

PROJECT IN BRIEF

1.1 SALIENT FEATURES OF PROJECT

i. Source

The source is located at Narmada main canal RD 74.00 Km (Near offtake of Bhimguda Distributory). Year wise drawl at source is as follows:

Demand/Year	2016			2031			2041		
	Sheo	Ramsar	Total	Sheo	Ramsar	Total	Sheo	Ramsar	Total
KLD	10075.90	7614.73	17690.62	14430.73	10905.84	25336.57	16828.19	12717.69	29545.88
MLD	10.0759	7.647	17.690	14.430	10.905	25.336	16.828	12.717	29.545

ii. Coverage

District	Tehsil	No. of Villages	Population		
			Yr-2016	Yr-2031	Yr-2041
1	Sheo	110	121263	173673	202526
2	Ramsar	95	91643	131251	153056
Total		205	212905	304924	355583

iii. Tehsil wise Requirement of Water

The Clear Water Demand is as below.

District	Tehsil	No. of Villages	Demand KLD		
			Yr-2015	Yr.-2029	Yr-2041
Barmer	Sheo	110	9431.54	13507.89	15752.03
	Ramsar	95	7127.77	10208.41	11904.39
Total		205	16559.31	23716.30	27656.42

iv. Rate of Supply

Rural

For Command Area 40 LPCD

For Non Command Area 70 LPCD

v. Alignment Proposed

Raw Water Trunk Main

RD 74.00 Km of NMC to Aleti Head Works

Transmission/Transfer Mains –

- CW Pumping from Aleti to Mangta CWR
- CW Pumping from Mangta to Isrol CWR
- CW Pumping from Isrol to tapping Setrau to Ramsar CWR

- CW pumping from Ramsar to Gadra road
- CW pumping from Gadra road to Khalife Ki Baori to Shadad Ka Par Khurd
- CW pumping from Gadraroad to Basra
- CW pumping from Ramsar to Balewa to Judiya
- CW pumping from Ramsar to Girab
- CW pumping from Setrau to Rajiv Nagar
- CW pumping from Ramsar to Surali

vi. Pipe Lines

Details of Raw Water Main/Transmission/Transfer Main

Sr. No.	From	To	Length (m)	Dia (mm)	Material	Class/ Thickness /Factory Test Pressure	Ref.
Raw Water Main							
1	L Point RD -74.0 Km	Aleti Head Works (RWR/WTP)	5200	700	MS	-	As per IS 3589
2	Aleti Head Works (RWR)	WTP (Aleti Head Work)	200	700	MS	-	As per IS 3589
		Total	5400				
Clear Water Main							
1	Aleti Head Works	IPS 1 Near Mangta	44500	700	MS	-	As per IS 3589
2	IPS 1 Near Mangta	IPS 2 Near Isrol	25500	700	MS	-	As per IS 3589
3	IPS 2 Near Isrol	Tapping point at Setrau in transmission main from IPS 2 to Ramsar	38500	700	MS	-	As per IS 3589
4	Tapping point at Setrau in transmission main from IPS 1 to Ramsar	CWR Ramsar	11945	600	MS	-	As per IS 3589
5	Tapping point at Setrau in transmission main from IPS ii to Ramsar	CWR at Setrau	1000	300	BWSC	12Kg/sqcm	As per IS 15155
6	CPS/TPS Ramsar	CPS Surali	17000	300	BWSC	12Kg/sqcm	As per IS 15155
7	CPS/TPS Setrau	CWR Rajiv Nagar	19000	200	DI	K-7	As per IS 8329

Sr. No.	From	To	Length (m)	Dia (mm)	Material	Class/ Thickness /Factory Test Pressure	Ref.
8	CPS/TPS Ramsar	CWR Balewa	26000	300	BWSC	12Kg/sqcm	As per IS 15155
9	CPS/TPS Balewa	CWR Judiya	27000	200	DI	K-7	As per IS 8329
10	CPS/TPS Ramsar	Ridge at Rd 2.5km from Ramsar onward to CWR Gadra road	2500	400	BWSC	12Kg/sqcm	As per IS 15155
11	Ridge at Rd 2.5km from Ramsar onward to CWR Gadra road	Tapping point at Gagariya Rd 10.0 km from Ramsar onward to CWR Gadra road	7500	400	BWSC	12Kg/sqcm	As per IS 15155
12	Tapping point at Gagariya Rd 10.0 km from Ramsar onward to CPS at Gadra road	CWR Gagariya	1600	200	DI	K-7	As per IS 8329
13	Tapping point at Gagariya Rd 10.0 km from Ramsar onward to CWR at Gadra road	CWR near Gadra road	26000	350	BWSC	12Kg/sqcm	As per IS 15155
14	CPS/TPS Ramsar	Ridge at Rd 5.5km from Ramsar onward to CWR Girab	5500	250	BWSC	12Kg/sqcm	As per IS 15155
15	Ridge at Rd 5.5km from Ramsar onward to CWR at Girab	CWR Girab	41500	250	BWSC	12Kg/sqcm	As per IS 15155
16	CPS/TPS near Gadra road	CWR (Near Basra)	28000	200	DI	K-7	As per IS 8329
17	CPS/TPS near Gadra road	CWR near Khalife ki Baori	25000	300	BWSC	12Kg/sqcm	As per IS 15155
18	CPS/TPS near Khalife ki Baori	CWR Shadad ka par (Rohiri)	26000	200	DI	K-7	As per IS 8329
		Total	374045				

Details of Cluster Pumping Main

Sr.No.	Dia (mm)	Length (m)	
		DI K-7	DI K-9
Sheo Tehsil			
1	100	224300	100
2	125	156500	100
3	150	102800	45000
4	200	14000	100
	Sub total	497600	45300
Ramsar Tehsil			
1	100	103800	37500
2	125	29000	100
3	150	48000	100
4	200	7000	100
	Sub Total	187800	37800
	Total	685400	83100

Details of Cluster Distribution Pipe Lines

S.No.	Dia (mm)	Total length of uPVC class-3 pipe line (m)	
		Sheo	Ramsar
1	90	149150	132200
2	110	84900	90100
3	125	65000	30100
4	140	19000	13500
5	160	11000	28700
6	180	3850	100
7	200	200	200
8	225	100	2000
9	250	2000	100
	Total	335200	297000

Details of Village Distribution System

S.No.	Nominal dia. of uPVC class-3 pipe (mm)	Length (M)	
		Sheo	Ramsar
1	90	165300	131375
2	110	34925	32125
3	125	20175	15700
4	140	8100	7800
5	160	1800	3400
6	180	800	800
7	200	280	560
8	225	120	240
	TOTAL	231500	192000

vii. Pumping Stations

Statement of Pump Configuration & Standby

Pump configuration at RW Pumping Stations

S. No.	Location	From	To	Pumps Details (Ph-I)				
				Config. (Running + Standby)	Disch. for pump Q (LPS)	Head H (m)	KW	Rated Volt. (V)
1	RD 74.00 Km L Point	Canal	RWR	3+2	Generating Normal (352) and Pre closure (704) flows at 44m and 55m by VFD support			415
2	Aleti (H/W)	RWR	WTP	1+1	340	12	70	415

Pump Configuration at Transfer Pumping Station (0.415 KV)

Pumping Station	Section	Pumps Details Phase -I			
		Config. (Running + Standby)	Disch. per pump Q (LPS)	Tent Head (m)	Tent. Pump KW
Aleti (Head Works)	Aleti (Headworks) to CWR Near Mangta	2+2	165	90	171
Mangta (IPS-1)	IPS-1 Mangta to CWR Near Isrol	2+2	165	106	201
Isrol (IPS-2)	IPS-2 Near Isrol to Tapping Setrau	2+2	165	67	144
Ramsar (TPS)	TPS Ramsar to CWR Gadra Road	1+1	121	10	24
	TPS Ramsar to CWR Girab	1+1	34	63	41
	TPS Ramsar to CWR Surali	1+1	39	36	27
	TPS Ramsar to CWR Belwa	1+1	51	83	83
Balewa (TPS)	TPS Balewa to CWR Judiya	1+1	14	55	15
Setrau (TPS)	TPS Setrau to CWR Rajiv nagar	1+1	20	59	22
Gadra Road (TPS)	TPS Gadra Road to CWR Khalife ki Baori	1+1	52	18	18
	TPS Gadra Road to CWR Near Basra	1+1	18	4	1
Khalife ki Baori (TPS)	TPS Khalife ki Baori to CWR Shadad ka par (Rohiri)	1+1	17	17	6

Pump Configuration at Cluster Pumping Stations (0.415 KV)

Pumping Station	Section	Pumps Details Phase -I			
		Config. (Running + Standby)	Disch. per pump Q (LPS)	Head H (m)	Tent KW
	SHEO PUMPING STATION				
Balewa	PS Balewa - Phogera*Balewa*Harsani-Gordiya*Moseri-Magra	1+1	30	59	35
	PS Balewa - Redana-Devipura	1+1	9	88	16
Girab	PS Girab-Ugeri*Girab*Salam singh ki basti*Chetrori-Jeena Ki Basti*Hafiya @ Sankhi	1+1	18	38	13

Pumping Station	Section	Pumps Details Phase -I			
		Config. (Running + Standby)	Disch. per pump Q (LPS)	Head H (m)	Tent KW
	PS Girab-Acharaniyon ki dhani-Aasari-Kundal@Gordhanili*Shastri Gaon-Bandhara	1+1	14	60	16
Gadra Road	PS Gadra Road-Gadard road (M)*Gadra road (R)	1+1	18	39	14
	PS Gadra Road-Ranasar-Detani*Kareem ka par-Dhamdali*Onara	1+1	20	74	29
KHALIFA KI BAORI	PS KHALIFA KI BAORI-Khareen*Matar ka par*Bhooni-Jaisindhar Station-Hafiya-Peethakar*Ransingh ki Dhani-Pannela*Beejawl	1+1	23	56	25
	PS KHALIFA KI BAORI-Sargila*Matarani Sound	1+1	3	71	4
	PS KHALIFA KI BAORI-Rohiri*Baniyali	1+1	5	29	3
Shadadka par khurd (Rohiri)	PS Shadadka par khurd (Rohiri)-Bhabhar*Sirguwala*Moderdi-Sundra	1+1	10	73	14
	PS Shadadka par khurd (Rohiri)-Peeparli-Nohdiyalai	1+1	6	111	13
	PS Shadadka par khurd (Rohiri)-Dhagari	1+1	2	42	2
Near Barsa	PS Near Basra-Jaisindhar Gaon*Munaaba	1+1	8	58	9
	PS Near Basra- Tamlor*Barsa	1+1	5	79	8
Near	PS Judiya-Karni Nagar*Judiya	1+1	2	22	1

Pumping Station	Section	Pumps Details Phase -I			
		Config. (Running + Standby)	Disch. per pump Q (LPS)	Head H (m)	Tent KW
	PS Judiya-Jan singh Beri*Tanumanji	1+1	9	39	7
	RAMSAR PUMPING STATION				
Gagriya	PS Gagriya-Alarakha Ka Par-Sinhani* Kantaliya Ka Par	1+1	18	48	17
	PS Gagriya- Sangrani*Sujal Ka Par	1+1	6	63	7
	PS Gagriya-Aneelsar	1+1	2	32	1
Surali	PS Surali- Pandi Ka Par*Bukar-Ladhe Ka Par*Surali	1+1	16	38	12
	PS Surali-Jane ki Beri-Selau-Nage Ka Par	1+1	14	45	12
	PS Surali-Ganganiyon Ka Par -Sabu Ka Par	1+1	10	62	12
Ramsar	PS Ramsar -Lasuwa*Bhachbhar	1+1	9	86	15
	PS Ramsar-Nopatiya*Pabosariya	1+1	7	73	10
	PS Ramsar-Ramsar	1+1	12	32	8
	PS Ramsar-Khariya Kalan*Naisiyae	1+1	7	55	8
	Rajiv Nagar (CPS 4)				
Rajiv Nagar	PS Rajiv Nagar-Rajiv Nagar	1+1	2	29	1
	PS Rajiv Nagar-Joonala Bhoo Ka Tala*Gandhi Nagar*Soda Basti-Ramdeoriyon Ka Tala	1+1	18	78	28
Setrau	PS Setrau-Setrau*Pabodhan Singh ki Dhani- Bhakalsar	1+1	16	33	10
	PS Setrau-Gidaniyon Ka Tala* Khariya Rathoran	1+1	11	60	13

viii. Raw Water Reservoir (RWR)

Capacity	620 ML
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ix. Water Treatment Plant (WTP)

Location	Output Capacity
Aleti H/W	1400 KLH (28 MLD)

x. Clear Water Reservoir

Clear water reservoirs at following Head Works.

Sr. No.	Location	Capacity (KL)
	AT Transfer Pumping Stations	

1	Aleti H/W	2800
2	IPS-1 Mangta	2800
3	IPS-2 Isrol	2800
4	Gadraroad	900
5	Setrau	400
6	Ramsar	2400
7	Belwa	450
8	Khalifa ki Baori	450
	Cluster Pumping Stations - Ramsar	
1	Rajiv Nagar	200
2	Surali	350
3	Near Gagriya	250
	Cluster Pumping Stations - Sheo	
1	Near Judiya	150
2	Near Barsa	150
3	Near Shadadka par khurd (Rohiri)	150
4	Near Girab	300

xi. Elevated Service Reservoir

Abstract of ESRs

S. No.	Capacity (KL)	No. of ESRs		Staging (m)
		Sheo Tehsil	Ramsar Tehsil	
1	100	17	6	20
2	150	19	6	20
3	200	10	8	20
4	250	2	6	20
5	300	4	2	20
6	400	1	3	20
7	500	0	1	20
8	700	1	0	20
	Total	54	32	

Cluster wise ESRs (OHSRs) of Ramsar

Cluster	ESR Location	Village	Demand in KLD			ESR Cap KL
			2016	2031	2041	
1	SETRAU	Chadi	113.46	162.50	189.50	

1	SETRAU	Setrau	179.44	257.00	299.70	
			292.91	419.50	489.20	250
1A	GIDALIYON KA TALA	Dhanora	110.12	157.72	183.92	
1A	GIDALIYON KA TALA	Gidaliyon Ka Tala	98.19	140.63	164.00	
1A	GIDALIYON KA TALA	Rodi Nadi	52.26	74.84	87.28	
			260.58	373.20	435.20	250
1B	KHARIYON RATHORAN	Pooniyon Ka Tala	55.60	79.63	92.86	
1B	KHARIYON RATHORAN	Khariya Rathoran	213.45	305.70	356.49	
			269.05	385.33	449.35	250
1C	Chadar Bankalsar	Chadar Bankalsar	103.80	148.66	173.36	
1C	Chadar Bankalsar	Chadar Dakhnad	61.33	87.83	102.42	
			165.13	236.49	275.79	150
2	RAJEEV NAGAR	Rajiv Nagar	63.71	91.25	106.41	
			63.71	91.25	106.41	100
2A	SODHA BASTI	Khadeen	84.95	121.66	141.88	
2A	SODHA BASTI	Davkiyon Ki Dhani	41.16	58.95	68.75	
2A	SODHA BASTI	Sodha Basti	54.05	77.41	90.27	
			180.16	258.03	300.89	200
2B	Gandhi Nagar	Jakhron Ka Tala	76.24	109.19	127.33	
2B	Gandhi Nagar	Indrawas	76.84	110.05	128.33	
2B	Gandhi Nagar	Gandhi Nagar	75.29	107.82	125.74	
			228.36	327.06	381.40	200
3	BHACHBHAR	Bhachbhar	139.95	200.44	233.74	
3	BHACHBHAR	Suwara	135.18	193.60	225.77	
3	BHACHBHAR	Wagta Ki Beri	83.76	119.96	139.89	
			358.89	514.00	599.39	300
3A	BHACHBHAR	Ramdeoriya Tala	84.47	120.98	141.08	
			84.47	120.98	141.08	100
4	LASUWA	Bhanpura	45.46	65.10	75.92	
4	LASUWA	Lasuwa	29.59	42.38	49.42	
			75.05	107.48	125.34	100
4A	Khariya Kalaan	Khariya Kita	59.30	84.93	99.04	
4A	Khariya Kalaan	Khariya Kalan	40.92	58.61	68.35	
			100.22	143.54	167.38	100
4B	JOONALA BHOO KA TALA	Joonala Bhooka Tala	75.29	107.82	125.74	
4B	JOONALA BHOO KA TALA	Tamliyar	330.01	472.65	551.17	
			405.30	580.47	676.91	400
5	PABOODAN SINGH KI DHANI	Chadar Mandroop	30.19	43.23	50.41	
5	PABOODAN SINGH KI DHANI	Paboodan Singh Ki Dhani	56.55	81.00	94.45	

5	PABOODAN SINGH KI DHANI	Ramdeo Ka Mandir	143.05	204.88	238.92	
5	PABOODAN SINGH KI DHANI	Salariya Kanlariya	39.37	56.39	65.76	
5	PABOODAN SINGH KI DHANI	Shere Ka Tala	32.45	46.48	54.20	
			301.62	431.98	503.75	300
6	SURALI	Manakki Dhani	30.66	43.92	51.21	
6	SURALI	Surali	83.04	118.93	138.69	
6	SURALI	Rawat Ka Tala	22.31	31.95	37.26	
6	SURALI	Hindiya	40.69	58.27	67.95	
			176.70	253.07	295.11	150
6A	PANDHI KA PAR	Mahinaniyon Ki Basti	49.28	70.57	82.30	
6A	PANDHI KA PAR	Pandhikapar	126.83	181.64	211.82	
6A	PANDHI KA PAR	Daweka Par	56.08	80.31	93.66	
6A	PANDHI KA PAR	Jaleela	17.18	24.61	28.69	
			249.36	357.13	416.47	250
7	JANE KI BERI	Gardiya	140.19	200.78	234.14	
7	JANE KI BERI	Janeki Beri	139.00	199.07	232.15	
7	JANE KI BERI	Mandroop Ka Tala	21.36	30.59	35.67	
7	JANE KI BERI	Ubhreka Par	94.02	134.65	157.02	
			394.56	565.09	658.97	400
7A	SELAU	Selau	77.79	111.41	129.92	
7A	SELAU	Jaton Ki Basti	51.42	73.65	85.88	
			129.21	185.06	215.81	150
8	NAGE KA PAR	Kelan Ka Par	19.33	27.68	32.28	
8	NAGE KA PAR	Nageka Par	46.29	66.30	77.32	
8	NAGE KA PAR	Mekaran Wala	97.84	140.12	163.40	
8	NAGE KA PAR	Mohammad Ka Par	6.20	8.89	10.36	
			169.66	242.99	283.36	150
8A	Sabu Ka Par	Bane Ki Basti	57.99	83.05	96.84	
8A	Sabu Ka Par	Lakriyali	66.58	95.35	111.19	
8A	Sabu Ka Par	Purpuriya	27.32	39.13	45.63	
8A	Sabu Ka Par	Sabu Ka Par	40.33	57.76	67.35	
8A	Sabu Ka Par	Padhariya	85.90	123.03	143.47	
			278.11	398.32	464.49	250
8B	Ladhe ka par	Ladhe Ka Par	34.96	50.07	58.39	
8B	Ladhe ka par	Sajjan Ka Par	100.58	144.05	167.98	
8B	Ladhe ka par	Talab Ka Par	30.66	43.92	51.21	
			166.20	238.03	277.58	150
8C	Bukar	Bukri	26.13	37.42	43.64	
8C	Bukar	Bheende Ka Par	45.22	64.76	75.52	
8C	Bukar	Bukar	117.52	168.31	196.28	
			188.87	270.50	315.44	200
9 C	Kantaliya Ka Par	Kantaliya Ka Par	59.54	85.27	99.43	

9 C	Kantaliya Ka Par	Siyai	87.93	125.94	146.86	
9 C	Kantaliya Ka Par	Bheelon Ka Par	199.01	285.02	332.38	
9 C	Kantaliya Ka Par	Gagriya	117.40	168.14	196.08	
			463.88	664.37	774.75	400
9	SUJAL KA PAR	Sujal Ka Par	38.06	54.51	63.57	
			38.06	54.51	63.57	100
9A	NEELSAR	Ajbe Ka Par	28.40	40.67	47.43	
9A	NEELSAR	Neelsar	21.95	31.44	36.67	
9A	NEELSAR	Sodhai	22.31	31.95	37.26	
9A	NEELSAR	Mandroop Ka Par	18.37	26.32	30.69	
			91.03	130.38	152.04	100
9B	GANGANIYON KA PAR	Ganganiyon Ka Par	64.43	92.27	107.60	
9B	GANGANIYON KA PAR	Abhe Ka Par	79.70	114.15	133.11	
9B	GANGANIYON KA PAR	Viradka Par	37.82	54.17	63.17	
			181.95	260.59	303.88	200
10	SANGRANI	Ajbani	79.58	113.98	132.91	
10	SANGRANI	Jheloon	52.38	75.02	87.48	
10	SANGRANI	Sangrani	52.02	74.50	86.88	
10	SANGRANI	Boothiya	115.14	164.90	192.29	
			299.11	428.39	499.56	250
11A	ALARAKH KA PAR	Alarakh Ka Par	14.68	21.02	24.51	
11A	ALARAKH KA PAR	Bangli	56.67	81.17	94.65	
11A	ALARAKH KA PAR	Jummafakir Ki Basti	46.17	66.13	77.12	
11A	ALARAKH KA PAR	Charwa @ Jharwa	34.48	49.38	57.59	
11A	ALARAKH KA PAR	Charwa Takhata Bad	76.48	109.53	127.73	
			228.48	327.23	381.60	200
11B	BINDU SINHANI	Dewaniyon Ka Par	15.03	21.53	25.11	
11B	BINDU SINHANI	Chandaniyon Ka Par	85.55	122.52	142.87	
11B	BINDU SINHANI	Bindu Sinhani	7.28	10.42	12.16	
11B	BINDU SINHANI	Peere Ka Par	73.14	104.75	122.15	
			180.99	259.22	302.29	200
12	RAMSAR	Ramsar	463.88	664.37	774.75	
12	RAMSAR	Ramsaragor	118.60	169.85	198.07	
			582.48	834.23	972.82	500
13	NAISIYAE	Kantal Ka Par	122.89	176.00	205.24	
13	NAISIYAE	Naisiyae	34.00	48.70	56.79	
13	NAISIYAE	Virmiyar	53.09	76.04	88.67	
			209.99	300.74	350.71	200
14	NOPATIYA	Nopatiya	22.55	32.30	37.66	
14	NOPATIYA	Kharchi	105.71	151.40	176.55	

			128.26	183.69	214.21	150
14A	PABOOSARIYA	Babuguleriya	81.49	116.71	136.10	
14A	PABOOSARIYA	Banwa	33.77	48.36	56.39	
14A	PABOOSARIYA	Paboosariya	70.15	100.48	117.17	
			185.41	265.54	309.66	200

Cluster wise ESRs (OHSRs) of Sheo

Cluster	ESR LOCATION	Village	Water Demand in KLD			ESR CAP KL
			2016	2031	2041	
s/cl-10-A	Acharaniyon Ki Dhani	Acharaniyon Ki Dhani	38.90	55.71	64.96	
s/cl-10-A	Acharaniyon Ki Dhani	Agasari	72.66	104.06	121.35	
			111.56	159.77	186.31	100.00
s/cl-10	Aasari	Aasari	80.89	115.86	135.10	
s/cl-10	Aasari	Asari Sindhiyan	81.01	116.03	135.30	
			161.91	231.88	270.40	150.00
s/cl-03	Balewa	Balewa	222.16	318.17	371.03	
s/cl-03	Balewa	Charno Ki Dhani	87.10	124.74	145.46	
			309.25	442.92	516.50	300.00
s/cl-25	Bandhara	Bandhara	176.34	252.56	294.52	
s/cl-25	Bandhara	Bikoosi	52.74	75.53	88.08	
			229.08	328.09	382.59	200.00
s/cl-25-A	Kundal @ Godhanili	Kundal @ Godhanili	34.60	49.55	57.79	
s/cl-25-A	Kundal @ Godhanili		34.60	49.55	57.79	50.00
s/cl-25-B	Bhabhar	Bhabhar	56.79	81.34	94.85	
s/cl-25-B	Bhabhar	Ratreri Kalan	83.64	119.79	139.69	
			140.43	201.12	234.54	150.00
s/cl-16-A	Hafiya	Rohidaala	80.42	115.17	134.31	
s/cl-16-A	Hafiya	Hafiya	69.56	99.62	116.17	
			149.97	214.79	250.48	150.00
s/cl-16	Beejawal	Phangali	37.34	53.48	62.37	
s/cl-16	Beejawal	Beejawal	65.02	93.13	108.60	

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s/cl-16	Beejawal	Samand Kapar	50.11	71.77	83.69	
			152.48	218.38	254.66	150.00
s/cl-27-A	Hafiya @ Sankhli	Hafiya @ Sankhli	24.46	35.03	40.85	
			24.46	35.03	40.85	50.00
s/cl-09-B	Ugeri	Ugeri	72.78	104.24	121.55	
			72.78	104.24	121.55	100.00
s/cl-09	Chetrori	Sadhon Ki Basti	71.71	102.70	119.76	
s/cl-09	Chetrori	Chetrori	138.16	197.88	230.75	
			209.87	300.57	350.51	200.00
s/cl-09-A	Salam Singh Ki Basti	Lambara	31.74	45.45	53.00	
s/cl-09-A	Salam Singh Ki Basti	Bahla	83.52	119.61	139.49	
s/cl-09-A	Salam Singh Ki Basti	Rawatsar	118.83	170.19	198.47	
s/cl-09-A	Salam Singh Ki Basti	Salam Singh Ki Basti	54.88	78.60	91.66	
			289	414	483	250.00
s/cl-12	GADRA ROAD	Gadraroad @ Ber Seeng Desar	758.46	1086.27	1266.74	
			758	1086	1267	650.00
s/cl-12-A	Onara	Onara	49.75	71.26	83.09	
			50	71	83	50.00
s/cl-13	GADRA ROAD	Bandasar	115.02	164.73	192.09	
s/cl-13	GADRA ROAD	Tirmohi	31.62	45.28	52.81	
			147	210	245	150.00
s/cl-26	Girab	Girab	160.00	229.15	267.22	
			160	229	267	150.00
s/cl-27	Jeene Ki Basti	Ratreri Khurd	62.04	88.86	103.62	
s/cl-27	Jeene Ki Basti	Jeene Ki Basti	54.88	78.60	91.66	
			116.92	167.46	195.28	100.00
s/cl-26-A	Shastri Gaon	Kubriya	32.69	46.82	54.60	
s/cl-26-A	Shastri Gaon	Shastri Gaon	92.47	132.43	154.43	
			125.16	179.25	209.03	150.00
s/cl-06	Harsani	Harsani	284.56	407.54	475.25	
s/cl-06	Harsani	Turbi	145.44	208.30	242.91	
			430.00	615.84	718.16	400.00
s/cl-17-C	Munaaba	Munaaba	49.04	70.23	81.90	
s/cl-17-C	Munaaba	Akali	78.75	112.78	131.52	
			127.78	183.01	213.41	150.00
s/cl-17-A	Bhooni	Bhooni	91.27	130.72	152.44	
s/cl-17-A	Bhooni	Bapunagar	36.39	52.12	60.78	

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			127.66	182.84	213.22	150.00
s/cl-17	Jaisindhar Station	Nopat	57.15	81.85	95.45	
s/cl-17	Jaisindhar Station	Jaisindhar Station	91.75	131.41	153.24	
			148.90	213.26	248.68	150.00
s/cl-17-B	Peethakar	Peethakar	33.77	48.36	56.39	
			33.77	48.36	56.39	50.00
s/cl-18-A	Barsa	Barsa	110.60	158.40	184.72	
s/cl-18-A	Barsa	Chhoti Khareen	37.58	53.83	62.77	
s/cl-18-A	Barsa	Hameerani	49.16	70.40	82.10	
s/cl-18-A	Barsa	Malana	42.83	61.35	71.54	
			240.17	343.98	401.12	200.00
s/cl-18	Jaisindhar Gaon	Jaisindhar Gaon	243.87	349.27	407.30	
			243.87	349.27	407.30	200.00
s/cl-11	Judiya	Judiya	85.78	122.86	143.27	
			85.78	122.86	143.27	100.00
s/cl-11-A	Karni Nagar	Karni Nagar	40.80	58.44	68.15	
s/cl-11-A	Karni Nagar	Unrod	119.91	171.73	200.26	
			160.71	230.17	268.41	150.00
s/cl-20	Dhagari	Shadad Ka Par Khurd	29.11	41.69	48.62	
s/cl-20	Dhagari	Dhagari	43.07	61.69	71.94	
			72	103	121	100.00
s/cl-19-A	Nohdiyala	Bachiya	45.58	65.28	76.12	
s/cl-19-A	Nohdiyala	Nohdiyala	74.57	106.80	124.54	
			120	172	201	100.00
s/cl-19	Peeparli	Khabrala	77.55	111.07	129.52	
s/cl-19	Peeparli	Peeparli	28.52	40.84	47.62	
s/cl-19	Peeparli	Punraj Ka Par	51.42	73.65	85.88	
			157.49	225.56	263.03	150.00
s/cl-19-B	Sirguwala	Drabha	44.15	63.22	73.73	
s/cl-19-B	Sirguwala	Sirguwala	94.38	135.16	157.62	
			138.52	198.39	231.35	150.00
s/cl-21-B	Baniyali	Baniyali	61.56	88.17	102.82	
			62	88	103	50.00
s/cl-21-A	Khareen	Shameer Ka Par	32.57	46.65	54.40	
s/cl-21-A	Khareen	Khareen	108.10	154.82	180.54	
			140.67	201.46	234.94	150.00
s/cl-21	Matharani Sound	Khalife Ki Baori @ Medusar	66.81	95.69	111.59	
s/cl-21	Matharani Sound	Matharani Sound	42.47	60.83	70.94	

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s/cl-21	Matharani Sound	Paboosari	132.08	189.16	220.59	
			241.37	345.69	403.12	200.00
s/cl-07-A	Kareem Ka Par	Kareem Ka Par	95.09	136.19	158.82	
			95.09	136.19	158.82	100.00
s/cl-07-B	Dhamdali	Khaniyani	116.69	167.12	194.88	
s/cl-07-B	Dhamdali	Dhamdali	38.66	55.36	64.56	
s/cl-07-B	Dhamdali	Lalasar	78.86	112.95	131.72	
			234.21	335.43	391.16	200.00
s/cl-05-B	Gordiya	Gordiya	108.10	154.82	180.54	
s/cl-05-B	Gordiya	Kharchi	54.41	77.92	90.87	
			162.50	232.74	271.40	150.00
s/cl-05-C	Magra	Kumbharon Ki Dhani	39.37	56.39	65.76	
s/cl-05-C	Magra	Magra	68.13	97.57	113.78	
			107.50	153.96	179.54	100.00
s/cl-05-A	Moseri	Moseri	134.82	193.09	225.17	
			134.82	193.09	225.17	150.00
s/cl-01	PHOGERA	Dedariyar	96.88	138.75	161.80	
s/cl-01	PHOGERA	Phogera	172.17	246.58	287.54	
s/cl-01	PHOGERA	Phogera Aagor	16.35	23.41	27.30	
s/cl-01	PHOGERA	Poshma	38.66	55.36	64.56	
			324.05	464.10	541.21	300.00
s/cl-04-A	Detani	Detani	267.61	383.28	446.96	
			267.61	383.28	446.96	250.00
s/cl-04	Ranasar	Khudani	199.13	285.20	332.58	
s/cl-04	Ranasar	Ranasar	158.33	226.75	264.43	
			357.46	511.95	597.00	300.00
s/cl-02-A	Devi Pura	Neemlee	48.20	69.03	80.50	
s/cl-02-A	Devi Pura	Devi Pura	40.09	57.41	66.95	
			88.29	126.45	147.46	100.00
s/cl-02	Redana	Manjholi	6.32	9.06	10.56	
s/cl-02	Redana	Deoron Ki Basti	97.60	139.78	163.00	
s/cl-02	Redana	Redana	179.21	256.66	299.30	
s/cl-02	Redana	Uttri Der	36.39	52.12	60.78	
			319.52	457.61	533.64	300.00
s/cl-15	Rohiri	Moti Ki Beri	29.35	42.04	49.02	
s/cl-15	Rohiri	Rohiri	65.74	94.15	109.80	
s/cl-15	Rohiri	Sagoraliya	61.45	88.00	102.62	
			157	224	261	150.00
s/cl-22-A	Ransingh Ki Dhani	Badrani	37.34	53.48	62.37	
s/cl-22-A	Ransingh Ki Dhani	Ransingh Ki Dhani	37.23	53.31	62.17	

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			75	107	125	100.00
s/cl-23	Sargila	Sargila	76.12	109.02	127.13	
s/cl-23	Sargila	Goraliya	65.26	93.47	109.00	
			141	202	236	150.00
s/cl-22	Mathar Ka Par	Shahdad Ka Par	92.35	132.26	154.23	
s/cl-22	Mathar Ka Par	Mathar Ka Par	40.09	57.41	66.95	
s/cl-22	Mathar Ka Par	Uttarba	100.34	143.71	167.58	
			233	333	389	200.00
s/cl-14	Sundra	Boi	55.36	79.29	92.46	
s/cl-14	Sundra	Panchla	36.15	51.78	60.38	
s/cl-14	Sundra	Sundra	65.14	93.30	108.80	
			156.66	224.36	261.64	150.00
s/cl-14-A	Modhri	Modhri	44.98	64.42	75.12	
			44.98	64.42	75.12	50.00
s/cl-24	Tamlor	Amee Ka Par	30.66	43.92	51.21	
s/cl-24	Tamlor	Makhan Ka Par	42.71	61.17	71.34	
s/cl-24	Tamlor	Tamlor	175.86	251.87	293.72	
			249.24	356.96	416.27	200.00
s/cl-24-A	Pannela	Pannela	80.89	115.86	135.10	
			80.89	115.86	135.10	100.00
s/cl-08-A	Jansingh Ki Beri	Tanuraoji	59.89	85.78	100.03	
s/cl-08-A	Jansingh Ki Beri	Doodhora	92.70	132.77	154.83	
s/cl-08-A	Jansingh Ki Beri	Jansingh Ki Beri	79.58	113.98	132.91	
			232.18	332.53	387.77	200.00
s/cl-08	Tanumanji	Solankiyon Ki Basti	122.65	175.66	204.85	
s/cl-08	Tanumanji	Tanumanji	75.76	108.51	126.53	
			198.41	284.17	331.38	200.00

Above cluster scheme is for the villages of 2001 census. However, the villages of census 2011 may have to be covered under this contract. Contractor shall include those villages also in the scope for OHSR onwards distribution lines, VTCs, PSPs, CWTs on direction of EIC. For this purpose the number of VTCs and Flow meters/ flow meter huts / CWTs / PSPs are also kept variable along with pipe lengths

xii. Public Stand Post and CWT

Details of PSPs and CWT

	Sheo	Ramsar
PSPS (nos)	698	524
CWT (nos)	433	328

xiii. Crossings

S.No	Crossings	Location	Nos.
1	Railway Line		
1.1	IPS -2 Isrol	TPS Ramsar	1
1.2	TPS Ramsar	CPS Surali	1
1.3	Gadraroad	Basra	1
2	NH/SH Crossing		
2.1	IPS -2 Isrol	TPS Ramsar	1
2.2	TPS Ramsar	CPS Surali	1
2.3	Gadraroad	Basra	1

xiv. Flow Measurement

a) Ultrasonic Flow Meters:

S.No.	Location	Nos.
1	RWPS-1 (Open Channel)	1
2	Aleti H/W Portable	1

b) Full Bore Electromagnetic Flow Meter;

S.No.	Location	Nos.
1	Full Bore Electromagnetic Flow Meters (mm)	
(i)	Transmission Main	
	200	4
	250	1
	300	3
	400	1
	700	3
(ii)	Pumping Main	
	Sheo	
	100	17
	150	21
	200	1
	Ramsar	
	100	13

S.No.	Location	Nos.
	150	11
	200	1
(iii)	Near ESR Inlet	
	Sheo	
	100	37
	150	17
	Ramsar	
	100	24
	150	8
(iv)	Near ESR Out Let	
	Sheo	
	80	50
	100	28
	150	29
	200	2
	250	1
	Ramsar	
	80	50
	100	23
	150	21
	200	1
(iv)	At Village Transfer Chamber (Voltman type)	
	Sheo	
	80	50
	100	28
	150	29
	200	2
	250	1
	Ramsar	
	80	50
	100	23
	150	21
	200	1
	Sub Total	572

xv. Village Transfer Chamber

Construction of VTCs at each village. Total 205 VTCs shall be constructed as per Census 2001 village list.

xvi. Ancillary works

Campus development works etc. shall be carried out as per the table shown in scope of work.

xvii. Power Availability

Direct Power Feeders of 33/11 KV are proposed from nearest 132/33 KV GSSs for respective Head Works as below. The power availability has been taken as 20 hours for design of all the Operating Units.

S.No.	Particular of Power Line	Length (Km)
1	RWPS-1 at L Point	5
2	Head works Aleti & RWPS-2	20
3	IPS -1 Mangta	18
4	IPS -2 Isrol	15
5	TPS/CPS Ramsar	3
6	TPS/CPS Gadra Road -Sheo Tehsil	3
7	TPS Judiya -Sheo Tehsil	5
8	CPS/TPS Balewa - Sheo Tehsil	10
9	CPS Girab -Sheo Tehsil	14
10	CPS Khalife ki Baori -Sheo Tehsil	15
11	CPS-Near Gagriya -Ramsar Tehsil	7
12	CPS Basra -Ramsar Tehsil	8
13	CPS-Surali -Ramsar Tehsil	15
14	CPS-TPS Setrau -Ramsar Tehsil	9

2.1 BACKGROUND

This project is prepared so as to get water supply to 205 Villages (as per 2001 census and to be covered as per 2011 census) of Sheo Ramsar Tehsils of Barmer District from Narmada Canal System. Earlier it was planned to be covered from IGNP system. The design the various components of the scheme with service level as 40 lpcd for Command Area and 70 LPCD in Non Command Area as Tahal Report with 10% losses in pipeline network. The pipe network & the CWR, Pump House, PSPs and OHSRs to be constructed are shown in drawings in Volume III as indicated in the Index Map and in this chapter. The Village Transfer Chamber for all villages shall be constructed at the village boundary at the location given by EIC. The locations of PSPs in each village shall be decided by the Village Water Health and Sanitation Committee (WHC) of respective village. WHCs shall be formed by a suitable NGO. The contractor is to avail the services of an NGO for the IEC activities and its payment is also to be made by the contractor for this package. The selection of NGO will be done on the norms of the department. Contractor has to start the IEC activities immediately after 15 days of the award of contract positively. The capacities of proposed CWR & OHSRs are also shown elsewhere in this chapter. Locations and land for construction of all the CWR/Pump house/OHSR/ Village Transfer Chambers etc. shall be provided by the department. References have been made of drawings in the foregoing paragraphs. Unless and until specific reference is made, it may be understood that these are concepts of the Department and the sole responsibility for correctness of designs, drawings and safety of equipment/structure shall rest on the Contractor. All references made for the diameter of pipes shall be considered as nominal diameters as defined in respective Standards.


SE(P) PHED CR.
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