

## **1. INTRODUCTION**

Visnagar town is a head quarter of visnagar taluka of Mehsana district. It is a railway station on Mahsana-Taranga hill railway line, about 19 km. in the North-East direction of Mehsana. This railway line was constructed by the former Baroda State. It is also connected by State Transport bus service with Mehsana, Vadnagar, Kheralu, Vijapur, Mansa, Unjha, Patan, Chansama etc. and also other major centers. State capital Gandhinagar is about 60 km. and Ahmadabad is about 97 km. away from Visnagar. Unjha is about 22km. away, Vadnagar is about 14 km away, Kheralu is about 25 km. away and Vijapur is about 28 km. away from Visnagar town. Visnagar is one of the important market centers for wholesale transactions in wheat and Bajri.

The population of this town as per 2011 census is 91753 persons. Visnagar Municipality (Nagarpalika) one of the oldest one in the area, was established in the year 1875 AD, It was then 'B' class municipality up to the year 1930 AD. From 1931 AD, it was placed in 'A' class. The water supply scheme for this town was introduced in the year 1931 during the time of former Baroda State. The water supply scheme was based on 4 tube wells and open well at Lal Darwaja headworks. Similarly, the underground sewerage system in this town has been introduced in the year 1942 AD. For collection of sewage/sullage water, a sewage pumping station has been constructed by the municipality. This collected sewage/sullage (waste) water is supplied to the farmers of the surrounding area for crop-cultivation. Besides, roads, street light, garden, fire fighting facilities etc. are also being maintained by the municipality of this town.

Various accounts are given of the origin of this town, Burgess states that it was founded by Visaldev, the Vaghela prince in the year 1243-1261 AD, but others attribute its foundation to Visaldev, the chauhan prince of Ajmer. Bardic traditions add that Visaldev, Mandaleshwar of Chandravati, the Vaghela, founded or rather repaired the town of Visalnagar.

Visnagar is the original seat of the six classes of Nagar Brahmins, known as Visnagara Nagars. When Visaldev founded Visnagar, he summoned many Brahmins to a Yagna; but most of the die-hard Vadnagar Brahmins refused to receive "Dakshina" from his hands treated those who did so, as out castes. This splits up Vadnagar Nagar Cast into two sub castes of Vadnagara and Visnagara Nagar Brahmins. In pre-railway days, the pilgrims, who passed by this place on

their way to Ambaji, halted at Visnagar. The town was then much frequented by merchants from Ahmadabad and other places and the merchandise of different kinds was sold.

This town had a fort, around it, which is now in ruins. There is an ancient step well, called "Hira Vav". The town has several tanks; out of which Deliya, Dipal and Madhak tanks are famous and the temples of the Jaleshwar Mahadev, the Sidhdheshwar Mahadev and the Mota Hanuman; where fairs are held on the Janamashtami day. Among the other places of worship are the temples Hatkeshwar Mahadev, the Swaminarayan Temple and the Ambaji Mata, Besides the Jain Temples and the Mosques.

In this town, brass and copper pots are even today manufactured and sold in large quantities. Visnagar is famous for copper, brass and aluminum vessels, manufactured locally by the Kansara community. As regards education institutions, this town has number of public as well as private primary school for boys as well as for girl. Besides, the secondary and higher secondary schools, there are one arts, science, law and commerce college, Mahila Arts college, B.Ed college as well as an Industrial Training Institute for education of students of this town as well as surrounding rural areas. The town has number of public libraries, a market yard, rest house, town hall, swimming pool, number of banks, government hospitals, maternity home, private hospitals and nursing homes etc.

### **1.1 Geography**

Visnagar is located at  $23.42^{\circ}\text{N } 72.73^{\circ}\text{E}$ . It has an average elevation of 120 meters (404 feet).

## **2. EXISTING WATER SUPPLY SCHEME**

Water supply scheme based on open well and ESR was executed during 1931. Open well of 6 m.dia and about 30m deep was dugged and ESR of 3.0 lakh ltr. Capacity and 14m. Height was constructed at Lal Darwaja head works and distribution pipeline as per requirement was also laid and water supply was started. Drainage project is also commissioned during 1942.

Looking to the development of town, no. of infrastructure like ESR, sump, tube wells are constructed to augment the water supply of Visnagar town. All the works were carried out in piecemeal and immediate requirement. At present there are 9 ESRs and 13 tube wells, out of which eight tube wells are being utilized for pumping water, five tube wells are recently and pumping machinery is to be installed and put into commission in due course, these tube wells will augment the water demand of town. Dharoi water is also available at some head works since the year 2004 which is being distributed up to consumer end through existing system.

### 3. PRESENT AND PROSPECTIVE POPULATION

HEAD WORK	POPULATION TO BE OBTAINED				WATER DISTRIBUTION (MLD)				COMMERCIAL DEMAND				15% UFW				TOTAL			
	2011	2021	2031	2041	2011	2021	2031	2041	2011	2021	2031	2041	2011	2021	2031	2041	2011	2021	2031	2041
<b>HIGHWAY ZONE</b>																				
MAIN ESR	4182	4836	6448	8293	0.59	0.68	0.90	1.16	0.65	0.81	0.98	1.14	0.19	0.22	0.28	0.34	1.42	1.71	2.16	2.64
PANCHSHIL TOWNSHIP	1394	1612	2149	2764	0.20	0.23	0.30	0.39					0.03	0.03	0.05	0.06	0.22	0.26	0.35	0.45
KINARA	11151	12895	17196	22113	1.56	1.81	2.41	3.10	0.25	0.31	0.38	0.44	0.27	0.32	0.42	0.53	2.08	2.44	3.20	4.06
JAWAHAR/ VEVEKANAND	11151	12895	17196	22113	1.56	1.81	2.41	3.10	0.24	0.30	0.36	0.42	0.27	0.32	0.42	0.53	2.07	2.42	3.18	4.04
<b>SUB TOTAL A</b>	<b>27877</b>	<b>32239</b>	<b>42990</b>	<b>55284</b>	<b>3.90</b>	<b>4.51</b>	<b>6.02</b>	<b>7.74</b>	<b>1.14</b>	<b>1.43</b>	<b>1.71</b>	<b>2.00</b>	<b>0.76</b>	<b>0.89</b>	<b>1.16</b>	<b>1.46</b>	<b>5.80</b>	<b>6.83</b>	<b>8.89</b>	<b>11.19</b>
<b>TOWN ZONE</b>																				
LAL DARWAJA	15090	17451	23270	29925	2.11	2.44	3.26	4.19	0.08	0.10	0.12	0.14	0.33	0.38	0.51	0.65	2.52	2.92	3.88	4.98
DOSABHAI GARDEN	13939	16119	21495	27642	1.95	2.26	3.01	3.87	0.08	0.10	0.12	0.14	0.30	0.35	0.47	0.60	2.34	2.71	3.60	4.61
FATEH DARWAJA	4182	4836	6448	8293	0.59	0.68	0.90	1.16	0.08	0.10	0.12	0.14	0.10	0.12	0.15	0.20	0.77	0.89	1.18	1.50
DIPRA DARWAJA	11151	12895	17196	22113	1.56	1.81	2.41	3.10	0.15	0.19	0.23	0.26	0.26	0.30	0.39	0.50	1.97	2.29	3.03	3.86
KAMANA CHOWKADI	8363	9672	12897	16585	1.17	1.35	1.81	2.32	0.18	0.23	0.27	0.32	0.20	0.24	0.31	0.40	1.55	1.82	2.39	3.03
KRISHNA NAGAR	5575	6448	8598	11057	0.78	0.90	1.20	1.55	0.15	0.19	0.23	0.26	0.14	0.16	0.21	0.27	1.07	1.25	1.64	2.08
PARIMAL	5575	6448	8598	11057	0.78	0.90	1.20	1.55	0.14	0.18	0.21	0.25	0.14	0.16	0.21	0.27	1.06	1.24	1.63	2.06
<b>SUB TOTAL B</b>	<b>63876</b>	<b>73868</b>	<b>98502</b>	<b>126671</b>	<b>8.94</b>	<b>10.34</b>	<b>13.79</b>	<b>17.73</b>	<b>0.86</b>	<b>1.08</b>	<b>1.29</b>	<b>1.51</b>	<b>1.47</b>	<b>1.71</b>	<b>2.26</b>	<b>2.89</b>	<b>11.27</b>	<b>13.13</b>	<b>17.34</b>	<b>22.12</b>
<b>GRAND TOTAL(A+B)</b>	<b>91753</b>	<b>106107</b>	<b>141492</b>	<b>181955</b>	<b>12.85</b>	<b>14.85</b>	<b>19.81</b>	<b>25.47</b>	<b>2.00</b>	<b>2.50</b>	<b>3.00</b>	<b>3.50</b>	<b>2.23</b>	<b>2.60</b>	<b>3.42</b>	<b>4.35</b>	<b>17.07</b>	<b>19.96</b>	<b>26.23</b>	<b>33.32</b>

**Table 1: Zone Wise Population and Water Demand (Considering 140 LPCD Demand)**

#### **4. DETAILS OF EXISTING HEADWORKS**

Details of existing components of water supply at different head works along with works proposed under Amrutdhara Yojna.

Sr No.	Details	Remarks
	<b>Main HW for Dharoi water</b>	<b>Developed in survey No. 305 which was approved under Saheri Vikas Varsh 2005</b>
	50.0 lakh ltr. Capacity U/G sump and pump house	It is planned to collect Dharoi water through 610 mm dia MS line into 50.00 lakh ltr. Capacity sump and then pump into ESR for gravity supply up to existing/ proposed sump at different sub head works of Visnagar town. It is also planned to collect water 50.00 lakh ltr. Capacity sump from tube well-3 Nos. recently drilled from the saving of fund under Saheri Vikas Varsh 2005 to augment water demand.
	Rising Main from sump to ESR	
	Pump House and pumping machinery approved under Saheri Vikas Varsh.	
	20.0 lakh ltr. Capacity ESR	
	Cabin for Chlorination plant	
	Chlorination plant	
	Poldar pump on 50.0 lakh ltr. Capacity sump is approved under Amrutdhara Yojana.	
	TW No. 9, 10 and 11 are drilled, pumping machinery is being installed, and power connection is awaited.	
<b>1.</b>	<b>Lal Darwaja H.W.</b>	Constructed during 1931
	4.5 lakh ltr. Capacity U/G sump 2 Nos.	Existing 350 mm dia. AC line is connected from main head works up to Lal Darwaja head works for Dharoi water. Water from open well and tube well is being collecting into existing sump. Dharoi water and water
	3.0 lakh ltr. Capacity and 14 m. height Square ESR Constructed in year 1931	

	Open well-1 No. with pumping machinery.	from local source is being pumped into ESR and supplied to the nearby areas through existing network of distribution system.
	TW No. 1 with pumping Machinery	
<b>2</b>	<b>Dosabhai Garden HW</b>	
	Ex. Sump of 4.5 lakh ltr. Capacity and 5.0 lakh ltr. Capacity U/G sump recently constructed.	Existing 350 mm dia. Ac line is connected from main head works and water is being collected in to sump and pumped into ESR for distribution. 250 mm dia DL pipeline is to be laid replacing AC line to collect Dharoi water.
	5.0 lakh ltr. capacity and 16 m. height ESR – recently constructed	
	Pumping machinery on sump	
<b>3</b>	<b>Fateh Darwaja HW</b>	
	1.0 lakh ltr. Capacity U/G sump	At present TW water is being pumped into ESR and distributed to the nearby area. 273.1 mm dia MS line is laid from Lal Darwaja head works i.e. Node No.7-15 connecting Fateh Darwaja head works and Dharoi water is made available. At present tube well No.7 is being utilized for direct supply into distribution system which will be connected with sump in future.
	4.0 lakh ltr. Capacity and 18 m. height ESR	
	Pumping machinery on sump	
	TW No.2 with pumping machinery	
	TW No.7 with pumping machinery at Vadnagar Darwaja head works.	
<b>4</b>	<b>Dipra Darwaja HW</b>	
	<b>Darbar road sump</b>	
	4.5 lakh ltr. Capacity U/G sump	Dharoi water is made available through 355.6 mm dia MS pipeline. At present TW
	Pumping machinery on sump	

	TW No. 6 and machinery	water is being pumped and distributed to the nearby area. Darbar road sump is proposed to connect with Dipra Darwaja ESR
	<b>Dipra Darwaja</b>	
	Ex. Sump and 3.0 lakh ltr. Capacity sump recently constructed	Dharoi water is being collected in U/G sump through 323.9 mm dia MS line and then pumped into ESR for distribution of water.
	3.0 lakh ltr. Capacity and 12 m. height ESR	
	Pumping machinery on sump	
<b>5</b>	<b>Kamana Chowkdi HW</b>	
	1.0 lakh ltr. Capacity sump	At present TW water is being pumped into ESR and distributed to the nearby area. 273.1 mm dia MS pipe is laid from Dipra Darwaja connecting Kamana Chowkdi head works to collect Dharoi water.
	4.0 lakh ltr. Capacity and 21 m. height ESR	
	Pumping machinery on sump	
	TW No. 3 and machinery	
<b>6.</b>	<b>Krishnanagar HW</b>	
	1.0 lakh ltr. Capacity sump	Recently TW No. 12 is drilled and machinery is being installed and water will be pumped into ESR for distribution.  273.1 mm dia MS pipeline is laid from Kamana Chowkdi to Parimal cross road and up to Krishnanagar sump and testing of pipeline is in progress. Dharoi water will be made available in near future.
	4.0 lakh ltr. Capacity and 22m. height ESR	
	Pumping machinery on sump	
	New TW No. 12 & submersible pump is installed under Amrutdhara Yojana	
<b>7.</b>	<b>Parimal HW</b>	

	2.0 lakh ltr. Capacity U/G sump approved under Amrutdhara Yojana	Dharoi water will be made available in future, at present TW water is being pumped into ESR and distributed to the nearby area. 250 mm dia Gravity Main from Mehsana Char rasta to Parimal society sump approved under Amrutdhara Yojana, and work will be taken up on hand after getting revised administrative approval.
	3.0 lakh ltr. Capacity and 20 m. height ESR	
	TW No. 5 and machinery	
	TW No. 8 and machinery at Gayatri Darwaja	Water is distributed to nearby area through direct pumping which will be connected to Parimal head works.
<b>8.</b>	<b>Kinara H.W. (B.K... HW)</b>	
	1m. dia 8m.deep RCC pipe for Collecting Dharoi water	At present Dharoi water is being tapped From MS line and collected through 400 mm dia AC line up to kinara HW , which is being collected into 1m dia RCC pipe and pumped into ESR for distribution. AC pipeline is leaking heavily and required replacement, the work will be proposed under UIDSSMT project.
	20 HP submersible pumps in 1m. Dia RCC pipe.	
	4.0 lakh ltr. Capacity and 16m. Height ESR	
	TW No.4 and machinery	
<b>9.</b>	<b>Jawahar H.W. / Vivekanand HW</b>	
	2.0 lakh ltr. Capacity sump and 1m. dia 8m. deep RCC pipe for Collecting Dharoi water.	At present Dharoi water is being tapped From MS line and collected through 400 mm dia AC line from kinara HW to Jawahar HW, which is being collected into 1m dia RCC pipe and pumped into ESR for Distribution.AC pipe line is leaking heavily And required replacement, the work will be
	3.0 lakh ltr. Capacity and 12m. Height ESR	
	Pumping machinery on sump	
	20 HP submersible pumps in 1m.	

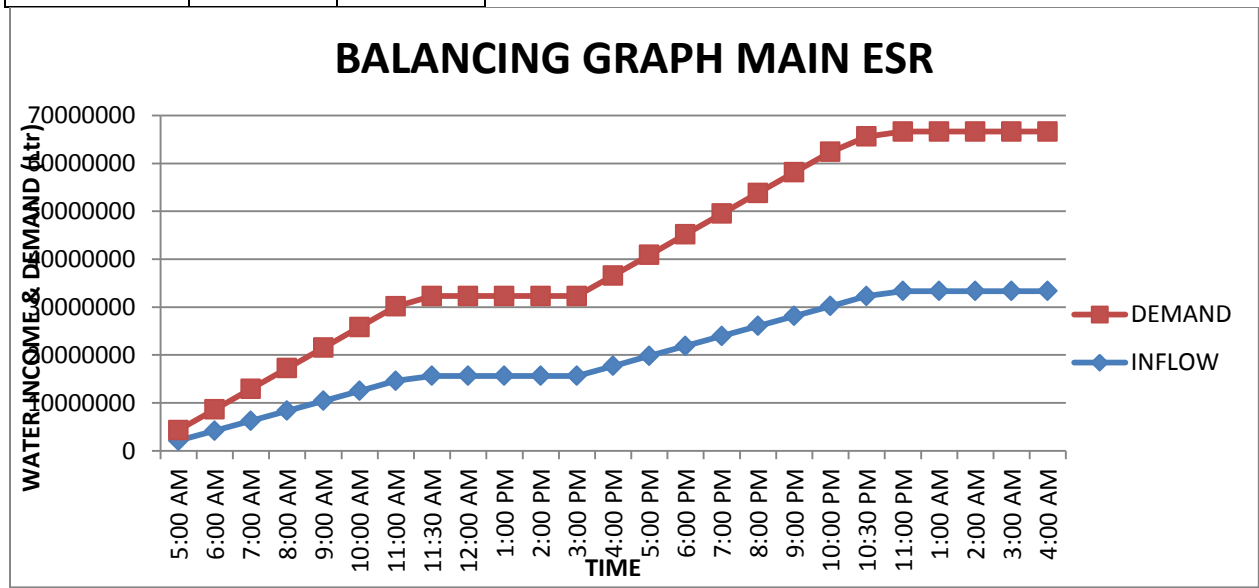


	Dia RCC pipe	Proposed under UIDSSMT project.
	New TW No.13 and submersible Pump is approved under Amrutdhara Yojana	
<b>10.</b>	<b>Panchshil Township HW</b>	
	1 lakh ltr. Cap. 15m ht. ESR	Water from tube well is being pumped into ESR and supplied to area; this HW is Belonging to township but now recently Handed over to local body for maintenance, Hence distribution of surrounding area is Designed as per requirement.
	<b>Distribution pipeline laid in Past</b>	
	Main pipeline	14 km.
	Feeder main	4 km.
	Distribution line	16 km.
	Total pipeline	36 km.
	Supply hours	Total supply is about 10 MLD ,45 minutes Supply in each zone/sub zone

<b>STORAGE CURVE &amp; MASS FLOW DIAGRAM FOR ESR</b>							
Storage Curve Calculation to fix Capacity of ESR at Main HW(305)							
15 hours of demand (outflow) satisfied by 16 hours of pumping (inflow)							
Supply time	Supply(Inflow) hours				Demand time	Demand hours	
5 AM TO 1 PM	8 hour				5 AM TO 12:30 PM	7.5hour	
4 PM TO 12 PM	8 hour				4 PM TO 11:30 PM	7.5 hour	
TOTAL PUMPING	16 hour				Total time for outflow	15 hour	
HOURLY PUMPING	1.5 a				hourly demand in morning	1.6 a	
Total Demand	33320000						
Avg.Hourly demand (a)	1388333						
TIMING	HOURLY DEMAND		CUMMULATIVE DEMAND (Outflow)		CUMMULATIVE SUPPLY (Inflow)	SURPLUS OR DEFICIT	SURPLUS OR DEFICIT(-) AMOUNT OF WATER
5 AM TO 6 AM	1.60	a	1.60	a	1.50	-0.1	-138833.3
6 AM TO 7 AM	1.60	a	3.20	a	3.00	-0.2	-277666.7
7 AM TO 8 AM	1.60	a	4.80	a	4.50	-0.3	-416500.0
8 AM TO 9 AM	1.60	a	6.40	a	6.00	-0.4	-555333.3
9 AM TO 10 AM	1.60	a	8.00	a	7.50	-0.5	-694166.7
10 AM TO 11 AM	1.60	a	9.60	a	9.00	-0.6	-833000.0
11 AM TO 12:00	1.60	a	11.20	a	10.50	-0.7	-971833.3
12 TO 12:30 PM	0.80	a	12.00	a	11.25	-0.8	-1041250.0
12 : 30 PM TO 1 PM	0.00	a	12.00	a	11.25	-0.8	-1041250.0
1 PM TO 2 PM	0.00	a	12.00	a	11.25	-0.8	-1041250.0
2 PM TO 3 PM	0.00	a	12.00	a	11.25	-0.8	-1041250.0
3 PM TO 4 PM	0.00	a	12.00	a	11.25	-0.8	-1041250.0
4 PM TO 5 PM	1.60	a	13.60	a	12.75	-0.9	-1180083.3
5 PM TO 6 PM	1.60	a	15.20	a	14.25	-0.9	-1318916.7
6 PM TO 7 PM	1.60	a	16.80	a	15.75	-1.1	-1457750.0
7 PM TO 8 PM	1.60	a	18.40	a	17.25	-1.2	-1596583.3
8 PM TO 9 PM	1.60	a	20.00	a	18.75	-1.3	-1735416.7
9 PM TO 10 PM	1.60	a	21.60	a	20.25	-1.4	-1874250.0
10 PM TO 11 PM	1.60	a	23.20	a	21.75	-1.5	-2013083.3
11 PM TO 11:30 PM	0.80	a	24.00	a	23.25	-0.8	-1041250.0
11:30 PM TO 12 PM	0.00	a	24.00	a	24.00	0.0	0.0
1 AM TO 2 AM	0.00	a	24.00	a	24.00	0.0	0.0
2 AM TO 3 AM	0.00	a	24.00	a	24.00	0.0	0.0
3 AM TO 4 AM	0.00	a	24.00	a	24.00	0.0	0.0
4 AM TO 5 AM	0.00	a	24.00	a	24.00	0.0	0.0
Total Demand	24.00	a			Total Surplus	0.00	
					Total Deficit	-1.5	-2013083
					Total storage required	1.5	2013083
					Hence, Capacity of ESR required	2013083	
					Say	2000000	
					Deduct capacity of Existing ESR	2000000	
					New ESR proposed	0	

**Note:** - As 13083 lit demand is too small for new ESR; we can increase Pumping hours.

HOUR	INFLOW	DEMAND
5:00 AM	2082500	2221333
6:00 AM	4165000	4442667
7:00 AM	6247500	6664000
8:00 AM	8330000	8885333
9:00 AM	10412500	11106667
10:00 AM	12495000	13328000
11:00 AM	14577500	15549333
11:30 AM	15618750	16660000
12:00 AM	15618750	16660000
1:00 PM	15618750	16660000
2:00 PM	15618750	16660000
3:00 PM	15618750	16660000
4:00 PM	17701250	18881333
5:00 PM	19783750	21102667
6:00 PM	21866250	23324000
7:00 PM	23948750	25545333
8:00 PM	26031250	27766667
9:00 PM	28113750	29988000
10:00 PM	30196250	32209333
10:30 PM	32278750	33320000
11:00 PM	33320000	33320000
1:00 AM	33320000	33320000
2:00 AM	33320000	33320000
3:00 AM	33320000	33320000
4:00 AM	33320000	33320000



## **5. LATEST DETAILS OF WARDWISE CONNECTION**

<b>Ward No.</b>	<b>Connections</b>
1	3023
2	1047
3	1185
4	1341
5	1395
6	3788
7	1701
8	1128
9	1323
10	1454
11	2738
12	1121
<b>Total</b>	<b>21244</b>

**Table 2: Details of ward wise connection as on 2014.**

**NOTE:-** In spite of repeated demand from Visnagar Nagarpalika; ward wise exact no. of connections was not given to us, so on the basis of past record and increased population we have worked out no. of connections.

## **6. PROJECT STRATEGY**

The strategy for further development of water supply facility is conceived as under:

- a) Water and sanitation standards are considered to assure safe and potable water.
- b) Technology selected must be technically acceptable in town condition.
- c) Service standards and technique must acceptable to their intend users.
- d) Technology selected must represent economics and least cost solution.
- e) Service standards and service charge must be affordable by their users.

## **7. DESIGN CRITERIA**

Urban area	140 lpcd for urban area with drainage
Rising Main	DI K-9 pipeline above 150mm Ms pipelines above 600mm
Gravity main connecting Different sumps	Design for ultimate population considering peak factor 1.5 DI pipe above 150mm dia. MS pipe above 600m dia. Maximum head loss 5m/1000 mt. Minimum effective head 5m.above ground level at U/G sump site
Storage at HW	Maximum 12 hours storage of ultimate demand
Underground sump	Maximum 2/3 capacity of 12 hours storage at Head work.
RCC ESR	Maximum 1/3 capacity of 12 hours storage at head works
Distribution system	Design for ultimate population considering peak Factor 3.0 MS pipe above 400 mm dia. DI pipe 150 mm to 400 dia. as work is to be carried in city area. PVC pipe below 150 mm dia. Maximum head loss 5m/1000 mt. Minimum effective head 8 m. above ground level.

## 8. PROPOSED COMPONENT (ESR AND SUMP ESTIMATION)

Details of work proposed/existing work to be utilized are as under

<b>8.1 SOURCE</b>	<p>Dharoi dam –Dharoi RWSS-Gunja HW</p> <p>Gross capacity 907.88 MCFT</p> <p>Dead storage 131.99 MCFT</p> <p>Live storage 775.80 MCFT</p> <p>FSL of dam 190.59</p> <p>GL at Vav HW 239.80</p> <p>GL at Kadarapur HW 174.47</p> <p>GL at Vadnagar HW 152</p> <p>GL at Gunja HW 140</p> <p>GL at Visnagar town HW 128.72</p> <p>Water is being pumped directly from vav head works into ESR at Kadarapur, Vadnagar, Gunja and sump at Visnagar. Design of existing pipeline from Vav HW up to Visnagar Town head work is rechecked and it is possible to fill ESR of Visnagar town directly from Vav HW along with Kadarapur, Vadnagar and Gunja head work ESR.</p>												
<b>8.2 ALLOTMENT OF FILTERED WATER FOR VISNAGAR</b>	<p>Water from Vav HW is reaching Visnagar town sump through 56372 m long MS pipe line through Kadarapur HW, Vadnagar HW and Gunja HW.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Year</th> <th>Population</th> <th>Allotment of Water (MLD)</th> </tr> </thead> <tbody> <tr> <td>1991</td> <td>59497</td> <td>8.32</td> </tr> <tr> <td>2001</td> <td>75000</td> <td>10.50</td> </tr> <tr> <td>2011</td> <td>91753</td> <td>17.07</td> </tr> </tbody> </table>	Year	Population	Allotment of Water (MLD)	1991	59497	8.32	2001	75000	10.50	2011	91753	17.07
Year	Population	Allotment of Water (MLD)											
1991	59497	8.32											
2001	75000	10.50											
2011	91753	17.07											

	2021	106107	19.96	
	2031	141492	26.23	
	2041	181955	33.32	
<b>8.3 PRODUCTION OF WATER FROM LOCAL SOURCE</b>	Total requirement of town is the year 2041 is 33.32 MLD, it is planned to collect 8.27 MLD water from 13 existing tube wells and 25.05 MLD from Dharoi dam – Dharoi RWSS. Details of pumping machinery installed on each tube well along with discharge and total production			
<b>8.4 MATN H.W VISNAGAR OF TOWN IS SURVEY NO .305</b>	Main head works is developed under Saheri Vikas Varsh 2005.			
<b>8.5 U/G SUMP, ESR AT MAIN H.W &amp; DIFFERENT SUB H.W</b>	Name of H.W	Ex. Sump (Ltr)	Proposed sump (Ltr)	Ex. ESR (Ltr)
	Main	50 Lakh		20 Lakh
	Lal Darwaja	9 Lakh	-	3 Lakh
	Dosabhai baug	9.5 Lakh	-	5 Lakh
	Fateh Darwaja	1 Lakh	-	4 Lakh
	Dipra Darwaja	7.5 Lakh	-	3 Lakh
	Kamana Chowkdi	1 Lakh	2.5 Lakh	4 Lakh
	Krishnanagar	1 Lakh	2.5 Lakh	4 Lakh
	Parimal	-	3.5 Lakh	3 Lakh
	Kinara (BK)	-	5 Lakh	4 Lakh
	Vivekanand	2 Lakh	3.5 Lakh	3 Lakh



	Panchshil	-	2 Lakh	1 Lakh
	Total	3.1 ML*	1.9 ML*	5.4ML*

**NOTE:** - \* Excluding capacity of main sump 50 lakh ltr. as a main storage.

## 10. TABLE SHOWING DETAILS OF PROPOSED WATER SUPPLY SCHEME OF VISNAGAR CITY

SR NO	AREA	CAPACITY(LAKHS Ltr)		LOCATION	CHAINAGE (m)	HIGHEST GROUND LEVEL	LOCATION	CHAINAGE (m)	LOWEST GROUND LEVEL
		ESR	SUMP						
1	305	20	50	LAL DARWAJA ENTERANCE	700.00	130.520	FRONT SMASHAN	130.00	126.790
2	LAL DARWAJA	3	9	SHRINATHJI STORE	250.00	130.470	BAPUNO CHORO	390.00	130.000
3	FATHEH DARWAJA	4	1	MIRADATAR	70.00	130.600	PACHALI SHERI	160.00	126.895
4	DARBAR	-	4.5	MAIN-SHAKTI PARLOR	240.00	132.235	ELE. POLE NR. TOWER	380.00	130.065
				ON SUMP	151.00	133.915	VACHALO VAS	20.00	124.370
				DESAI POR LINE-6	0.00	131.400	VANKAR VAS	96.00	125.460
5	DIPRA	3	3	NEAR DIPRA BETHAKNO MADH LEFT FIRST SHERI	90.00	128.835	DIPRA BRL	180.00	<b>123.895</b>
6	KAMANA	4	1	INDRAPRASTH SOCIETY	140.00	125.400	Nr, S.K.COLLEGE	490.00	122.805
7	PARIMAL	3	2	AMBIKA SOCIETY	210.00	131.965	Nr RAM ZUMPADI HOTEL	380.00	122.925
8	VIVEKANAND	3	2	Nr. KINARA ESR	1040.00	128.680	Nr C/S ROAD BHAGATSINH STATUE	160.00	126.230
9	PANCHSHIL	1	2	PANCHAVATI SOCIETY	880.00	131.060	RAMBAG SOCIETY	390.00	128.890
10	KRISHNANAGAR	4.0	1.0	MAIN-HORDING POLE KANSA CIRCLE	1445.10	126.700	FOOTPATH SHRIJI MOTORS	90.00	122.980
				TAKHASHILA SOCIETY	130.00	126.510	KRISHNANAGAR SOCIETY	10.00	123.010
				PARISHRAM SOCIETY	139.00	127.340	PARISHRAM SOCIETY	0.00	126.500
11	KINARA	4	-	SANGRAM FACTORY	818.00	130.240	RAILWAY UNDER PASS	170.00	126.185
12	DOSABHAI BAUG	5	9.5	IN FRONT OF VIJAY PARA	70.00	129.045	Nr, NOOTAN SCHOOL	330.00	127.455