

ATAL BHUJAL YOJANA (Atal Jal)

State: Maharashtra

Department: Ground water Surveys and Development Agency

HYDROGEOLOGICAL REPORT

BLOCK : Amalner

DISTRICT : Jalgaon

YEAR : 2020

*Towards partial fulfillment of requirements for Disbursement of
Incentive under DLI -9*

DATE OF DISCLOSURE: 25/11/2020.

HYDROGEOLOGICAL REPORT

(YEAR : 2019-20)

STATE	:	Maharashtra
DISTRICT	:	Jalgaon
BLOCK/TALUK	:	Amalner
BLOCK/TALUK HQs	:	Amalner

A GENERAL INFORMATION							
1.	Geographical area (Ha) : 83324.99						
2.	No. of Gram Panchayats : 119						
3.	No. of towns : 1						
4.	No. of villages : 154						
5.	Population (2011) : <table border="1" style="margin-left: 20px;"> <tr> <th>Male</th> <th>Female</th> <th>Total</th> </tr> <tr> <td>99029</td> <td>92826</td> <td>191855</td> </tr> </table>	Male	Female	Total	99029	92826	191855
Male	Female	Total					
99029	92826	191855					
6.	Rainfall (mm) : <table border="1" style="margin-left: 20px;"> <tr> <th>Monsoon</th> <th>Non-monsoon</th> <th>Annual</th> </tr> <tr> <td>686.20</td> <td>114.10</td> <td>800.30</td> </tr> </table>	Monsoon	Non-monsoon	Annual	686.20	114.10	800.30
Monsoon	Non-monsoon	Annual					
686.20	114.10	800.30					
7.	River basin : Tapi						
8.	Major soil types : Black Cotton Soil						

B LAND USE	
1.	Forest area (Ha) : 1843
2.	Cultivable area (Ha) : 67768.21
3.	Net sown area (Ha) : 67768.21
4.	Gross cropped area (Ha) :

C CROPPING PATTERN (As in 2019-20)																									
1.	Major crops grown : <table border="1" style="margin-left: 20px;"> <tr> <th>Khariif</th> <th>Rabi</th> <th>Summer</th> <th>Perennial</th> </tr> <tr> <td>Cotton</td> <td>Wheat</td> <td></td> <td></td> </tr> <tr> <td>Maze</td> <td>Gram</td> <td></td> <td></td> </tr> <tr> <td>Jawar</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Khariif	Rabi	Summer	Perennial	Cotton	Wheat			Maze	Gram			Jawar											
Khariif	Rabi	Summer	Perennial																						
Cotton	Wheat																								
Maze	Gram																								
Jawar																									

D IRRIGATION FACILITIES (As in 2019-20)											
1.	Net irrigated area (Ha) : 10585.39										
2.	Gross irrigated area (Ha) :										
3.	Area under irrigation (Ha) (Source-wise) : <table border="1" style="margin-left: 20px;"> <tr> <th>DW</th> <th>BW/TW</th> <th>Tanks/Ponds</th> <th>Canals</th> <th>Others</th> </tr> <tr> <td>10585.39</td> <td></td> <td></td> <td>0</td> <td></td> </tr> </table>	DW	BW/TW	Tanks/Ponds	Canals	Others	10585.39			0	
DW	BW/TW	Tanks/Ponds	Canals	Others							
10585.39			0								

E GEOLOGY & HYDROGEOLOGY	
1.	Predominant rocktype : Hard Rock
2.	Major geological formations : Deccan Basalt

3.	Important water-bearing formations	:	Weathered Basalt
4.	Status of coverage under NAQUIM		Not Covered.

F GROUND WATER CONDITIONS								
1.	No. of wells used for WaterLevel (WL) monitoring.	:	Open wells			BW/TW/ PZ		
			CGWB	SGWD	Total	CGWB	SGWD	Total
			3	11	14			
2.	Monitoring mechanism (Nos.)	:	Manual		DWLR		Telemetry	
			CGWB	SGWD	CGWB	SGWD	CGWB	SGWD
			3	11				
3.	Monitoring frequency	:	Agency	No. of times monitored/year				
			CGWB	4				
			SGWD	4				
4.	Period of water level data availability.	:	Agency	Period of WL data availability (From - To)				
				From (year)		To (year)		
			CGWB	2015		2019		
			SGWD	2015		2019		
5.	Water level range (m.bgl) Pre-monsoon (April-May 2019) Post-monsoon (November 2019)	:	Minimum/Village		Maximum/Village			
			2.80/Dhar		12.10/Mehergaon			
			2.00/Chopdai		8.7/Mehergaon			
6.	Seasonal WL fluctuation range (m)	:	Minimum/ Village		Maximum/ Village			
			4/Mehergan		13.7/Kamatwadi			

G GROUND WATER QUALITY							
1.	No. of wells used for Water Quality (WQ) monitoring.		Open Wells			BW/TW/ PZ	
			CGWB	SGWD	Total	CGWB	SGWD
			0	11	11	0	11
2.	Monitoring frequency		Agency	No. of times monitored/year			
			CGWB	0			
			SGWD	2 time (pre & post monsoon)			
3.	Period of water quality data availability		Agency	Period of WQ data availability (Years)			
			CGWB	0			
			SGWD	2016-2019			
4.	Parameters analysed		Agency	Parameters Analysed			
			CGWB	0			
			SGWD	Temperature ,pH, EC, TDS , Total Hardness , Alkalinity , Calcium , Chloride , Nitrate , Sulphate , Fluoride , Iron			
5.	Known ground water quality issues, if any		No				

H. GROUND WATER RESOURCES		
1.	Latest assessment year	2016-17
2.	Assessment Unit	Taluk/Watershed
3.	Annual extractable GW resource (ha.m)	11304.62
4.	Current annual GW extraction (ha.m)	8124.01
5.	Net GW availability for future use (ha.m)	2201.24
6.	Stage of GW extraction (%)	71.86

7.	Category of block/taluk/(2017)		Semi-critical			
8.	Category of block/taluk/ in previous assessments		2013	2011	2009	2004
			Safe	Safe	Safe	Safe

I		WATER-RELATED SCHEMES				
1.	Schemes with a bearing on ground water, being implemented in the block / taluk.					
	Centrally Sponsored /Central Sector Schemes	i)	NRDWP Sustainability			
		ii)	PMKSY			
		iii)	MGNAREGA			
		iv)				
	State Schemes	i)	Shivkalin			
		ii)	Jalyukta Shivar			
		iii)				
		iv)				

J		GROUND WATER RELATED ISSUES				
1.	Ground water related issues of the block/					
	i) Issues related to GW availability	:	Taluka is in Semi-critical category			
	ii) Issues related to GW quality	:	No			
	iii) Other issues if any.	:	No			

TABLE-01

BASIC DATA OF WATER LEVEL (WL)/WATER QUALITY (WQ) WELLS LOCATIONS

STATE-MAHARASHTRA, DISTRICT-JALGAON, TALUKA-AMALNER

Sl. No	Well No.	Village Name	Long.	Lat.	Type of well (DW/BW/TW/PZ)	Reduced Level (m.amsl)	Aquifer tapped	Height of measuring point (m.agl)	Depth (m.bgl)	Diameter (m)	Purpose of monitoring (WL/ WQ / WL & WQ)	Monitoring mechanism (Manual/ DWLR/ Telemetry)	Agency
1	W210633075183501	Kamatwadi	75.3081843	21.1089327	DW		Basalt	0	19	3	WL	Manual	SGWD
2	W205918075101001	Dheku kh	75.1698009	20.9883124	DW		Basalt	0	10	1.9	WL	Manual	SGWD
3	W210733075062901	Mehergaon	75.1057570	21.1273570	DW		Basalt	0.8	13	6	WL	Manual	SGWD
4	W205845075045501	Sadawan Bk	75.0900130	20.9763880	DW		Basalt	0	13.3	5.2	WL	Manual	SGWD
5	W205747074570201	Dangar Bk	74.9472900	20.9639170	DW		Basalt	0.4	7.4	5.9	WL	Manual	SGWD
6	W210519075023201	Dhar	75.0397730	21.0881020	DW		Basalt	0.7	7	3	WL	Manual	SGWD
7	W210148075034501	Amalner	75.0576250	21.0612301	DW		Basalt	0.8	8.6	2.3	WL	Manual	SGWD
8	W210610074564501	Bharwas	74.9452070	21.1013220	DW		Basalt	1	17.5	6	WL	Manual	SGWD
9	W210632074531701	Mudi pr Da	74.8856330	21.1104400	DW		Basalt	0	8	4	WL	Manual	SGWD
10	W210927074592901	Kalamsare	74.9913889	21.1575000	DW		Basalt	0	14.1	6	WL	Manual	SGWD
11	W205700074552501	Chopdai	74.9236111	20.9500000	DW		Basalt	0.6	11	2.5	WL	Manual	SGWD

TABLE-01-Continued

Sl. No	Well No.	Village Name	Long.	Lat.	Type of well (DW/BW/TW/PZ)	Reduced Level (m.amsl)	Aquifer tapped	Height of measuring point (m.agl)	Depth (m.bgl)	Diameter (m)	Purpose of monitoring (WL, WQ / WL & WQ)	Monitoring mechanism (Manual/DWLR/Telemetry)	Agency
1	W210243075043801	Amalner-1	75.077222	21.045278	Dug Well	182			7.2				CGWB
2	W210243075043801	Amalner-1	75.077222	21.045278	Dug Well	182			7.2				CGWB
3	W210243075043801	Amalner-1	75.077222	21.045278	Dug Well	182			7.2				CGWB
4	W210243075043801	Amalner-1	75.077222	21.045278	Dug Well	182			7.2				CGWB
5	W210243075043801	Amalner-1	75.077222	21.045278	Dug Well	182			7.2				CGWB
6	W210243075043801	Amalner-1	75.077222	21.045278	Dug Well	182			7.2				CGWB
7	W210243075043801	Amalner-1	75.077222	21.045278	Dug Well	182			7.2				CGWB
8	W210243075043801	Amalner-1	75.077222	21.045278	Dug Well	182			7.2				CGWB
9	W210243075043801	Amalner-1	75.077222	21.045278	Dug Well	182			7.2				CGWB
10	W210243075043801	Amalner-1	75.077222	21.045278	Dug Well	182			7.2				CGWB
11	W210243075043801	Amalner-1	75.077222	21.045278	Dug Well	182			7.2				CGWB
12	W210243075043801	Amalner-1	75.077222	21.045278	Dug Well	182			7.2				CGWB
13	W210243075043801	Amalner-1	75.077222	21.045278	Dug Well	182			7.2				CGWB
14	W210243075043801	Amalner-1	75.077222	21.045278	Dug Well	182			7.2				CGWB
15	W210243075043801	Amalner-1	75.077222	21.045278	Dug Well	182			7.2				CGWB
16	W210340075124901	Nimjhari	75.213611	21.061111	Dug Well	185			18				CGWB
17	W210340075124901	Nimjhari	75.213611	21.061111	Dug Well	185			18				CGWB
18	W210340075124901	Nimjhari	75.213611	21.061111	Dug Well	185			18				CGWB
19	W210340075124901	Nimjhari	75.213611	21.061111	Dug Well	185			18				CGWB
20	W210800075135001	Savkheda	75.230556	21.133333	Dug Well	169			85				CGWB
21	W210800075135001	Savkheda	75.230556	21.133333	Dug Well	169			85				CGWB
22	W210800075135001	Savkheda	75.230556	21.133333	Dug Well	169			85				CGWB

TABLE-02													
WATER LEVEL (WL) DATA OF MONITORING WELLS-SGWD													
STATE-MAHARASHTRA, DISTRICT-JALGAON, TALUKA-AMALNER													
Sr.No.	Well ID	Well Type	Village	May-15	Oct-15	May-16	Oct-16	May-17	Oct-17	May-18	Oct-18	May-19	Oct-19
1	W210633075183501	DW	Kamatwadi	14	3.6	16	3.7	19	4.75	16.9	4	16.3	2.6
2	W205918075101001	DW	Dheku kh	5.1	3.9	8.5	3.1	8.2	5	9.7	3	9.9	1
3	W210733075062901	DW	Mehergaon	9.4	9.2	15.8	9.5	13	13	13	13	13	9
4	W205845075045501	DW	Sadawan Bk	5.9	4.5	10.2	3.4	12.2	7.5	12.1	4.1	12.3	1.1
5	W205747074570201	DW	Dangar Bk	9.7	2.5	10	1.8	7.4	4.2	8.5	4	8.5	0.2
6	W210519075023201	DW	Dhar	4.2	3.9	7.9	2.1	6.3	4.1	6.3	2.4	6.4	0.4
7	W210148075034501	DW	Amalner	12	9.2	12.5	8.5	8.2	4.55	7.15	5.2	7.3	0.8
8	W210610074564501	DW	Bharwas	6.8	3.8	7.6	3.1	7.6			5.2	16.4	2.7
9	W210632074531701	DW	Mudi pr Da	18.5	5.1	18.5	4.7	8	7	9.4	5.5	9.4	0.3
10	W210927074592901	DW	Kalamsare	8.8	6.1	13	4.3	13.8	9.95	12.9	7.05	13.1	2.1
11	W205700074552501	DW	Chopdai	8	3.8	12	3.1	11	10.4	11	11	11	1.3

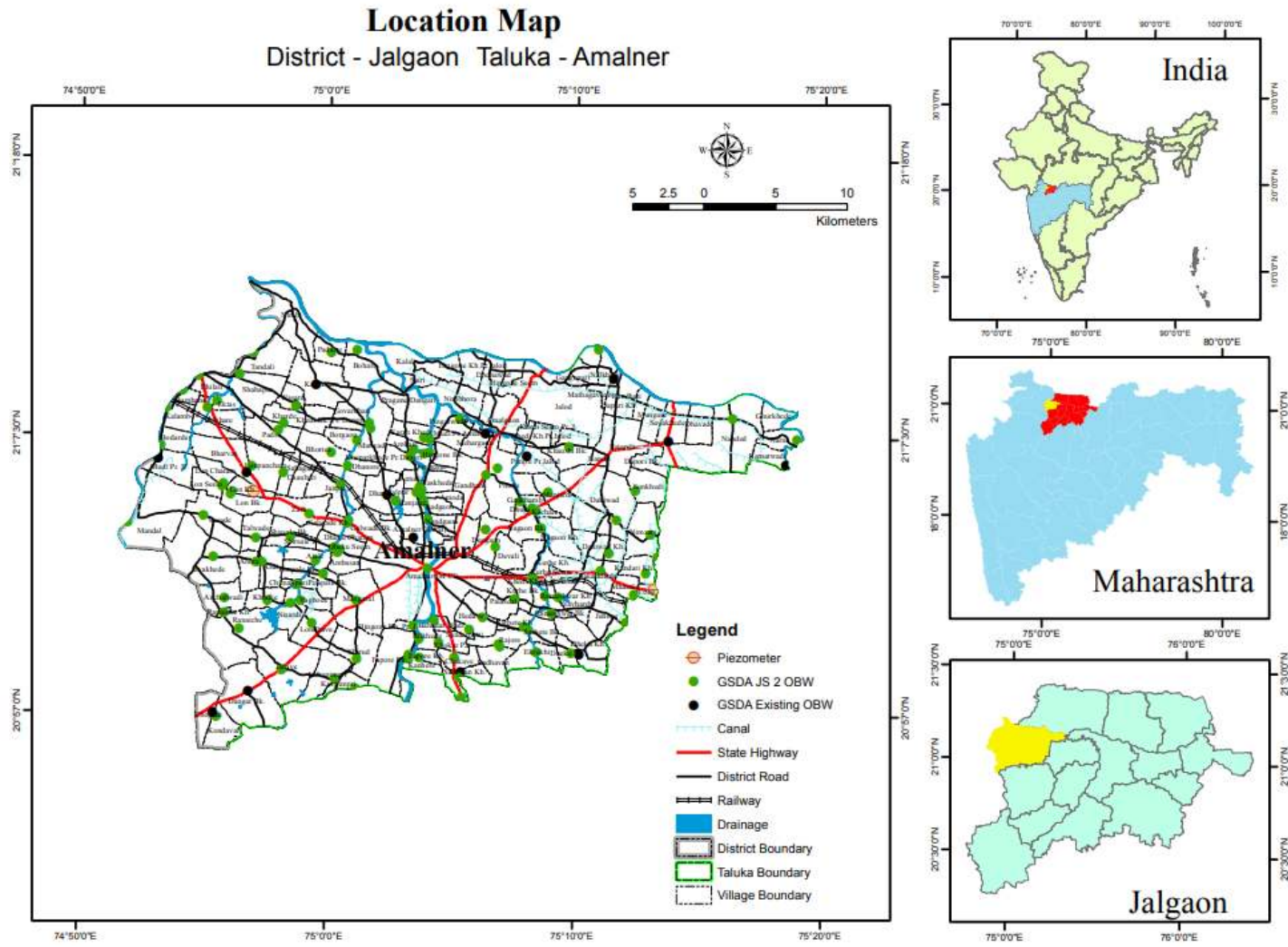
TABLE-02-Continued													
WATER LEVEL (WL) DATA OF MONITORING WELLS-CGWB													
STATE-MAHARASHTRA, DISTRICT-JALGAON, TALUKA- AMALNER													
Sr.No.	Well ID	Well Type	Village	May-15	Nov-15	May-16	Nov-16	May-17	Nov-17	May-18	Nov-18	May-19	Nov-19
1	W210243075043801	DW	Amalner-1			7.2	4.27	7.2	4.57	6.5	4.4	7.19	2.9
2	W210340075124901	DW	Nimjhari									15.16	5.3
3	W210800075135001	DW	Savkheda										

TABLE-03

WATER QUALITY (WQ) DATA OF MONITORING STATIONS-SGWD																		
STATE-MAHARASHTRA, DISTRICT-JALGAON, TALUKA- AMALNER																		
Sr. No.	Name of Village	Type of Source	Year	Sample Testing Date	Temp	pH	EC	TDS (mg/L)	Alkalinity (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Nitrate (mg/L)	Sulphate (mg/L)	Total Hardness (mg/L)	Iron (mg/L)	Ca (mg/L)	Mg (mg/L)	Remark
1	Kamatwadi	DW	16-17	16.06.2016	370C	8.1	1349.230769	877	244	92	0.47	54.51	NA	260	BDL	NA	NA	UNFIT
2	Kamatwadi	DW	17-18	04.05.2017	370C	8.2	917	596	280	93.971	0.706	25.7339	50.66	292	0.008	NA	NA	FIT
3	Kamatwadi	DW	18-19	25.04.2018	370C	8.4	1146.153846	745	240	139.96	0.192	84.22	72.58	172	BDL	NA	NA	UNFIT
4	Kamatwadi	DW	19-20	11.11.2019	260C	7.9	1040.532308	676.35	48	398	0.4	0.886	40	188	0.13	NA	NA	FIT
5	Pimpri jalod	DW	16-17	25.10.2016	370C	8.4	732.3076923	476	84	41.987	0.961	41.9078	NA	220	0.018	NA	NA	FIT
6	Pimpri jalod	DW	17-18	04.05.2017	370C	8.2	669	435	192	87.973	1.216	30.9258	27.68	164	0.245	NA	NA	FIT
7	Pimpri jalod	DW	18-19	25.10.2018	370C	8.1	856.1377846	556.49	100	234	0.9	39.3916	34	148	0.33	NA	NA	FIT
8	Pimpri jalod	DW	19-20	06.11.2019	260C	7.7	812.6430769	528.22	136	126	0.7	77.968	31	156	0.02	NA	NA	UNFIT
9	Dheku kh	DW	16-17	25.10.2016	370C	8.5	676.9230769	440	272	59.981	BDL	55.8003	NA	284	BDL	NA	NA	UNFIT
10	Dheku kh	DW	17-18	14.11.2017	370C	6.8	875.3846154	569	240	149.95	0.843	1.497	32.87	392	0.006	NA	NA	FIT
11	Dheku kh	DW	18-19	21.04.2018	370C	8	715.3846154	465	260	49.985	0.387	44.8	134.24	260	0.065	NA	NA	FIT
12	Dheku kh	DW	19-20	16.04.2019	37° C	7.8	830.7692308	540	152	70	0.368	84.28	35.46	176	0.1	NA	NA	UNFIT
13	Mehergaon	DW	16-17	25.10.2016	370C	8.3	456.9230769	297	60	39.988	0.466	11.8813	NA	176	BDL	NA	NA	FIT
14	Mehergaon	DW	17-18	04.05.2017	370C	8.2	2138	1390	464	317.9	0.905	93.2958	77.96	252	0.012	NA	NA	UNIFT
15	Mehergaon	DW	18-19	23.04.2018	370C	7.8	2869.230769	1865	520	165.95	0.607	39.78	62.38	200	0.101	NA	NA	FIT
16	Mehergaon	DW	19-20	05.04.2019	37° C	8.5	1935.384615	1258	592	194	1.452	44.4	57.18	244	0.344	NA	NA	FIT
17	Sadawan Bk	DW	16-17	25.10.2016	370C	8.2	489.2307692	318	188	31.99	0.682	78.0034	NA	120	0.013	NA	NA	UNFIT
18	Sadawan Bk	DW	17-18	06.11.2017	370C	7.6	624.6153846	406	272	73.977	0.458	1	26.54	276	0.01	NA	NA	FIT
19	Sadawan Bk	DW	18-19	02.05.2018	370C	8.2	967.6923077	629	256	99.969	BDL	1.382	51.54	108	0.012	NA	NA	FIT
20	Sadawan Bk	DW	19-20	09.04.2019	37° C	8.2	756.9230769	492	188	58	1.114	35.68	61.05	120	0.1	NA	NA	FIT
21	Dangar Bk	DW	16-17	26.10.2016	370C	8.5	667.6923077	434	92	41.987	BDL	58.5114	NA	156	0.021	NA	NA	UNFIT
22	Dangar Bk	DW	17-18	21.04.2017	370C	7.9	860	559	268	79.975	1.467	51.4766	90.84	444	0.035	NA	NA	UNIFT
23	Dangar Bk	DW	18-19	19.04.2018	370C	8	2292.307692	1490	280	374.88	0.981	82.38	122.37	760	BDL	NA	NA	UNFIT
24	Dangar Bk	DW	19-20	12.04.2019	37° C	7.8	3107.692308	2020	364	612	0.694	89	192.43	564	0.1	NA	NA	UNFIT

25	Dhar	DW	16-17	25.10.2016	370C	8.1	680	442	48	69.978	0.444	50.8121	NA	240	0.027	NA	NA	UNFIT
26	Dhar	DW	17-18	16.11.2017	370C	7.7	1675.384615	1089	56	479.85	0.549	5.918	10.336	500	0.203	NA	NA	FIT
27	Dhar	DW	18-19	17.10.2018	370C	7.2	1551.847908	1008.7	40	700	0.4	6.19314	58	608	0.18	NA	NA	UNFIT
28	Dhar	DW	19-20	06.11.2019	260C	8.1	610.2092308	396.64	128	74	0.6	14.176	39	140	0.08	NA	NA	FIT
29	Bharwas	DW	16-17	26.10.2016	370C	7.5	1355.384615	881	80	155.95	0.699	90.815	NA	416	0.013	NA	NA	UNFIT
30	Bharwas	DW	17-18	03.05.2017	370C	7.6	1460	949	192	149.95	BDL	44.4329	117.8	580	BDL	NA	NA	FIT
31	Bharwas	DW	18-19	25.04.2018	370C	8.1	624.6153846	406	180	79.975	0.704	56.22	35.23	140	BDL	NA	NA	UNFIT
32	Bharwas	DW	19-20	17.04.2019	37° C	8.1	1118.461538	727	152	136	0.066	86.24	49.88	276	0.22	NA	NA	UNFIT
33	Mudi pr Da	DW	19-20	17.04.2019	37° C	8.5	900	585	192	126	0.25	11.952	42.2	192	0.318	NA	NA	FIT
34	Kalamsare	DW	16-17	25.10.2016	370C	8	850.7692308	553	100	71.978	1.402	17.0821	NA	144	0.016	NA	NA	FIT
35	Kalamsare	DW	17-18	16.11.2017	370C	8.3	569.2307692	370	172	73.977	0.659	9.183	34.25	280	0.273	NA	NA	FIT
36	Kalamsare	DW	18-19	17.10.2018	370C	7.8	1019.995908	663	320	110	1.4	32.5073	11	188	0.15	NA	NA	FIT
37	Kalamsare	DW	19-20	11.04.2019	37° C	8.3	1563.076923	1016	360	220	1.357	63.34	58.97	220	0.147	NA	NA	UNFIT
38	Chopdai	DW	16-17	26.10.2016	370C	8.2	472.3076923	307	80	35.989	BDL	62.9946	NA	224	0.032	NA	NA	UNFIT
39	Chopdai	DW	17-18	21.04.2017	370C	8	772	502	232	97.97	0.258	50.7235	72.63	400	0.016	NA	NA	UNIFT
40	Chopdai	DW	18-19	19.04.2018	370C	7.8	796.9230769	518	60	189.94	0.389	2.622	60.38	164	0.005	NA	NA	FIT
41	Chopdai	DW	19-20	15.11.2019	260C	7.7	614.6246154	399.51	112	60	0.1	80.626	30	116	0.14	NA	NA	UNFIT

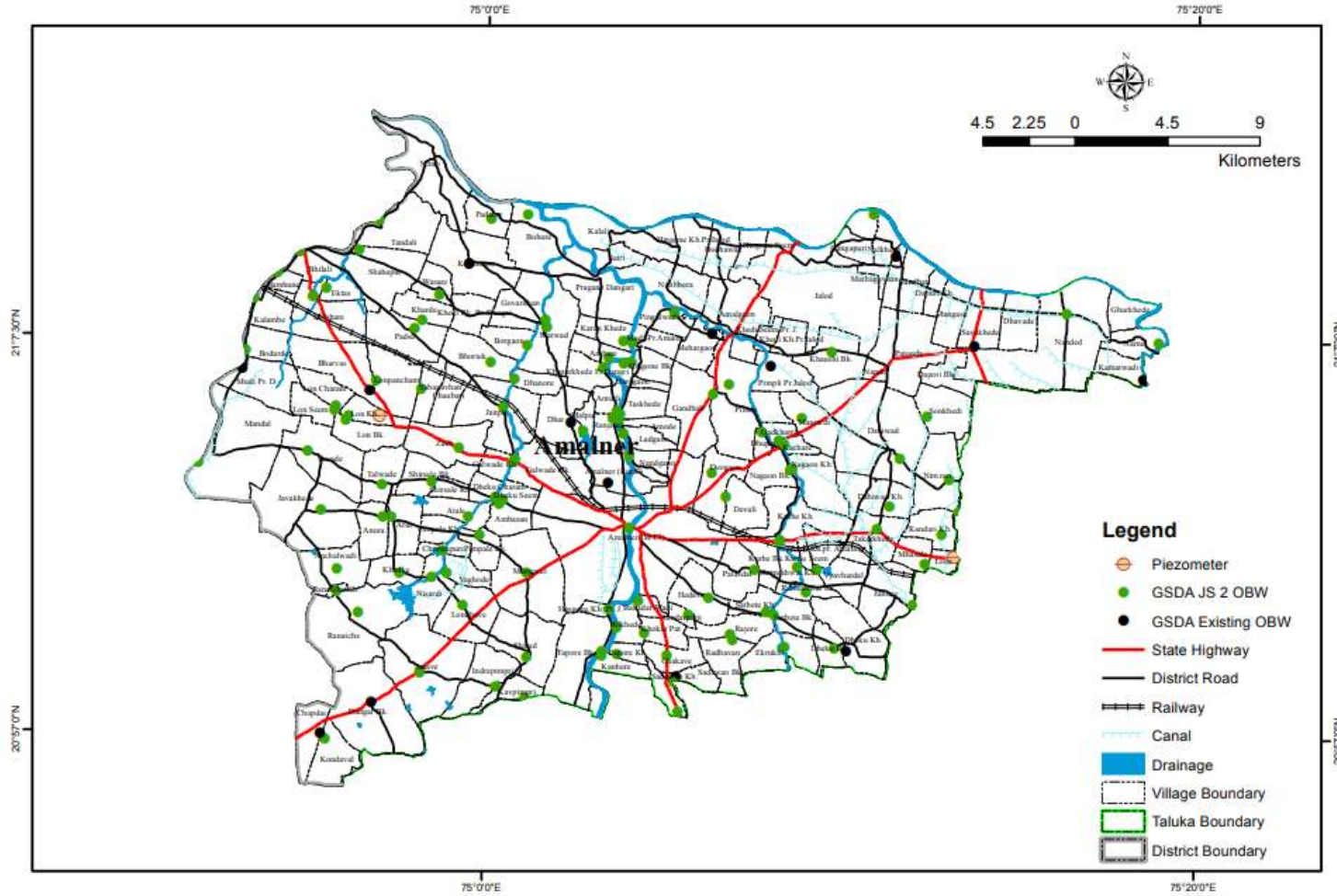
MAP-01-LOCATION MAP



MAP-02-Base MAP

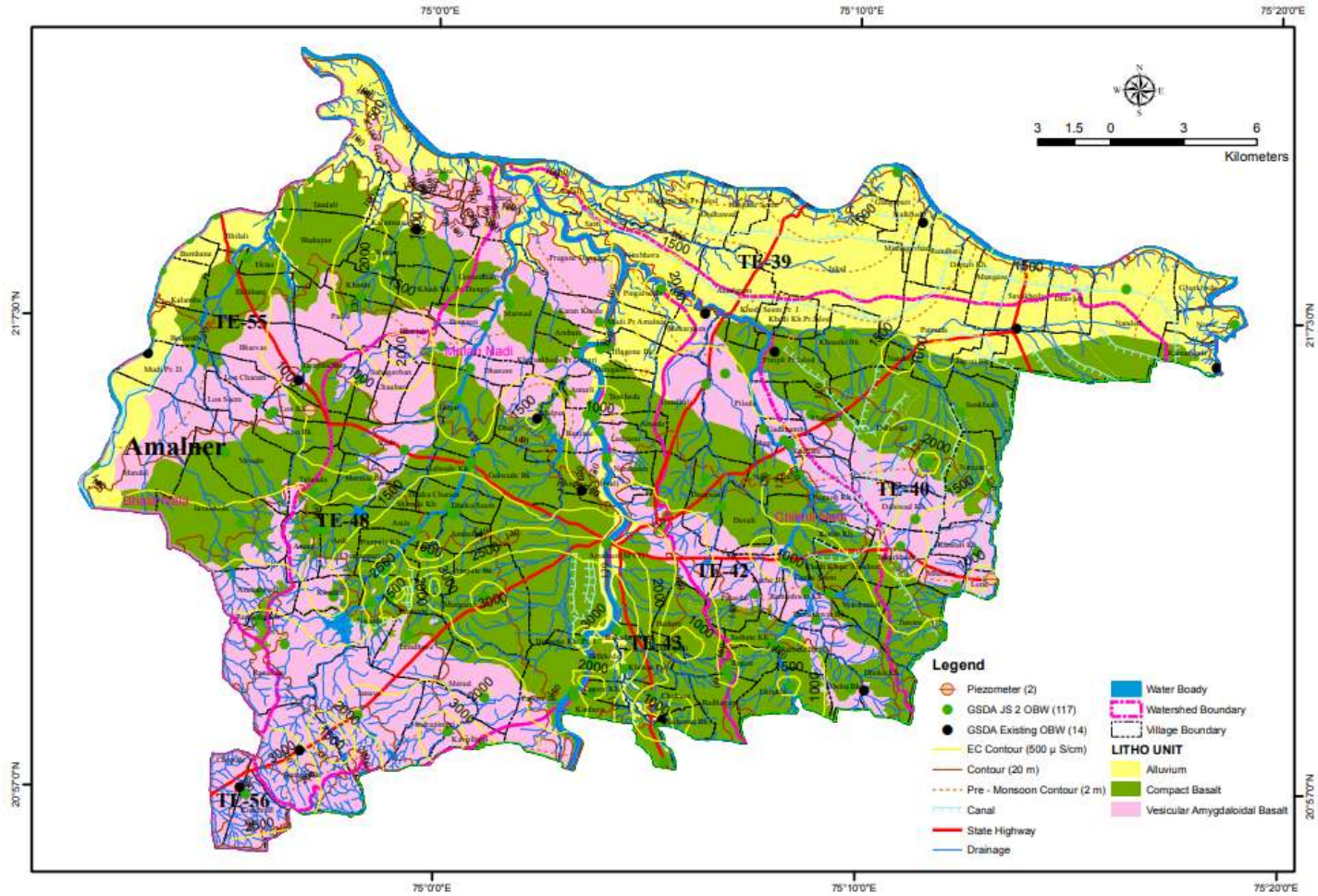
Base Map

District - Jalgaon Taluka - Amalner

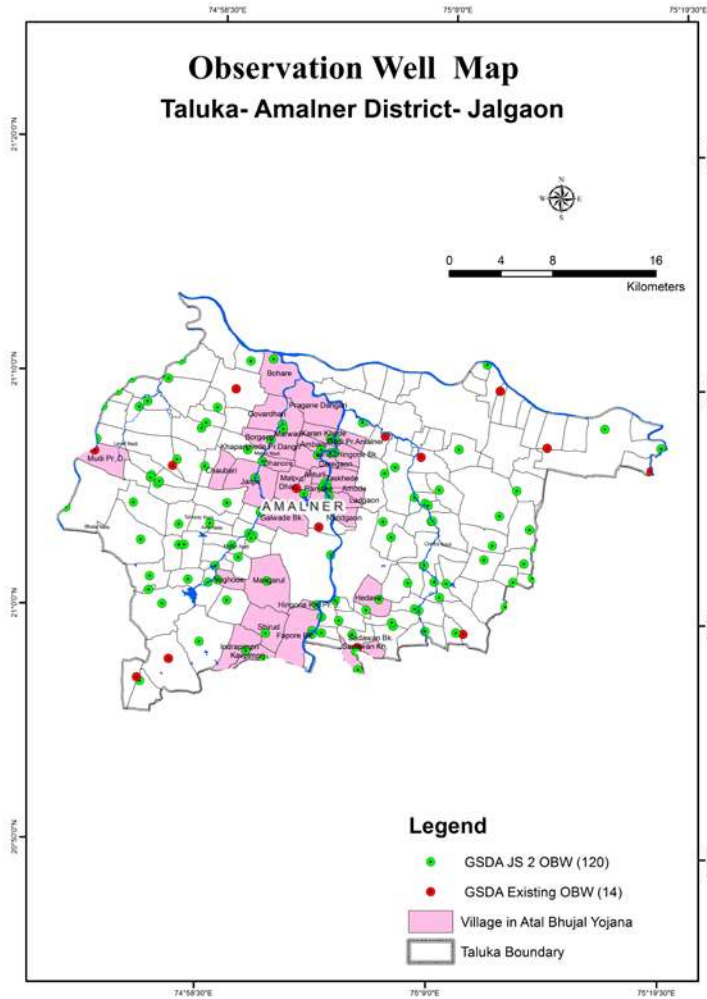


MAP-03-HYDROGEOLOGICAL MAP

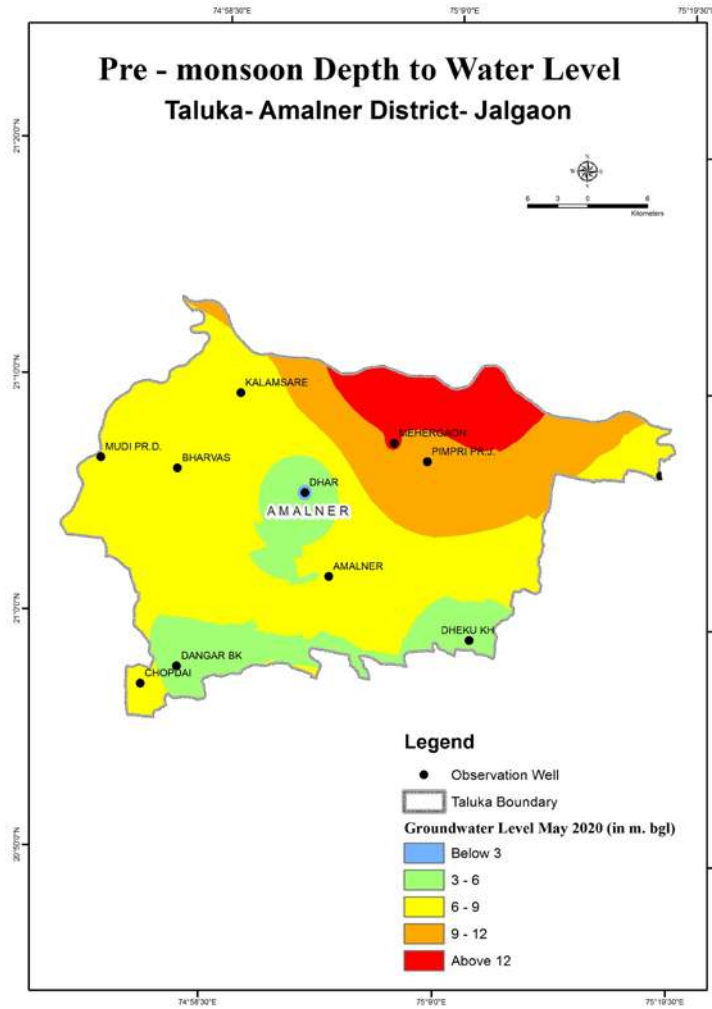
Hydrogeological Map
District - Jalgaon Taluka - Amalner



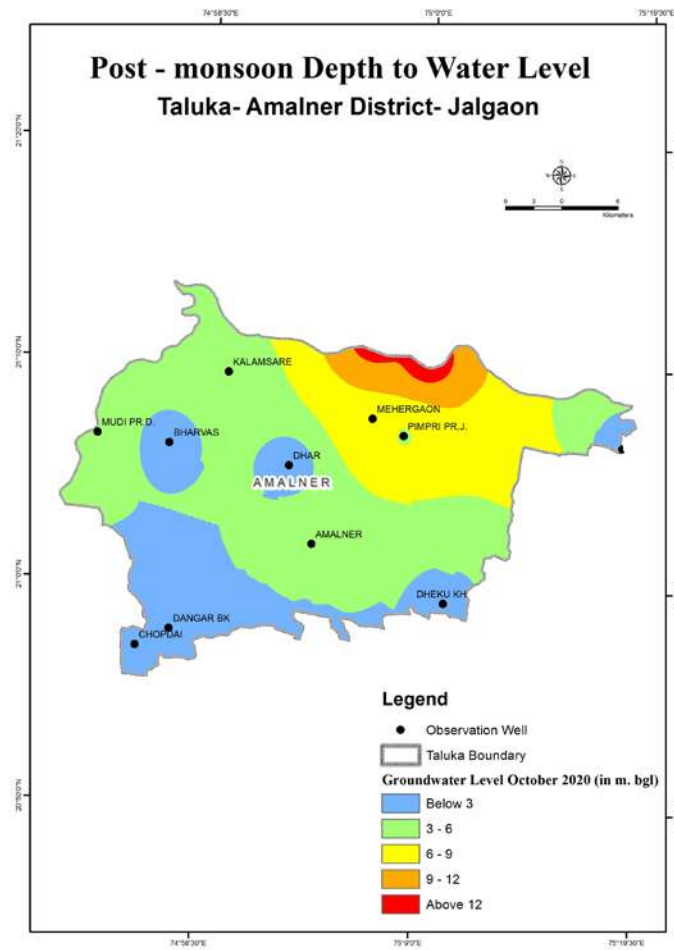
MAP-04-LOCATION OF OBW MAP



MAP-05-PRE-MONSOON GWL MAP



MAP -06- POST-MONSOON GWL MAP



MAP NO-07-GW ELECTRIC CONDUCTIVITY MAP

Distribution of Electrical Conductivity Map
District - Jalgaon Taluka - Amalner

