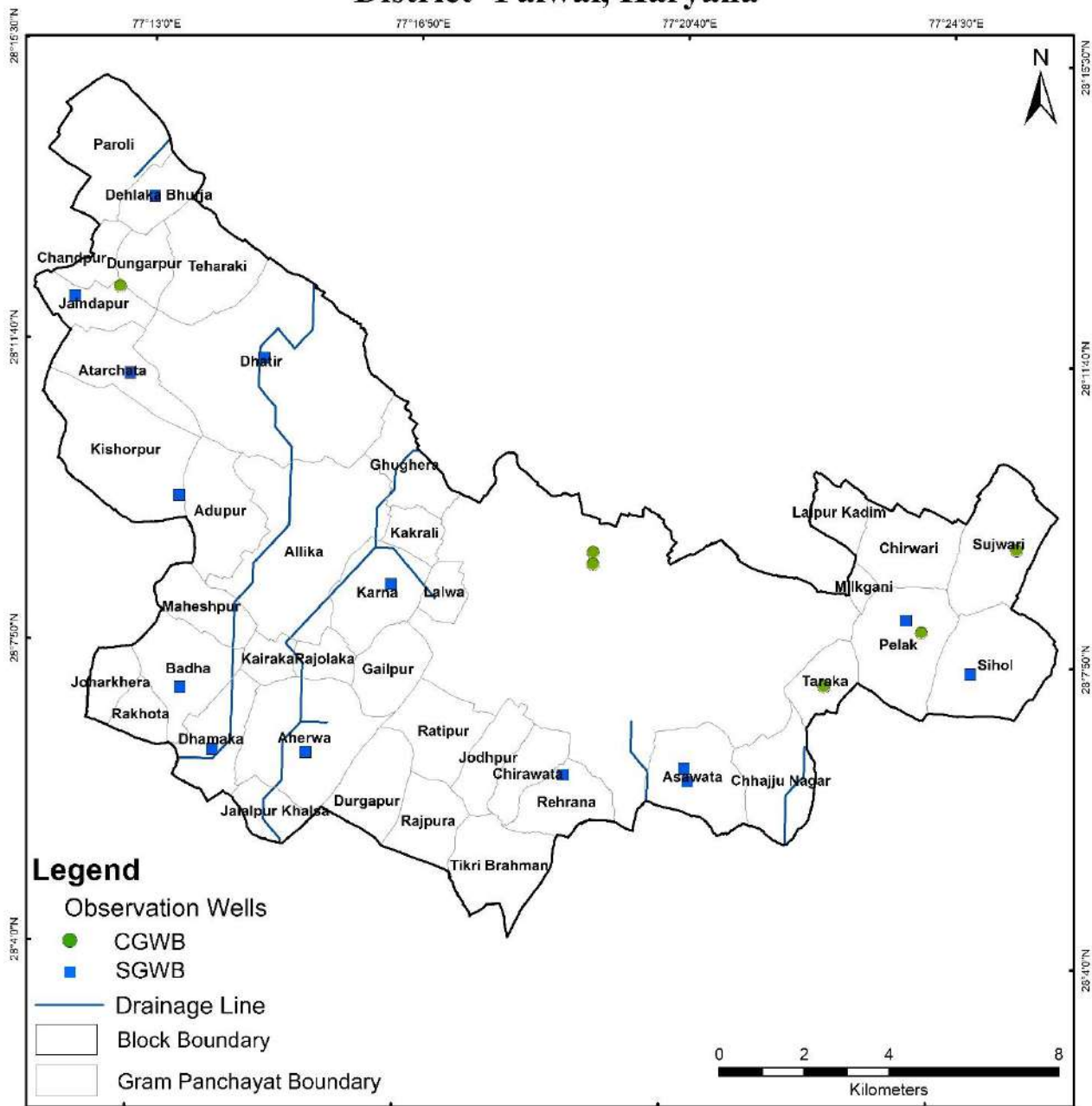
I WATER-RELATED SCHEMES							
1.	Schemes with a bearing on ground water, being implemented in the block / taluk.						
	Centrally Sponsored		i)	PMKSY			

	/Central Sector Schemes	ii)	MGNREGA
		iii)	RKVY
		iv)	JJM
		v)	NHP
		vi)	NAQUIM
		State Schemes	i)
ii)	MPMV		
iii)			
iv)			

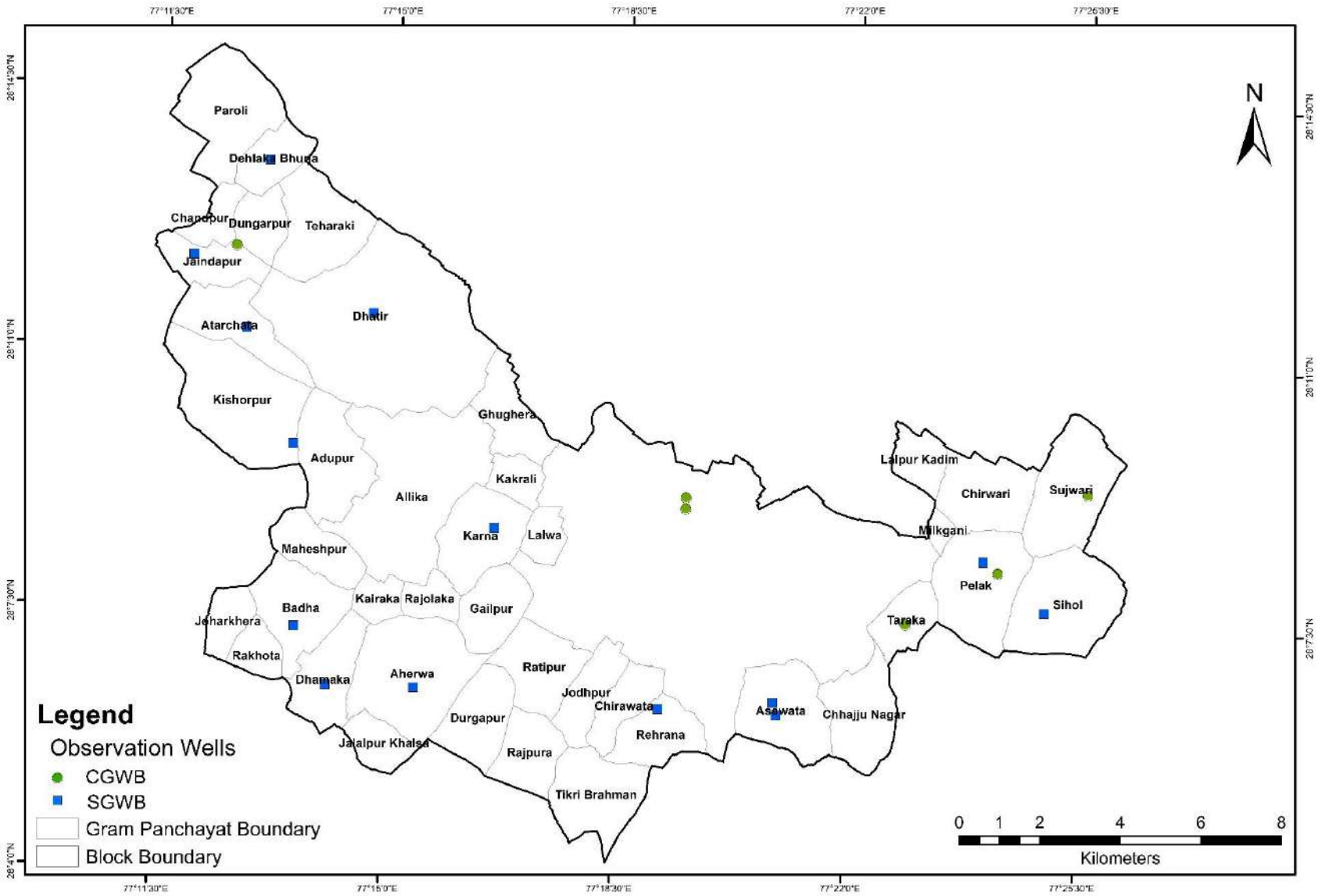
J	GROUND WATER RELATED ISSUES		
1.	Ground water related issues of the block/		
	i) Issues related to GW availability		No such issue
	ii) Issues related to GW quality	:	The shallow ground water of the block is alkaline in nature and is moderately to highly saline. It is found that more than half of the ground waters are not suitable for drinking purposes mainly due to fluoride content that exceeds the maximum permissible limit of 1.5mg/l. These waters are not suitable for customary irrigation as they may cause salinity and sodium hazards.
	iii) Other issues if any.	:	

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

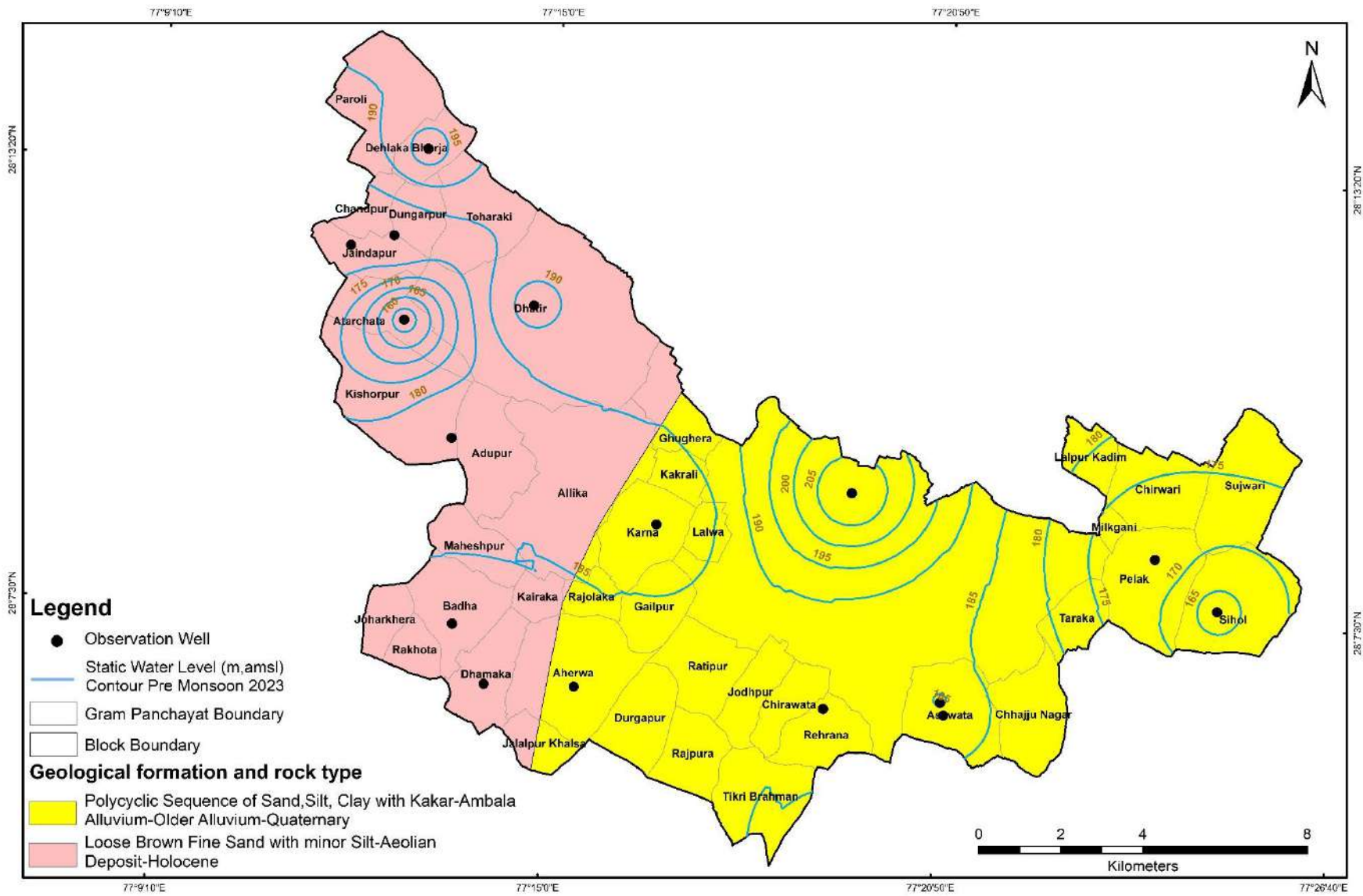
Location Map of Block- Palwal, District- Palwal, Haryana



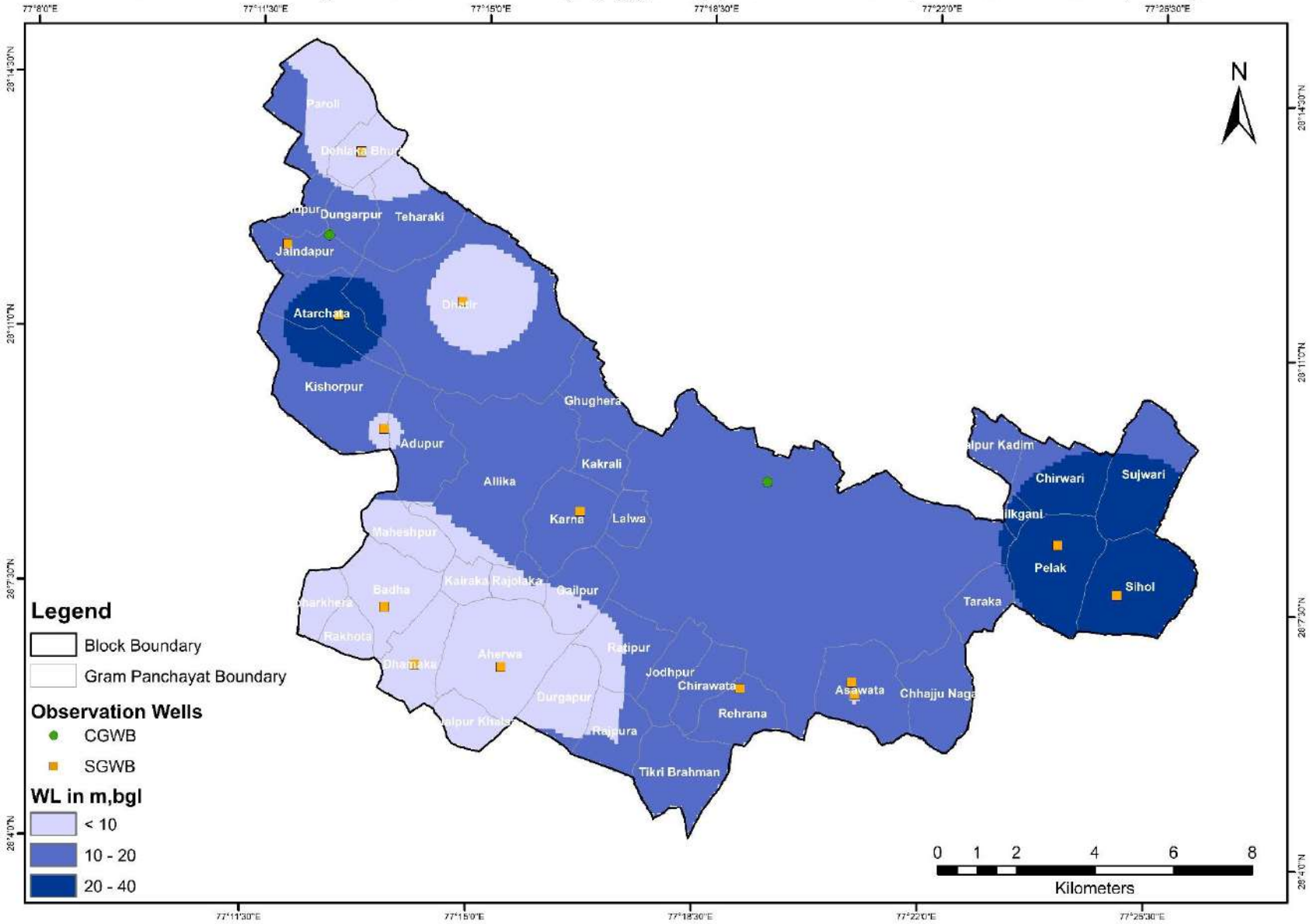
Location of Observation Wells for Monitoring Water Levels and Water Quality, Block-Palwal, District- Palwal, Haryana



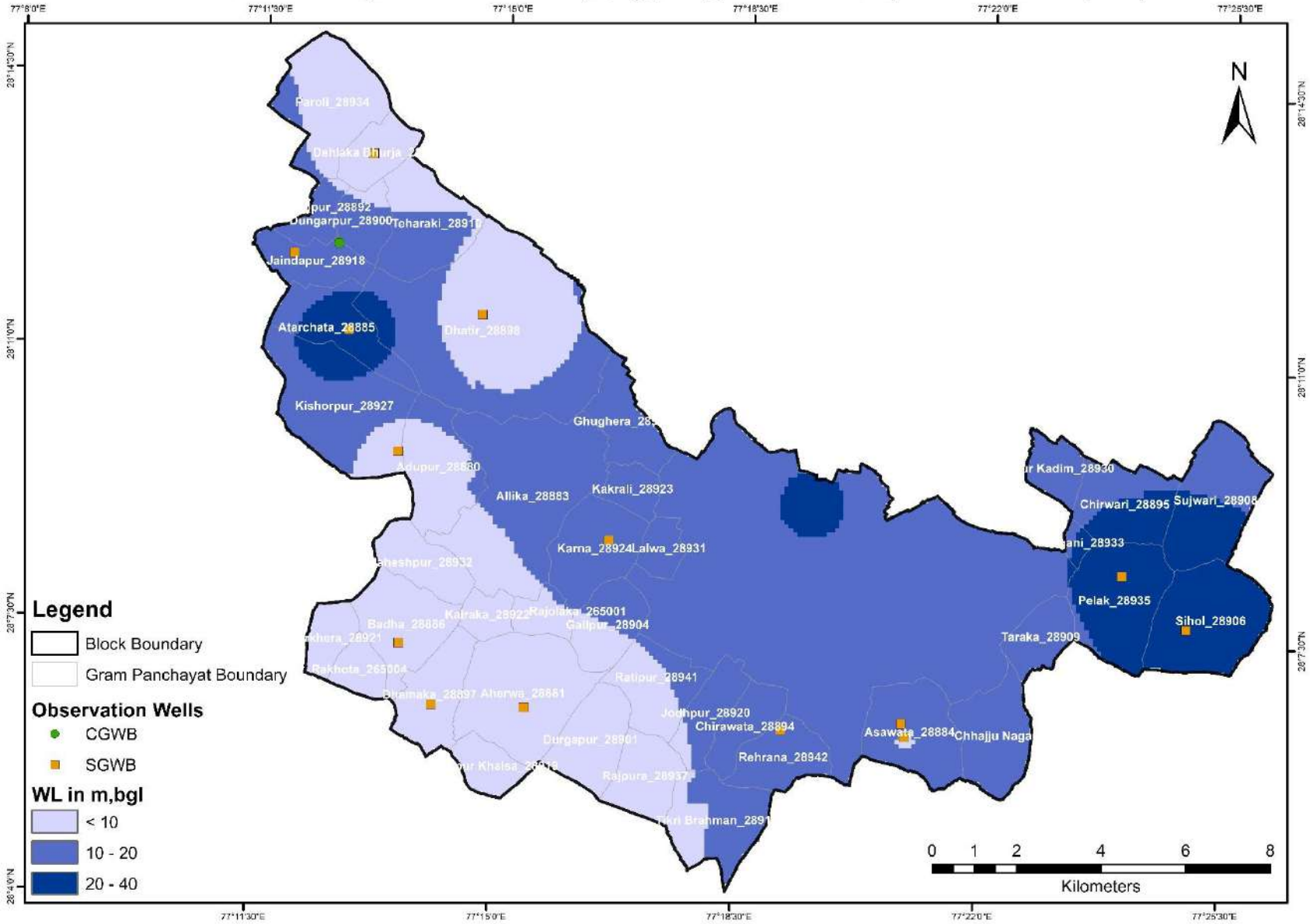
Hydrogeological Map, Block- Palwal, District- Palwal, Haryana



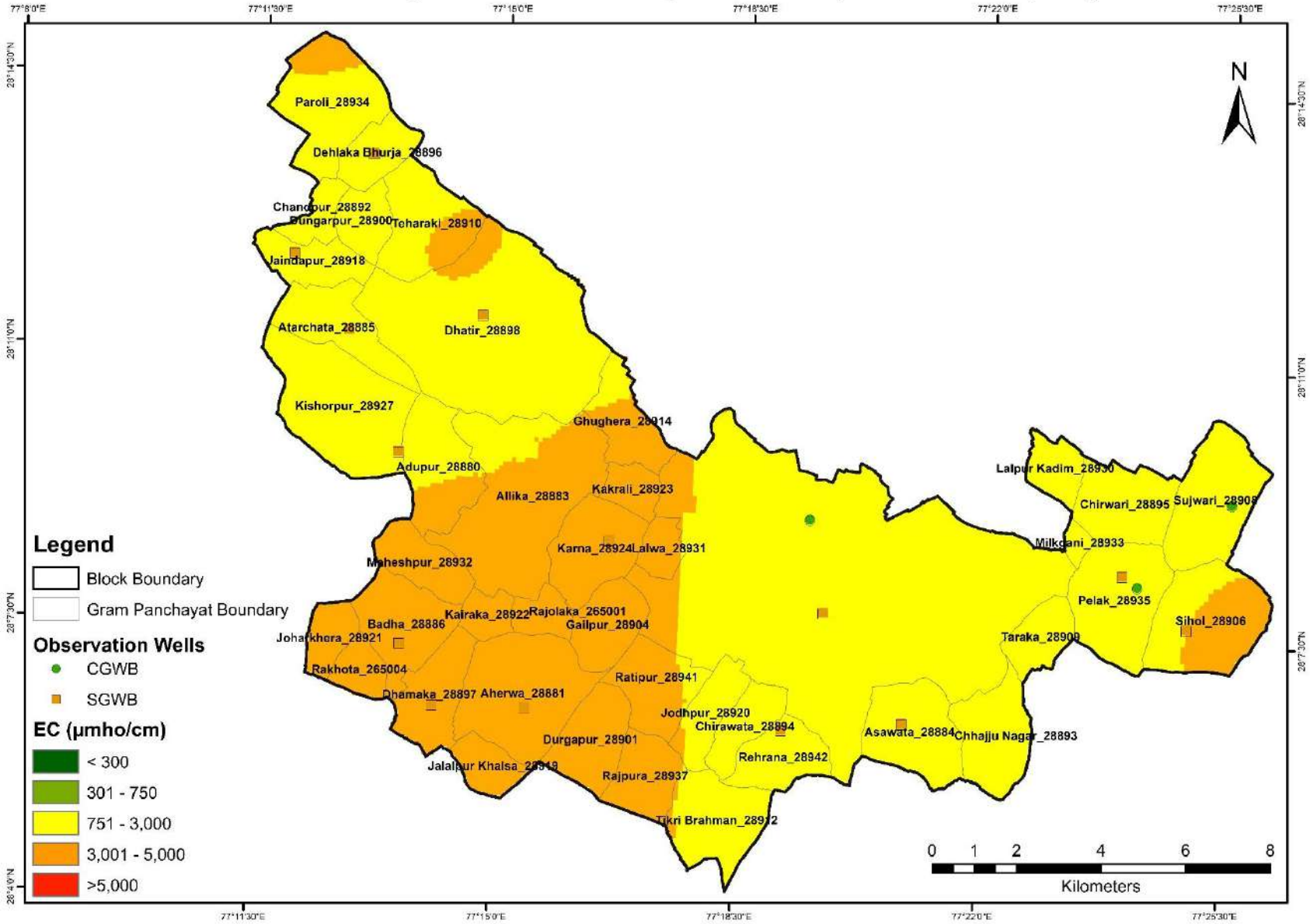
Pre Monsoon 2023 Depth to Water Level (m,bgl) Map, Block - Palwal, District - Palwal, Haryana



Post Monsoon 2023 Depth to Water Level (m,bgl) Map, Block - Palwal, District - Palwal, Haryana



Electrical Conductivity of Groundwater-2023, Block - Palwal, District - Palwal, Haryana



ANNEXURE: 1
BASIC DATA OF MONITORING WELLS

State	Haryana				District	Palwal				Block	Palwal				
S.No	Well ID	GP Name	Name of the village	Site Name	Latitude	Longitude	Type of Well (DW/Pz)	Reduced Level (m,asl)	Aquifer Type/Lithology	Height of Measuring (m,asl)	Depth (m,bgl)	Diameter (m)	Purpose of Monitoring (WL/WQ)	Monitoring Mechanism	Agency
1	Ch_28.188_77.213	Atarchata_28885	Chat	Panchyati in front of Bhadi Choupal in the village, OW	28.187593	77.212909	DW	189.3	Unconfined to Semi Confined	1.25	55	2	Both	Manual	SGWB
2	Dh_28.225_77.218	Dehlaka Bhurja_28896	Dhaliaka	Jat well west of village about 100 mt away from village, OW	28.225259	77.217579	DW	198.3	Unconfined to Semi Confined	1.25	14.7	2	Both	Manual	SGWB
3	Dh_28.108_77.235	Dhamaka_28897	Dhamaka	Nepal s/o Gangi LHS to dhamaka road north of village, OW	28.108233	77.235316	DW	194.3	Unconfined to Semi Confined	1.25	20	2	Both	Manual	SGWB
4	Dh_28.192_77.245	Dhatir_28898	Dhatir	Govt. Senior Secondary School, OW	28.19158	77.24491	DW	193.6	Unconfined to Semi Confined	1.25	62	2	Both	Manual	SGWB
5	As_28.107_77.348	Asawata_28884	Asawata	School well just on railway crossing Adharsh Public School, OW	28.107104	77.348404	DW	192.1	Unconfined to Semi Confined	1.25	35	2	Both	Manual	SGWB

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6	Ha_28.0928_77.34 15	Hazipur	Hazipur	Panchyati just on Bus stand, PT	28.09284 5	77.341585	DW	194.5	Unconfined to Semi Confined	1.25	9.2	2	Both	Manual	SGW B
7	Ja_28.2036_77.199 2	Jaindapur_28918	Jaindapur	Kundan Well just on the turn of approach road, OW	28.203611	77.199167	DW	194.9	Unconfined to Semi Confined	1.25	49	2	Both	Manual	SGW B
8	Ba_28.121_77.227	Badha_28886	Badha	Harijan Well RHS just on approach road, OW	28.121198	77.22705 5	DW	193.8	Unconfined to Semi Confined	1.25	14	2	Both	Manual	SGW B
9	Ka_28.1444_77.27 69	Karna_28924	Karna	Surjan S/o Laxman house termination of approach road, OW	28.144367	77.27686 8	DW	194.2	Unconfined to Semi Confined	1.25	45	2	Both	Manual	SGW B
10	Ah_28.108_77.258	Aherwa_28881	Aharawan	Panchyati in village on the during point approach road, OW	28.10821	77.25764 2	DW	194.5	Unconfined to Semi Confined	1.25	65	2	Both	Manual	SGW B
11	Ki_28.1619_77.225 6	Kishorpur_28927	Kishorepur	Mr. Bhuru well east of village LHS of approach road, OW	28.161944	77.22555 6	DW	193.6	Unconfined to Semi Confined	1.25	16.15	2	Both	Manual	SGW B
12	Mi_28.1_288_77.4 162	Sihol_28906	Misa	Samlati near school and tularam house behind gali on misa rasulpur road, OW	28.128817	77.416238	DW	189.8	Unconfined to Semi Confined	1.25	30	2	Both	Manual	SGW B
13	Pa_28.1302_77.3288	Palwal	Palwal	LHS of Palwal Rasulpur road just of railway cross, KOW	28.130244	77.328782	DW	193	Unconfined to Semi Confined	1.25	19	2	Both	Manual	SGWB

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14	Pe_28.1399_77.4005	Pelak_28935	Peelak	Mandir well LHS of village to alligarh kuccha point, OW	28.139878	77.400488	DW	192.8	Unconfined to Semi Confined	1.25	47	2	Both	Manual	SGW B
15	Re_28.105_77.3195	Rehrana_28942	Rehrana	Harijan well LHS of approach road, OW	28.104985	77.319484	DW	192.7	Unconfined to Semi Confined	1.25	30	2	Both	Manual	SGW B
16	W282109076571701	Palwal	Palwal	Palwal	28.1525	77.325	DW	196	Unconfined to Semi Confined	0.56	12	102mm	Both	Manual	CGW B
17	W281215077142001	JAINDAPUR_28918	JAINDAPUR	JAINDAPUR	28.206	77.2098	Piezometer	NA	Unconfined to Semi Confined	0.5	47	0.1	WL	Manual	CGW B
18	W281140077224001	Badraun	Badraun	Badraun	28.198611	77.376389	Dug Well	196	Alluvium	0.95	NA	152mm	WQ	Manual	CGW B
19	W281315077183001	Baghaura	Baghaura	Baghaura	28.220833	77.308333	Dug Well	195	Alluvium	1.6	NA	3.43	WQ	Manual	CGW B
20	W280345077203001	Bamani Khera_236841	Bamnikhera	Bamnikhera	28.0625	77.341667	Dug Well	195	Alluvium	NA	NA	NA	WQ	Manual	CGW B
21	W301419076422201	Hassanpur_28759	Hassanpur	Hassanpur	27.97	77.49	Tube Well	NA	Alluvium	NA	NA	NA	WQ	Manual	CGW B
22	W280815077241501	Pelak_28935	Lalwa	Lalwa	28.1375	77.404167	Dug Well	195	Alluvium	0.5	NA	1.1	WQ	Manual	CGW B
23	W280121077103601	Lakhnaka_28815	Pehladpur	Pehladpur	28.0225	77.176667	Dug Well	NA	Alluvium	NA	NA	NA	WQ	Manual	CGW B
24	W280920077253501	Sujwari_28908	Pelakh	Pelakh	28.155556	77.426389	Dug Well	197	Alluvium	1	NA	152mm	WQ	Manual	CGW B
25	W302650077130001	Rasulpur	Rasulpur	Rasulpur	28.0865	77.398222	Dug Well	NA	Alluvium	NA	NA	NA	WQ	Manual	CGW B
26	W280100077080501	Theraka	Theraka	Theraka	28.125278	77.433056	Tube Well	191	Alluvium	0.64	NA	2.63	WQ	Manual	CGW B

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

State	Haryana	District	Palwal	Block	Palwal
Month of Pre-monsoon Water Level Measurement					June
Month of Post-monsoon water Level measurement					October

S.No.	Observation Point	Source	Well Types	Co-ordinate		Water Level (m)																	
						2015		2016		2017		2018		2019		2020		2021		2022		2023	
				Latitude	Longitude	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
1	Atarchata_28885	SGWB	DW	28.1876	77.2129	26.85	27.05	27.70	28.10	28.50	28.75	29.10	27.85	29.20	28.60	30	29.4	29.15	29.10	30.80	30.6	31.10	30.35
2	Dehlaka_Bhurja_28896	SGWB	DW	28.2253	77.2176	11.30	11.40	11.75	11.55	11.75	11.45	11.48	11.65	1.50	1.45	1.5	1.4	11.70	12.00	1.10	1.05	1.80	0.95
3	Dhamaka_28897	SGWB	DW	28.1082	77.2353	6.70	6.75	7.45	7.00	7.65	7.50	7.65	7.50	8.15	7.75	8.4	8	8.15	7.50	7.60	6.45	7.05	6.15
4	Dhatir_28898	SGWB	DW	28.1916	77.2449	10.00	10.15	10.75	11.30	11.20	11.15	10.70	7.75	8.45	8.30	8.8	7.95	6.75	7	7.2	5.60	6.70	5.25
5	Asawata_28884	SGWB	DW	28.1043	77.3493	6.50	6.62	6.98	5.70	7.15	7.10	7.15	7.10	7.90	7.75	8.2	8.05	8.35	8.20	9.00	8.70	9.45	8.55
6	Jaindapur_28918	SGWB	DW	28.2036	77.1992	12.05	12.00	12.70	13.20	12.90	13.05	13.15	12.85	13.90	13.75	14.4	14	15.75	13.40	16.70	14.95	16.30	14.65
7	Asawata_28884	SGWB	DW	28.1071	77.3484	11.55	11.65	12.70	13.00	13.10	12.95	13.25	12.85	13.90	13.55	14.7	14.5	16.70	17.00	10.60	15.40	13.25	15.65
8	Badha_28886	SGWB	DW	28.1212	77.2271	4.25	4.32	4.65	4.50	5.30	6.05	6.89	6.65	7.05	6.80	7.4	7.1	7.55	6.25	7.86	6.95	7.95	5.20
9	Karna_28924	SGWB	DW	28.1444	77.2769	11.60	11.78	12.25	12.45	12.35	12.40	12.70	12.60	13.60	13.40	14	13.8	14.2	13.5	13.15	12.05	12.85	13.65
10	Aherwa_28881	SGWB	DW	28.1082	77.2576	5.10	5.15	5.60	5.45	5.67	5.62	5.65	5.55	6.20	6.10	6.47	6.27	6.57	6.52	6.75	5.85	6.20	3.40
11	Kishorpur_28927	SGWB	DW	28.1619	77.2256	8.00	8.18	8.75	9.05	8.75	8.80	8.80	8.45	8.90	8.65	9.15	9	9.25	8.80	9.40	8.60	9.65	8.45
12	Sihol_28906	SGWB	DW	28.1288	77.4162	21.40	21.35	21.85	22.25	22.50	22.65	22.80	21.60	23.50	22.95	24.4	24.3	NA	NA	25.65	NA	26.10	25.05
13	Palwal	SGWB	DW	28.7625	75.9831	6.60	6.70	7.35	7.40	7.32	7.27	7.44	7.32	8.10	7.95	8.3	8.02	8.8	9	10.7	10.40		
14	Pelak_28935	SGWB	DW	28.1399	77.4005	20.15	20.22	20.65	21.30	21.92	22.23	21.75	21.32	23.80	23.60	24.6	24.4	20.95	20.00	21.67	21.05	21.85	20.95
15	Rehrana_28942	SGWB	DW	28.1050	77.3195	11.00	11.20	11.70	11.50	11.85	12.05	11.98	11.72	12.60	12.35	12.9	13.3	9.40	10.00	11.20	10.75	11.65	10.55
16	Palwal	CGWB	DW	28.1525	77.3250	7.63	6.42	6.75	7.13	7.64	6.82	7.62	7.58	7.88	5.00	NA	7.59	NA	7.65	6.54	buried	10.34	Dry
17	JAINDAPUR_28918	CGWB	PZ	28.2060	77.2098	NA	NA	NA	NA	15	15.3	NA	15	17.4	17.1	18.1	15.9	12.3	17	14.6	14.5	14.03	13.93

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

State	Haryana	District	Palwal	Block	Palwal
Month of Collection of samples for WQ monitoring*					June

Village	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	
Badraun	CGWB	Dw	28.19861111	77.37638889	2015	Sample not collected from this location														
Badraun	CGWB	Dw	28.19861111	77.37638889	2016	8.65	925	ND	151.6	20.2	24.6	155.0	9.5	44.4	191.9	120.0	90.3	0.48	14.00	
Badraun	CGWB	Dw	28.19861111	77.37638889	2017	7.82	2056	ND	400.0	88.0	44.0	213.0	48.0	0.0	513.0	154.0	241.0	0.13	4.00	
Badraun	CGWB	Dw	28.19861111	77.37638889	2018	7.65	1336	ND	343.0	55.0	50.0	152.0	32.0	0.0	446.0	80.0	174.0	0.31	22.00	
Badraun	CGWB	Dw	28.19861111	77.37638889	2019	8.62	1261	ND	180.0	28.0	27.0	190.0	52.0	0.0	195.0	55.0	191.0	0.20	28.11	
Badraun	CGWB	Dw	28.19861111	77.37638889	2020	8.44	1194	ND	178.6	16.8	33.2	191.0	24.0	42.8	275.9	67.0	163.1	0.02	22.00	
Badraun	CGWB	Dw	28.19861111	77.37638889	2021	8.81	1091	ND	140.1	12.0	26.8	192.0	32.0	78.0	285.6	0.0	148.9	0.12	4.00	
Badraun	CGWB	Dw	28.19861111	77.37638889	2022	8.18	1160	ND	190.2	44.1	19.5	170.0	42.0	0.0	397.2	24.0	163.1	0.30	11.00	
Badraun	CGWB	Dw	28.19861111	77.37638889	2023	Sample not collected from this location														
Baghaula	CGWB	Dw	28.22083333	77.30833333	2015	8.39	2317	ND	347.1	28.6	67.0	380.0	60.0	70.2	309.4	332.0	361.3	1.12	17.00	
Baghaula	CGWB	Dw	28.22083333	77.30833333	2016	7.85	5030	ND	1303.9	263.1	157.2	600.0	69.0	0.0	304.8	890.0	945.0	0.58	220.00	
Baghaula	CGWB	Dw	28.22083333	77.30833333	2017	7.9	5270	ND	1061.0	144.0	170.0	718.0	365.0	0.0	732.0	1902.0	170.0	0.13	329.00	
Baghaula	CGWB	Dw	28.22083333	77.30833333	2018	7.72	3227	ND	598.0	82.0	95.0	398.0	124.0	0.0	538.0	268.0	612.0	0.31	47.00	
Baghaula	CGWB	Dw	28.22083333	77.30833333	2019	8.7	6930	ND	800.0	28.0	177.0	972.0	537.0	144.0	354.0	1233.0	1212.0	0.62	9.10	
Baghaula	CGWB	Dw	28.22083333	77.30833333	2020	8.13	4201	ND	914.2	96.8	163.4	537.0	38.0	0.0	421.2	952.0	517.6	0.87	58.00	
Baghaula	CGWB	Dw	28.22083333	77.30833333	2021	8.47	4596	ND	1008.2	43.9	218.4	608.0	9.0	31.2	126.9	601.0	1049.3	1.03	54.00	
Baghaula	CGWB	Dw	28.22083333	77.30833333	2022	7.51	7184	ND	2301.8	240.5	413.4	590.0	124.0	0.0	294.7	364.0	1786.7	0.30	692.00	
Baghaula	CGWB	Dw	28.22083333	77.30833333	2023	7.49	6879	ND	2251.0	52.0	515.5	457.0	115.0	0.0	207.0	1682.0	736.0	0.71	578.00	
Bamnikhera	CGWB	Dw	28.0625	77.34166667	2015	8.54	1687	ND	234.8	20.4	44.7	290.0	39.0	81.9	464.1	132.0	166.8	0.91	23.00	
Bamnikhera	CGWB	Dw	28.0625	77.34166667	2016	8.7	1460	ND	212.3	28.3	34.4	235.0	6.8	77.7	349.9	90.0	139.0	0.91	24.00	
Bamnikhera	CGWB	Dw	28.0625	77.34166667	2017	8.19	1915	ND	440.0	72.0	63.0	338.0	11.0	0.0	928.0	161.0	156.0	1.16	50.00	
Bamnikhera	CGWB	Dw	28.0625	77.34166667	2018	7.78	2277	ND	402.0	35.0	76.0	333.0	14.0	0.0	839.0	6.0	264.0	1.17	90.00	
Bamnikhera	CGWB	Dw	28.0625	77.34166667	2019	Sample not collected from this location														
Bamnikhera	CGWB	Dw	28.0625	77.34166667	2020	8.7	2001	ND	357.3	16.8	76.6	320.0	11.0	128.5	610.0	0.0	198.5	1.31	71.00	

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Bamnikhera	CGWB	Dw	28.0625	77.34166667	2021	Sample not collected from this location														
Bamnikhera	CGWB	Dw	28.0625	77.34166667	2022	Sample not collected from this location														
Bamnikhera	CGWB	Dw	28.0625	77.34166667	2023	7.6	1642	ND	465.0	68.0	71.7	138.0	35.0	0.0	410.0	121.0	245.0	2.10	22.00	
Hassanpur	CGWB	Tw	27.97	77.49	2015	8.6	1879	ND	194.0	20.4	34.7	365.0	5.0	93.6	345.1	252.0	194.5	1.26	12.00	
Hassanpur	CGWB	Tw	27.97	77.49	2016	8.52	3055	ND	151.6	36.4	14.7	680.0	0.4	77.7	609.6	492.0	326.6	4.15	13.00	
Hassanpur	CGWB	Tw	27.97	77.49	2017	7.86	1665	ND	320.0	56.0	44.0	302.0	3.0	0.0	342.0	560.0	70.0	1.90	14.00	
Hassanpur	CGWB	Tw	27.97	77.49	2018	8.11	2212	ND	304.0	51.0	43.0	420.0	5.2	0.0	748.0	188.0	278.0	1.27	14.00	
Hassanpur	CGWB	Tw	27.97	77.49	2019	Sample not collected from this location														
Hassanpur	CGWB	Tw	27.97	77.49	2020	8.61	1971	ND	220.7	25.3	38.3	357.0	5.1	71.4	464.7	147.0	219.8	1.40	13.00	
Hassanpur	CGWB	Tw	27.97	77.49	2021	8.9	1531	ND	190.2	16.0	36.5	270.0	4.5	78.0	349.0	92.0	163.1	1.69	14.00	
Hassanpur	CGWB	Tw	27.97	77.49	2022	8.42	2199	ND	290.2	36.1	48.6	427.0	6.0	63.0	551.0	247.0	255.2	1.89	15.00	
Hassanpur	CGWB	Tw	27.97	77.49	2023	7.75	2280	ND	634.0	87.0	101.3	236.0	6.5	0.0	358.0	269.0	405.0	1.30	27.00	
Lalwa	CGWB	Dw	28.1375	77.40416667	2015	8.45	2040	ND	632.9	28.6	136.4	205.0	5.4	59.0	274.0	326.0	277.9	1.64	28.00	
Lalwa	CGWB	Dw	28.1375	77.40416667	2016	8.55	1500	ND	353.8	36.4	63.9	180.0	4.6	55.5	293.5	120.0	194.5	1.00	16.00	
Lalwa	CGWB	Dw	28.1375	77.40416667	2017	7.94	1380	ND	320.0	24.0	54.0	186.0	4.6	0.0	427.0	117.0	170.0	1.75	16.00	
Lalwa	CGWB	Dw	28.1375	77.40416667	2018	8.06	1365	ND	353.0	39.0	62.0	165.0	4.6	0.0	485.0	48.0	174.0	1.78	14.00	
Lalwa	CGWB	Dw	28.1375	77.40416667	2019	8.66	1132	ND	210.0	20.0	39.0	203.0	1.0	84.0	183.0	108.0	163.0	0.95	9.12	
Lalwa	CGWB	Dw	28.1375	77.40416667	2020	8.37	1614	ND	336.3	25.3	66.4	229.0	3.5	42.8	305.0	105.0	262.3	0.67	12.00	
Lalwa	CGWB	Dw	28.1375	77.40416667	2021	8.7	1441	ND	380.3	20.0	80.3	170.0	5.0	62.4	349.0	15.0	234.0	1.26	17.00	
Lalwa	CGWB	Dw	28.1375	77.40416667	2022	8.08	3160	ND	790.6	60.1	155.6	416.0	11.0	0.0	576.6	298.0	623.9	1.00	3.10	
Lalwa	CGWB	Dw	28.1375	77.40416667	2023	Sample not collected from this location														
Palwal	CGWB	Dw	28.15	77.325	2015	8.4	595	ND	194.0	28.6	29.8	62.0	11.0	46.8	95.2	82.0	62.5	0.55	9.80	
Palwal	CGWB	Dw	28.15	77.325	2016	8.54	1915	ND	171.8	40.5	17.2	385.0	3.9	66.6	575.7	151.0	173.7	2.00	19.00	
Palwal	CGWB	Dw	28.15	77.325	2017	8.29	1865	ND	200.0	24.0	34.0	358.0	4.0	0.0	708.0	205.0	128.0	2.25	4.00	
Palwal	CGWB	Dw	28.15	77.325	2018	7.85	1364	ND	275.0	47.0	38.0	205.0	5.2	0.0	538.0	76.0	132.0	1.02	18.00	
Palwal	CGWB	Dw	28.15	77.325	2019	8.72	1242	ND	280.0	32.0	48.0	203.0	1.6	84.0	220.0	104.0	191.0	0.80	15.71	
Palwal	CGWB	Dw	28.15	77.325	2020	8.6	1182	ND	262.7	21.0	51.1	155.0	2.0	57.1	319.5	50.0	134.7	0.79	17.00	
Palwal	CGWB	Dw	28.15	77.325	2021	8.84	1794	ND	230.2	12.0	48.6	334.0	4.0	109.2	491.8	12.0	191.4	1.10	70.00	
Palwal	CGWB	Dw	28.15	77.325	2022	8.26	2212	ND	300.2	32.1	53.5	395.0	8.0	0.0	743.2	51.0	319.1	1.09	37.00	
Palwal	CGWB	Dw	28.15	77.325	2023	7.82	2251	ND	565.0	68.0	96.0	267.0	8.2	0.0	383.0	412.0	263.0	1.70	35.00	
Pehladpur	CGWB	Dw	28.0225	77.17666667	2015	Sample not collected from this location														
Pehladpur	CGWB	Dw	28.0225	77.17666667	2016	8.2	1285	ND	343.7	64.8	44.2	150.0	5.3	0.0	248.4	52.0	180.7	0.58	191.00	

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Pehladpur	CGWB	Dw	28.0225	77.17666667	2017	7.78	1270	ND	410.0	80.0	51.0	100.0	5.6	0.0	439.0	40.0	163.0	0.79	0.00	
Pehladpur	CGWB	Dw	28.0225	77.17666667	2018	7.88	1284	ND	294.0	74.0	26.0	174.0	13.0	0.0	446.0	ND	229.0	0.49	2.40	
Pehladpur	CGWB	Dw	28.0225	77.17666667	2019	8.42	1142	ND	210.0	52.0	19.0	186.0	8.0	36.0	281.0	BDL	234.0	0.62	1.19	
Pehladpur	CGWB	Dw	28.0225	77.17666667	2020	Sample not collected from this location														
Pehladpur	CGWB	Dw	28.0225	77.17666667	2021	8.64	915	ND	250.2	16.0	51.1	97.0	7.0	46.8	142.8	0.0	191.0	0.35	3.00	
Pehladpur	CGWB	Dw	28.0225	77.17666667	2022	8.15	1160	ND	274.0	24.0	52.0	127.0	9.0	0.0	117.0	133.0	207.0	0.42	14.00	
Pehladpur	CGWB	Dw	28.0225	77.17666667	2023	7.7	1325	ND	390.0	61.0	57.8	125.0	19.0	0.0	396.0	128.0	145.0	0.72	11.00	
Pelakh	CGWB	Dw	28.15555556	77.42638889	2015	8.65	1633	ND	245.0	8.2	54.6	262.0	15.0	58.5	226.1	146.0	236.2	0.39	75.00	
Pelakh	CGWB	Dw	28.15555556	77.42638889	2016	8.8	970	ND	141.5	20.2	22.1	175.0	8.5	55.5	293.5	72.0	76.4	0.46	15.00	
Pelakh	CGWB	Dw	28.15555556	77.42638889	2017	7.88	2120	ND	240.0	32.0	39.0	481.0	5.0	0.0	952.0	161.0	241.0	1.20	0.00	
Pelakh	CGWB	Dw	28.15555556	77.42638889	2018	7.73	1180	ND	235.0	39.0	33.0	187.0	5.6	0.0	538.0	34.0	111.0	0.30	2.60	
Pelakh	CGWB	Dw	28.15555556	77.42638889	2019	8.46	1411	ND	250.0	32.0	41.0	271.0	7.0	84.0	183.0	123.0	290.0	0.15	22.00	
Pelakh	CGWB	Dw	28.15555556	77.42638889	2020	8.37	1730	ND	283.7	25.3	53.6	281.0	8.5	57.1	363.1	98.0	248.2	0.37	66.00	
Pelakh	CGWB	Dw	28.15555556	77.42638889	2021	8.87	1500	ND	190.2	8.0	41.3	261.0	12.0	93.6	428.4	0.0	184.0	0.29	40.00	
Pelakh	CGWB	Dw	28.15555556	77.42638889	2022	8.4	1778	ND	330.3	32.1	60.8	250.0	22.0	50.4	448.5	24.0	269.4	0.43	60.00	
Pelakh	CGWB	Dw	28.15555556	77.42638889	2023	7.56	2275	ND	550.0	30.0	115.4	254.0	12.0	0.0	389.0	287.0	346.0	0.70	51.00	
Rasulpur	CGWB	Dw	28.0865	77.39822222	2015	8.52	1020	ND	255.2	16.4	52.1	152.0	7.0	105.3	214.2	85.0	104.2	1.48	0.92	
Rasulpur	CGWB	Dw	28.0865	77.39822222	2016	8.58	2000	ND	131.4	24.3	17.2	430.0	1.2	99.9	654.7	122.0	139.0	5.55	24.00	
Rasulpur	CGWB	Dw	28.0865	77.39822222	2017	8.13	2530	ND	240.0	32.0	39.0	501.0	1.0	0.0	952.0	289.0	156.0	3.25	26.00	
Rasulpur	CGWB	Dw	28.0865	77.39822222	2018	8.21	1909	ND	147.0	20.0	24.0	399.0	3.4	0.0	1009.0	15.0	125.0	5.78	26.00	
Rasulpur	CGWB	Dw	28.0865	77.39822222	2019	8.76	1934	ND	140.0	28.0	17.0	425.0	15.0	192.0	488.0	62.0	184.0	0.89	25.09	
Rasulpur	CGWB	Dw	28.0865	77.39822222	2020	8.6	380	ND	80.1	20.0	7.3	62.0	2.0	36.0	158.7	0.0	14.2	0.01	0.33	
Rasulpur	CGWB	Dw	28.0865	77.39822222	2021	8.83	1395	ND	360.3	8.0	82.7	141.0	20.0	62.4	317.3	12.0	135.0	1.00	159.00	
Rasulpur	CGWB	Dw	28.0865	77.39822222	2022	8.31	1020	ND	294.0	12.0	64.2	87.0	12.0	30.0	264.0	0.0	102.0	0.87	114.00	
Rasulpur	CGWB	Dw	28.0865	77.39822222	2023	7.6	1137	ND	395.0	42.0	70.5	78.0	4.2	0.0	449.0	29.0	71.0	0.81	111.00	
Theraka	CGWB	Tw	28.12527778	77.43305556	2015	8.45	782	ND	245.0	28.6	42.2	82.0	6.3	70.2	166.6	62.0	69.5	1.12	10.00	
Theraka	CGWB	Tw	28.12527778	77.43305556	2016	8.15	1390	ND	384.1	56.7	59.0	145.0	11.0	0.0	440.3	78.0	145.9	0.67	75.00	
Theraka	CGWB	Tw	28.12527778	77.43305556	2017	7.82	2671	ND	581.0	72.0	97.0	389.0	8.5	0.0	757.0	45.0	532.0	0.73	22.00	
Theraka	CGWB	Tw	28.12527778	77.43305556	2018	7.73	989	ND	353.0	51.0	55.0	73.0	6.3	0.0	472.0	ND	83.0	1.08	15.00	
Theraka	CGWB	Tw	28.12527778	77.43305556	2019	8.6	1074	ND	360.0	36.0	66.0	109.7	23.8	72.0	269.0	30.0	163.0	0.40	22.23	
Theraka	CGWB	Tw	28.12527778	77.43305556	2020	Sample not collected from this location														
Theraka	CGWB	Tw	28.12527778	77.43305556	2021	8.87	1165	ND	280.2	20.0	55.9	148.0	7.0	78.0	301.4	106.0	71.0	0.79	54.00	

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Theraka	CGWB	Tw	28.12527778	77.43305556	2022	7.84	4334	ND	807.0	74.0	151.2	624.0	7.8	0.0	412.0	547.0	841.0	0.84	67.00
Theraka	CGWB	Tw	28.12527778	77.43305556	2023	7	4502	ND	725.0	130.0	97.3	694.0	60.0	0.0	483.0	810.0	710.0	0.67	58.00

Name of District	Name of Block	Source	Name of village/ OW data	Latitude	Longitude	Value of EC June 2020	Value of EC June- 2021	Value of EC June- 2022	Value of EC June- 2023
Palwal_619	Palwal_468	SGWB	AHRAWAN	28.10821	77.25764	8900	9000	9000	4800
Palwal_619	Palwal_468	SGWB	ASAWATA	28.1071	77.3484	1500	1550	1900	1900
Palwal_619	Palwal_468	SGWB	BADHA	28.1212	77.22706	3000	3000	3400	3050
Palwal_619	Palwal_468	SGWB	DHAMAKA	28.10823	77.23532	6800	6800	6400	4750
Palwal_619	Palwal_468	SGWB	DHALIACA	28.22526	77.21758	3300	3400	2300	1900
Palwal_619	Palwal_468	SGWB	HAZIPUR	28.09284	77.34158	1700	NA	1900	1600
Palwal_619	Palwal_468	SGWB	JAINDAPUR	28.20361	77.19917	1800	NA	1500	800
Palwal_619	Palwal_468	SGWB	KARNA	28.14437	77.27687	2950	3000	3900	3500
Palwal_619	Palwal_468	SGWB	MISA	28.12882	77.41624	NA	NA	NA	NA
Palwal_619	Palwal_468	SGWB	REHRANA	28.10499	77.31948	2350	NA	3500	2900
Palwal_619	Palwal_468	SGWB	DHATIR	28.19158	77.24491	3800	2500	1300	1900
Palwal_619	Palwal_468	SGWB	KISHOREPUR	28.16194	77.22556	3200	3300	2700	3000
Palwal_619	Palwal_468	SGWB	CHAT	28.18759	77.21291	1800	NA	2200	2000
Palwal_619	Palwal_468	SGWB	BALAI	28.19125	77.45555	5500	1850	NA	NA
Palwal_619	Palwal_468	SGWB	PEELAK	28.13988	77.40049	700	NA	1300	1950
Palwal_619	Palwal_468	SGWB	PALWAL	28.13024	77.32878	NA	NA	2000	1050

Note: Only EC data of SGWB is available.