



**C.1 Mahatma Gandhi NREGA Job card Holders (Source: MIS – MGNREGA)**

Registered Job cards		Active Job Cards		Expenditure Since Inception	Expenditure Last Year	Key Observations
HHS	Person	HHS	Person			

**Climatic profile**

Temperature				
Months	Minimum (oC)	Maximum (oC)	Average (oC)	Key Observations
January-19				
February-19				
March-19				
April-19				
May-19				
June-19				
July-19				
August-19				
September-19				
October-19				
November-19				
December-19				

Rainfall					
Rainfall	Normal Rainfall (mm)	Normal Rainy	Normal Onset	Normal	Key Observations
SW monsoon (June-Sept)					
NE Monsoon (Oct-Dec)					
Winter (Jan-Mar)					
Summer(Apr-May)					
Annual					

**Evapo Transpiration (<http://indiawris.gov.in/wris/#/waterData>)**

Month	Evapo-Transpiration	Key
Jun-18		
Jul-18		
Aug-18		
Sep-18		
Oct-18		
Nov-18		
Dec-18		
Jan-19		
Feb-19		
Mar-19		

No data

	Apr-19		
	May-19		
		0	
<b>Soil Moisture</b>			
	<b>Month</b>	<b>Volumetric Soil</b>	<b>Key</b>
	Jul-18		
	Aug-18		
	Sep-18		
	Oct-18		
	Nov-18		
	Dec-18		
	Jan-19		
	Feb-19		
	Mar-19		
	Apr-19		
	May-19		
	Jun-19		
		0	

No data

**D. Land Resources**

**D.1 Information of Land Use (Ha.) (Source: Census 2011)**

	<b>Classification</b>	<b>Area in Ha</b>	<b>Key</b>
	Forest Area		
	Area under Non-Agricultural Uses		
	Barren & Un-cultivable Land Area		
	Permanent Pastures and Other Grazing Land Area		
	Land Under Miscellaneous Tree Crops etc. Area		
	Culturable Waste Land Area		
	Fallows Land other than Current Fallows Area		
	Current Fallows Area		
	Total Unirrigated Land Area		
	Area Irrigated by Source		
	Total		

**D.2 Land Use Detail of Micro Water Sheds (Source: Watershed Atlas)**

S.N	Macro W/s Name	Macro No.	Area (Ha.)	Micro W/s No.	Area (Ha)	Key
1						
2						
3						
4						
5						

6								
7								
8								
9								
10								

**D.3 Soil Resources** ( Source : <https://soilhealth.dac.gov.in/NewHomePage/NutriPage>)

Major Nutrients (No. of samples in village)	Very Low (VL)	Low (L)	Medium (M)	High (H)	Very High (VH)	Key Observations
Nitrogen (N)						
Phosphorus (P)						
Potassium (K)						
Organic Carbon						

Micro Nutrients (No. of samples in village)	Sufficient (S)	Deficient (D)	Total Sample	Key
Boron (B)				
Copper (Cu)				
Iron (Fe)				
Manganese (Mn)				
Sulphur (S)				
Zinc (Zn)				

Physical Parameter	pH	Values	EC	Key
Acidic Sulphate (AS)				
Strongly Acidic (SrAc)				
Highly Acidic (HAc)				
Moderately Acidic (MAc)				
Slightly Acidic (SIAc)				
Neutral (N)				
Moderately Alkaline (MAI)				
Strongly Alkaline (SIAI)				

**D 4 A. Soil Profile (Source: Agriculture Contingency Plan for District)**

SN	Type of Soil	Presence	Key
1	Clayey skeletal		
2	Fine		
3	Fine loamy		
4	None		
5	<b>Total</b>		
6			

**D 5. Forest Resources (Source: Department of Forest)**

SN	Type of Forest	Area in Ha	Key
1	Protected Forest		
2	Reserve Forest		
3	Open Forest/Jungle		
4	Degraded Forest		
5	Village Forest		
6	Community Conserved Area		
Total		0	

**D 6. Water Resources****D6A. Amount of Run-off (To be calculated from Strange's table method)**

Types of Run-Off	Area (Hect.)	% of Runoff	Rainfall:		Key Observations
			run-off (Cum)	run-off (Ha.)	
Good Catchment Area	0	#N/A	#N/A	#N/A	
Average Catchment Area	0	#N/A	#N/A	#N/A	
Bad Catchment Area	0	#N/A	#N/A	#N/A	
<b>Total</b>	<b>0</b>			<b>#N/A</b>	

**D6B. Existing Water Harvesting Structures**

S.N.	Name of Structure	Existing Structures				
		No.	Area in Ha	Storage	Type of Uses	Key Issues
1	Pond (Talab/Naadi)					
2	Oorani					
3	MPT					
4	Anicut					
5	Checkdam					
6	Gabion					
7	Gully Plug					
8	Farm Pond					
9	RTRWHS					
10	Tanka					
11	Other (please specify name)					
Total				<b>0.00</b>		

**D6C. Description of Natural Drainage Lines (Source: Gram Panchayat/ Irrigation & Minor Irrigation department)**

S.N.	Name / Details	Length in	Type of Use	key Issues
1				
2				
3				
4				

5							
6							
7							
<b>Total</b>			0				

**D6D. Canal Network (Source: GP/Irrigation department)**

S.N.	Type	Length in Village (m)	Type of Use	Key Issues
1	Main Canal			
2	Minor			
3	Distributaries			
4	Water Courses (Field Channels)			
<b>Total</b>		0		

**D6E. Availability of Drinking water (Department of Public Health Engineering)**

Source		Functional in No.	Households	Key Observation
Type				
Tap Supply	Household			
	Public			
RTRWHS / Tanka				
Handpump				
Openwell				
Borewell				
Tank/ Pond/ Oorani				
Springs				
River/ Streams				
Other (specify name)				

**D6F. Status of Irrigation Facilities-Surface Water (Source: Census 2011)**

Type	Area Irrigated	Available	Key Issues
Canals Area (in Hectares)			
Wells/Tube Wells Area (in Hectares)			
Tanks/Lakes Area (in Hectares)			
Waterfall Area (in Hectares)			
Other Source (specify) Area (in Hectares)			
<b>Total</b>	0		

**Means of Water Extraction**

S.N	Type	No. of Sources	Purpose	Target Area	Target	Key Issues
	Gravity based					
	Syphoning					
	Electric Power					

<b>Lifting</b>	Solar Power					
	Diesel Power					
	Draught power					

**Water Application practices for Irrigation**

S.N.	Details of Practices	Water Source	Extraction	Area in Ha	Key Issues
1	Wild Flooding				
2	Control Flooding				
3	Furrow Method				
4	Contour Farming				
5	Sprinkler Irrigation				
6	Drip Irrigation				

**W 1. Water Quality Profile (Source: [https://ejalshakti.gov.in/IMISReports/Reports/WaterQuality/WQ/rpt\\_WQ\\_DistrictProfile\\_S.aspx?Rep=0&RP=Y](https://ejalshakti.gov.in/IMISReports/Reports/WaterQuality/WQ/rpt_WQ_DistrictProfile_S.aspx?Rep=0&RP=Y) {District Quality Profile})**

**Chemical Contaminants (Nos. of Sources with Single Chemical Contaminants)**

Iron	Fluoride	Salinity	Nitrate	Arsenic	Key

**Bacterial and Other Contaminants (Nos. of Sources with Bacteriological Contaminants)**

Faecal Coliform	TDS	Hardness	Chloride	Sulphates	Key

**Assessment of Grey Water Generation**

S.N	Waste water generation Source	Per day/unit waste	Daily volume of	Annual Grey	Key
1	Bathing	15	0	0	
2	Washing	10	0	0	
3	Toilet	10	0	0	
4	Cleaning	5	0	0	
5	Cooking and cleaning Utensils	5	0	0	
6	Others	5	0	0	
<b>Total</b>		<b>50</b>	<b>0</b>	<b>0</b>	
<b>Annual Grey water generated in HaM</b>				<b>0</b>	

**5. Details of Domestic Grey Water Drains**

S.N.	Details of existing Drain	Total Length of	Termination	Key Issues
1				
2				
3				
4				
5				
6				

7								
	<b>Total</b>		0					

**E. Agriculture and Water Resources**

SI	Crop	Irrigated Area (ha)	Rainfed area	WR (m) -	WR (m) -	Volume in	volume in HaM	Total volume
1	Paddy			1.5	1	0	0	0
2	Jowar			0.55	0.5	0	0	0
3	Bajra			0.4	0.35	0	0	0
4	Maize			0.6	0.55	0	0	0
5	Ragi			0.45	0.4	0	0	0
6	Wheat			0.55	0.45	0	0	0
7	Minor Millets			0.35	0.3	0	0	0
8	Bengal gram			0.45	0.4	0	0	0
9	Red gram			0.7	0.65	0	0	0
10	Other pulses			0.4	0.35	0	0	0
11	Groundnut			0.6	0.5	0	0	0
12	Castor			0.7	0.65	0	0	0
13	Sunflower			0.6	0.5	0	0	0
14	Soybean			0.55	0.45	0	0	0
15	Sesamum			0.45	0.35	0	0	0
16	Mustard			0.45	0.35	0	0	0
17	Safflower			0.45	0.35	0	0	0
18	Linseed			0.5	0.4	0	0	0
19	Niger			0.4	0.3	0	0	0
20	Sugar cane			2	1.7	0	0	0
21	Cotton			0.85	0.75	0	0	0
22	Tobacco			0.5	0.45	0	0	0
23	Mulberry			1.2	0.8	0	0	0
24	Mango			0.6	0.6	0	0	0
25	Banana			2.2	2.2	0	0	0
26	Lemon			0.9	0.9	0	0	0
27	Guava			0.6	0.6	0	0	0
28	Sapota			0.5	0.5	0	0	0
29	Pomogranate			0.6	0.9	0	0	0
30	Papaya			0.9	0.6	0	0	0
31	Grapes			0.9	0.9	0	0	0
32	Other fruits			0.6	0.6	0	0	0
33	Potato			0.6	0.5	0	0	0
34	Tomato			0.7	0.7	0	0	0
35	Brinjal			0.7	0.7	0	0	0
36	Beans			0.5	0.5	0	0	0



37	Onion			0.6	0.5	0	0	0
38	Green chillies			0.6	0.6	0	0	0
39	Cole crops			0.6	0.6	0	0	0
40	Ladies finger			0.5	0.5	0	0	0
41	Radish			0.3	0.3	0	0	0
42	Carot			0.4	0.4	0	0	0
43	Water melon			0.3	0.3	0	0	0
44	Total leafy vegetables			0.3	0.3	0	0	0
45	Total gaurds			0.4	0.4	0	0	0
46	Other vegetables			0.45	0.45	0	0	0
47	Pepper			1	1	0	0	0
48	Cardamum			1	1	0	0	0
49	Tamarind			0.6	0.6	0	0	0
50	Dry Ginger			0.9	0.9	0	0	0
51	Turmeric			0.9	0.9	0	0	0
52	Garlic			0.6	0.6	0	0	0
53	Dry chilli			0.5	0.65	0	0	0
54	Coriander			0.6	0.6	0	0	0
55	Other spices			0.7	0.7	0	0	0
56	Coconut			0.5	0.5	0	0	0
57	Arecanut			0.7	0.7	0	0	0
58	Coffee			1	1	0	0	0
59	Oil palm			0.5	0.7	0	0	0
60	Cashew			0.5	0.5	0	0	0
61	Other plantation crops			0.5	0.5	0	0	0
62	Total flower crops			0.7	0.7	0	0	0
63	Medicinal plants			0.7	0.7	0	0	0
64	Aromatic crops			0.7	0.7	0	0	0
65	Forest			0.45	0.45	0	0	0
<b>Total</b>		<b>0</b>	<b>0</b>			<b>0</b>	<b>0</b>	<b>0</b>

**Livestock and Water Resources (Source: Livestock Census, 2014, Dept of Animal Husbandry)**

Type of Animal	Numbers	Water Req. (HaM)
Cattle (Indigenous)		0.00
Cattle (Cross breed)		0.00
Buffaloes		0.00
Sheep		0.00
Goat		0.00
Horses and Camels		0.00
Pigs		0.00
Poultry		0.00

Dogs		0.00
Rabbits		0.00
<b>Total</b>		<b>0.00</b>

<b>Water Demand Estimation (Primary Information)</b>				
<b>Water Users</b>	<b>Total Annual</b>	<b>Requirement</b>	<b>Requirement</b>	<b>Key</b>
Human	0			
Animals	0.00			
Agriculture	0	0.00	0	
Industry				
Other (specify)				

#### F. Water Budget

##### F.6 Village Wise Water Budgeting (Ha.M)

<b>S.N.</b>		<b>Required</b>	<b>Key</b>
1	Water for Human	0.00	
2	Water for Agriculture	0.0	
3	Water for Animal	0.00	
4	Water for Industry		
5	Water for Other Purposes		
6	Village wise water required (1 to 5)	0.0	
7	Available run-off from rain water	#N/A	
8	Harvested Runoff from Water Harvesting Activities	0.0	
9	Potential Harvesting from proposed Interventions		
10	Total Water harvested	0.0	
11	Water deficiency/Surplus (10-6)	0.0	

#### Key Water Challenges

<b>SN</b>	<b>Title</b>	<b>Key Challenges</b>
1	B.1 Population and Household Information (Source: Census 2011)	
2	C.1 Mahatma Gandhi NREGA Job card Holders (Source: MIS – MGNREGA)	
3	Climatic profile	
4	Rainfall	
5	Evapo Transpiration ( <a href="http://indiawris.gov.in/wris/#/waterData">http://indiawris.gov.in/wris/#/waterData</a> )	
6	Soil Moisture	
7	D.1 Information of Land Use (Ha.) (Source: Census 2011)	
8	D.2 Land Use Detail of Micro Water Sheds (Source: Watershed Atlas)	
9	D.3 Soil Resources (Source : <a href="https://soilhealth.dac.gov.in/NewHomePage/NutriPage">https://soilhealth.dac.gov.in/NewHomePage/NutriPage</a> )	
10	D 4 A. Soil Profile (Source: Agriculture Contingency Plan for District)	
11	D 5. Forest Resources (Source: Department of Forest)	

12	D6A. Amount of Run-off (To be calculated from Strange's table method)				
13	D6B. Existing Water Harvesting Structures	.....			
14	D6C. Description of Natural Drainage Lines (Source: Gram Panchayat/ Irrigation & Minor Irrigation)				
15	D6D. Canal Network (Source: GP/Irrigation department)				
16	D6E. Availability of Drinking water (Department of Public Health Engineering)				
17	D6F. Status of Irrigation Facilities-Surface Water (Source: Census 2011)				
18	Means of Water Extraction				
19	Water Application practices for Irrigation				
20	Chemical Contaminants (Nos. of Sources with Single Chemical Contaminants)				
21	Bacterial and Other Contaminants (Nos. of Sources with Bacteriological Contaminants)				
22	Assessment of Grey Water Generation				
23	5. Details of Domestic Grey Water Drains				
24	Water Demand Estimation (Primary Information)				
25	F.6 Village Wise Water Budgeting (Ha.M)				

**C. Comprehensive Action Plan for Water Resources (Note: row could be added as per requirements)**

**1. Action Plan for existing waterbodies/tanks/ponds/oornis/WHS**

S.N.	Name & Location of Structure	Storage Capacity (Ha. M)	Interventions Required				
			Deepening/	Inlet	Surplus/waste	Bund	Estimated Cost
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

**2. Action Plan for New Water Bodies/Farm Ponds (Source: Gram Panchayat)**

**2 a) Action Plan for New Water Bodies on Common land**

S.N.	Nature of Storage/Location	Area (Hectares)	Storage	Estimated
1				
2				

**2 b) Action Plan for Farm Ponds on Individual Beneficiary land (Note: row could be added as per number of beneficiaries)**

S.N.	Name of Individual Beneficiary & Site	Storage Capacity	Estimated Cost
1			
2			
3			
4			

5			
6			
7			
8			
9			
10			

**3. Action Plan for Roof top Rain Water Harvesting for Storage (Source: Gram Panchayat)**

**3 a) Action Plan for Roof top Rain Water Harvesting for Storage on Common land**

S.N.	Nature of Storage/Location	Storage	Estimated
1			
2			
3			
4			

**3 b) Action Plan for Roof top Rain Water Harvesting for Storage on Individual Beneficiary land**

S.N.	Name of Individual Beneficiary & Site Location	Storage	Estimated
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

**4. Action Plan for Canal Network (Source: GP/Irrigation & Minor Irrigation Department)**

S.N.	Type	Interventions Required				Estimated Cost
		Slit removal	Restoration /	Repairing	Canal side	
1	Main Canal					
2	Branch Canal					
3	Branch Distributary					
4	Minor					
	<b>Total</b>					

**5. Action Plan for Water Courses (Source: GP/Irrigation & Minor Irrigation Department)**

S.N.	Site Location/Name	Interventions Required			Estimated Cost	Bund	Estimated Cost
		Renovation	Silt removal	Strengthening			
1							

2							
3							
4							
5							
6							
7							
8							
9							
10							
	<b>Total</b>						

**6. Intervention Required for Natural Drainage Network (Source: Gram Panchayat/ Irrigation & Minor Irrigation Department)**

S.N.	Name	Interventions Required				
		Deepening/ Desilting	Silt traps	Check dams/	Recharge	Connecting
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
	<b>Total</b>					

**Consolidated Proposed Activities for Water Security**

Activity	Numbers	Area In Ha	Estimated Cos	Expected Outcomes
<b>Treatment measures of upper slopes</b>				
Afforestation				
Continous contour trenches (CCT)				
Water point				
Gabion				
Contour Continous Bunds (CCB)				
Drainage Line Treatment (DLT)				
Gully Plugs				
<b>Treatment measures of middle slopes</b>				
Loose Stone Check Dam (LSCD)				
Mini Percolation Tank (MPT)				
Staggerred Contour Trenches (SgCT)				

Water Absorption Trench (WAT)							
Water Harvesting Structure (WHS)							
Silvi-pasture Development							
Linear Plantation							
Avenue plantation							
Block Plantation							
Fencing							
Grass seeding							
<b>Treatment measures of gentle slopes</b>							
Deepening of waterbodies							
Desiltation of waterbodies							
Waterbody Bund strengthening							
Inlet development with silt trap of							
Surplus/waste weir							
Sub surface barriers							
Artificial recharge structure							
<b>Treatment measures for canal network</b>							
Repairing outlets, gates & regulators of							
Minor repair of cracks in canals							
Canal Bed levelling							
Canal Bund Plantation							
Irrigation channels							
Canal side plantation							
<b>Treatment measures for farm lands</b>							
Composting							
Farm Bunding							
Micro Irrigation							
Construction of farm ponds							
Construction/renovation open well							
Nursery development							
Silt application							
Mulching							
Land development							
Field terracing							
<b>Drinking water measures</b>							
Rooftop Rainwater Harvesting							
Drinking Water Scheme Panghat							
<b>Grey water management</b>							
Drain for Regulating Domestic waste							
Wastewater drains							
soak pits							