

Transitioning from Non-Daily to Daily Water Supply

Experts group meeting

24th December 2025

Transitioning from Non-Daily to Daily Water Supply System

Water Experts Roundtable meeting

Center for Water and Sanitation (CWAS)-CRDF-CEPT
University in Collaboration with Gandhidham Municipal
Corporation (GdMC)

December 2025

1 Introduction

The Centre for Water and Sanitation (CWAS), CRDF–CEPT University, in partnership with Gandhidham Municipal Corporation (GdMC), organised a Water Expert Roundtable on “Transitioning from Non-Daily to Daily Water Supply Systems” under Phase II of the Empowerment Foundation project “Moving Towards Water Security and Climate-Resilient Cities”, supported by Dasra and the Empowerment Foundation. The roundtable convened city officials, representatives from line departments, municipal engineers, consultants, and water sector experts to deliberate on strategic pathways and practical approaches for improving water service delivery in Gandhidham.

The primary objective of the roundtable was to undertake a comprehensive review of Gandhidham’s existing water supply situation, including the newly added municipal areas, and to discuss viable technical, operational, and institutional measures required to transition from a non-daily to a daily water supply system. The session aimed to strengthen coordination among key stakeholder agencies, assess the preparedness of current infrastructure and systems, and identify immediate as well as medium-term actions necessary for a smooth and sustainable transition.

The roundtable was attended by over 30 participants and was chaired by the Municipal Commissioner. Participants included representatives from Gujarat Urban Development Company (GUDC), Gujarat Water Infrastructure Limited (GWIL), and Gujarat Water Supply and Sewerage Board (GWSSB), consultants from SRD Quality Services Pvt. Ltd., municipal engineers, water sector experts, including CWAS team.



2 Background

Urban centres across India are increasingly confronted with water scarcity, rising demand, and climate-induced stresses. Rapid urbanisation, expansion of municipal boundaries, and rainfall variability are exerting significant pressure on existing water sources and distribution systems. Many cities continue to depend on Non-Daily water supply systems, leading to inequitable access, operational inefficiencies, and vulnerability to service disruptions. Ensuring reliable daily water supply has therefore emerged as a key priority for strengthening urban water security, improving public health outcomes, and enhancing resilience to climate variability.

Non-Daily Water Supply – The Key Challenge

Gandhidham, located in the climate-sensitive Kachchh region, reflects many of these challenges. In 2025, the municipal boundary was expanded through the merger of eleven peripheral villages, adding approximately 1.7 lakh people to the city's jurisdiction. The Gandhidham Municipal Council was subsequently upgraded to Gandhidham Municipal Corporation (GdMC), and the total population is now estimated at 5.89 lakhs.

The present, water is supplied once every three to four days. This non-daily supply has led to increased dependence on private water suppliers, widespread household water storage, extensive use of booster pumps, and heightened risks of contamination due to negative pressure in pipelines. Uneven distribution across neighbourhoods and frequent pressure fluctuations further exacerbate service inequities. The integration of newly added villages into the municipal network has compounded these challenges, underscoring the urgent need to reassess existing water management practices and transition towards a daily water supply system.

From Non-Daily to Daily: An Urgent Call

During Phase I of the project, CWAS conducted a detailed assessment of the existing water service chain using the Water Security Assessment Framework. The assessment examined key dimensions of urban water security, including accessibility, quantity, quality, affordability, and reliability, and informed the development of the Water Security Action Plan (WSAP). The WSAP proposes a range of strategic and operational interventions, including enhancing local water availability through rainwater harvesting (RWH) and groundwater recharge (GWR); improving service delivery by transitioning to daily water supply, establishing District Metered Areas (DMAs), and reducing non-revenue water. It also emphasises water audits, systematic water quality testing, automation and monitoring systems, along with strengthening institutional capacities and community engagement to support sustainable and equitable water service delivery.

Building on this foundation, CWAS, as technical support partner, proposed organising a Water Expert Consultation Roundtable to support GdMC in conceptualising the transition from Non-Daily to daily water supply.

3 Water Expert Roundtable: Context Setting

The meeting commenced with brief introductions by participating institutions and experts, establishing a shared understanding of roles and expectations for the roundtable.

During the session, CWAS formally handed over the IWA Utility Award trophy and certificate to the Municipal Commissioner, Shri Manish Gurwani. Gandhidham Municipal Corporation was recognised under the IWA Climate Smart Utilities Recognition Programme for its pioneering efforts in advancing climate-resilient water management in an arid coastal context. The recognition acknowledged GdMC's work through the lenses of climate adaptation, mitigation, and institutional leadership, underscoring the city's commitment to sustainable urban water management in a climate-sensitive region.



Following the introductions, CWAS presented glimpses of its three-year collaboration with Gandhidham Municipal Corporation under the Empowerment Foundation programme. A short video was showcased highlighting key initiatives undertaken during this period, including the geohydrological study, preparation of the Water Security Assessment Framework and Water Security Action Plan (WSAP), pilot demonstrations on Groundwater Recharge (GWR) and Rainwater Harvesting (RWH), and broader institutional strengthening efforts. The video documented the outcomes achieved and the city's progressive steps towards climate-resilient water management.

3.1 Understanding the Need and Operational Pathways for Transitioning to Daily Water Supply



Water Expert Roundtable began with CWAS’s presentation on “Transitioning from Non-Daily to Daily Water Supply System” was delivered. The presentation highlighted the hidden economic and public health burdens associated with Non-Daily supply systems. It discussed the coping costs borne by households, particularly vulnerable communities, the operational inefficiencies arising from Non-Daily distribution, dependence on private water markets, and the inequities created by pressure fluctuations and uneven distribution. The broader Gujarat scenario was also presented, noting that nearly one-third of cities in the state do not receive daily water supply and that the average duration of supply in many cities is approximately two hours.

The discussion then focused specifically on Gandhidham’s evolving context. The municipal expansion through the inclusion of eleven villages has increased both geographic coverage and population, intensifying service delivery challenges. The current supply system, which provides water once every three to four days, was analysed in detail. Issues such as the status of the Water Treatment Plant, reliance on multiple water sources, transmission losses, leakages, and service delivery gaps across parameters of quantity, accessibility, quality, reliability, and affordability were examined.

Based on the assessment of the existing water supply system, CWAS proposed a pilot trial to transition to daily water supply in the Ward 2B Headworks command area, which primarily receives water from GWSSB borewells. The proposed strategy included structured consultations with valve operators to understand existing operational practices, identification of first and last households in each supply zone to assess pressure variations, and optimisation of supply schedules through a uniform 30-minute daily supply while avoiding odd-hour operations.

A three-day trial run was planned to assess system readiness, document operational and consumer-level issues, and refine protocols prior to scaling up daily water supply.

Experts also highlighted the importance of addressing the gap between water demand and available supply, noting that supply augmentation and system efficiency improvements must accompany the transition to daily water supply.

3.2 Progress of Nal Se Jal Distribution Infrastructure and Implications for Daily Supply Transition

GUDC presented the progress under the Nal Se Jal Scheme, reporting that approximately 70 percent of the new distribution network has been completed.

The remaining works are currently impacted by implementation constraints, including pending legal clearances, local resistance, interface issues with existing pipelines, and land availability challenges in informal settlements under other institutional jurisdictions.

It was indicated that the remaining network works are expected to be commissioned by March 2026. Once the distribution infrastructure becomes fully operational, trial runs for daily water supply can be undertaken in additional areas, enabling a phased transition towards citywide daily water supply.



The discussion also highlighted the need for public outreach and consumer awareness initiatives to encourage households to shift to the upgraded network, which will be critical for ensuring full utilisation of the improved infrastructure and smooth implementation of daily water supply.

3.3 Status of Regional Water Supply Schemes and Source Augmentation Requirements

GWSSB presented an overview of the Regional Water Supply Schemes (RWSS) serving Gandhidham. Under the Kandla–Gandhidham RWSS, Varshamedi Headworks functions as the primary source, receiving water from Tappar Dam and Narmada supplies through GWIL. GWSSB also outlined the regional source augmentation and supply plan.

It was noted that the 42 MLD Water Treatment Plant under the Kandla–Gandhidham RWSS is nearing completion, with approximately 98 percent of works completed.

Under the Vidi RWSS, approximately 19–20 MLD of water is currently supplied to Adipur (Ward 2B Headworks), while the remaining quantity is distributed to surrounding villages.

During the discussion, participants emphasized that additional bulk water supply of approximately 5–10 MLD may be required to support the city’s transition to daily water supply. It was suggested that Gandhidham Municipal Corporation initiate a formal request for additional allocation while simultaneously strengthening local water sources through lake rejuvenation, rainwater harvesting (RWH), and groundwater recharge (GWR) to enhance long-term water security.

Experts also highlighted the need to identify and regularize illegal water connections to improve distribution efficiency and reduce system losses.



3.4 Planning Water Supply Infrastructure for Newly Added Areas

SRD Quality Services Pvt. Ltd., the consultant appointed for preparing the water supply DPR for the newly added areas of Gandhidham, presented their work on water supply and drainage planning for Meghpar Borichi. The proposal envisages supplying water through the Rambaug ESR, along with necessary system augmentation to meet the combined demand of the expanded municipal areas. The discussion also covered potential source augmentation options, including:

- Utilisation of Shinay Lake
- Desilting of Tappar Dam to enhance storage capacity
- Measures to reduce evaporation losses

It was agreed that the DPR would be revised in consultation with GWSSB and GUDC to ensure alignment with the city's broader plan for transitioning to daily water supply. Participants also emphasized the need for system strengthening measures, including installation of bulk flow meters at water distribution systems, augmentation of pumping machinery, development of digital network maps, and preparation of standard operating procedures (SOPs) for valve operations, to support reliable and efficient service delivery. CWAS will provide technical support to GdMC in developing these system management tools and operational protocols.



3.5 Way Forward

The roundtable meeting concluded with a plan to initiate Phase I of a three-day trial run in the first week of February in the 2B command area to assess operational challenges such as source adequacy, valve operations, leakages, and pressure management. Based on the observations, necessary corrective measures will be undertaken. Subsequently, Phase II, a one-week trial run, will be conducted to facilitate a smooth transition from the existing non-daily water supply system to a daily water supply system.

Photo Glimpses of the Roundtable Meeting



4 Site Visit

In the latter half of the roundtable meeting, participants undertook a site visit to the Ward 2B Headworks to assess the feasibility of implementing daily water supply in the command area. The visit involved inspection of pumping machinery, review of current supply patterns, and direct interaction with the valve operator to understand operational constraints and on-ground realities.



The visit concluded with a shared understanding that a daily water supply trial in Ward 2B is technically feasible, provided adequate water availability and operational coordination are ensured. It was agreed that GUDC, GWSSB, and other relevant agencies would extend technical support to operationalise the trial, which is proposed to commence in January 2026.



5 Annexure

5.1 List of Participants

Table 1 .List of Participants

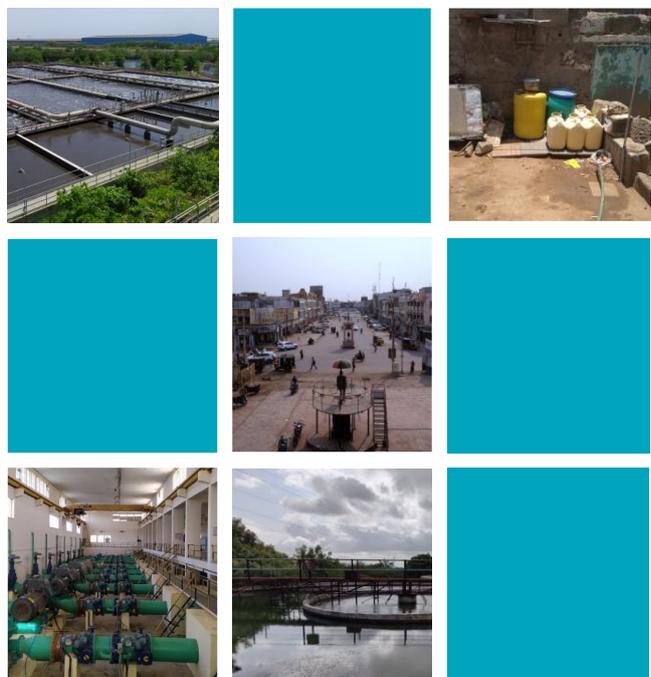
Sr. No.	Name	Organisation
1	Mr. Manish Gurwani (IAS)	Gandhidham Municipal Corporation
2	Prof. Meera Mehta	CWAS- CRDF, CEPT University
3	Prof. Dinesh Mehta	CWAS- CRDF, CEPT University
4	Prof. Mona Iyer	CEPT University
5	Mr. Vijay Anadkad	WRI (Former City Engineer- Water Supply, Rajkot)
6	Mr. Harshal Parikh	Tata Consulting Engineer (TCE)
7	Mr. Madhav Pandya	SRD Quality Services Pvt. Ltd
8	Mr. Bharat Rupala	GUDC
9	Mr. Mukesh Antroliya	GWSSB
10	Mr. Pratik Babhaniya	GWSSB
11	Mr. Bhavik Padsumbiya	GUDC
12	Mr. Jaydeep Gorasiya	JSCPL (Nal se Jal Implementing agency)
13	Mr. Mitulbhai	JSCPL (Nal se Jal Implementing agency)
14	Mr. Shailesh Joshi	MARS (Nal se Jal Consultant)
15	Mr. Bhavik Sabhaya	SRD
16	Mr. Vijay Goswami	SRD
17	Mr. Sanjay Garg	Consultant (Ex. Chairman Water Community)
18	Mr. Dinesh Pujara	Gandhidham Municipal Corporation
19	Mr. Pravinsinh Jhala	
20	Mr. Mayur Maheshwari	
21	Mr. Jay Solanki	
22	Mr. Saurabh Shrivastav	

Sr. No.	Name	Organisation
23	Mr. Rahul Mishra	
24	Mr. Pravin Gadhvi	
25	Mr. Dhruv Bhavsar	CWAS, CRDF, CEPT University
26	Mr. Aasim Mansuri	
27	Ms. Upasana Yadav	
28	Ms. Priyadarshini Choudhary	
29	Ms. Dipti Tanna	

5.2 Presentations by Various Organizations

Presentation by CWAS, CRDF-CEPT University

Expert Roundtable: Intermittent to Daily water Supply System



Expert Roundtable: Intermittent to Daily water Supply System

**Gandhidham Municipal Corporation (GdMC)
and
Center for Water and Sanitation (CWAS)**

24th December 2025





Intermittent water supply – Invisible and Hidden Burden

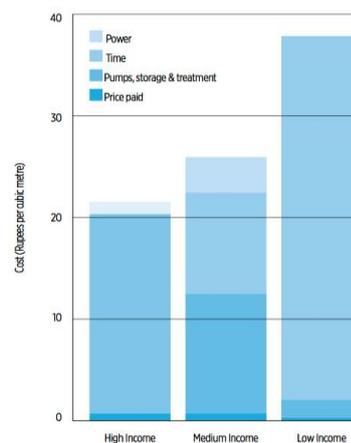
Economical and public health risks

- **INR 13,600 Cr/Year:** Estimated annual losses from irregular urban water systems in India [1]
- **27% Electricity:** Average household electricity used for water access due to intermittency in Pune region [2]
- Poses severe public health risks, primarily through contamination entering pipes during low-pressure periods

Operational inefficiency and dependent on alternative water markets

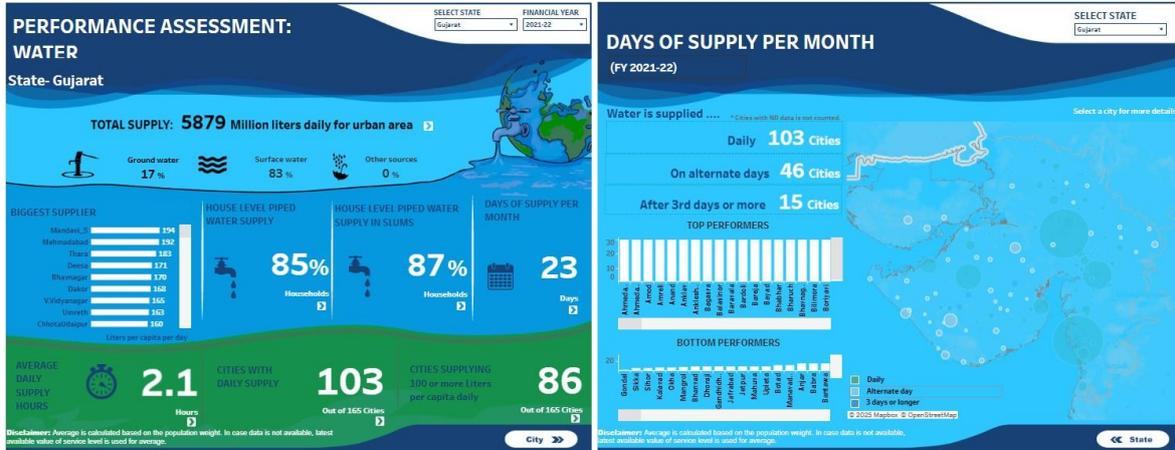
- High pressure variation leading to pipe deterioration resulting higher water losses.
- Unpredictable supply hours → Household coping mechanism
- Increased dependency on alternative water markets: Water tankers and Bottle water markets

Additional burden on poor: Coping costs of intermittent water supply



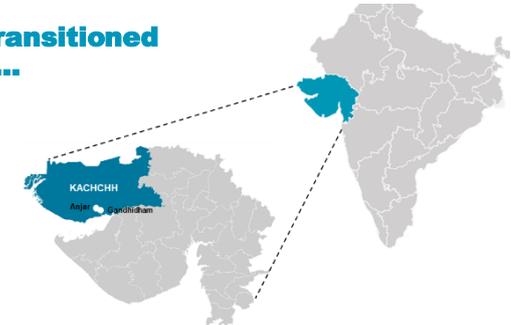
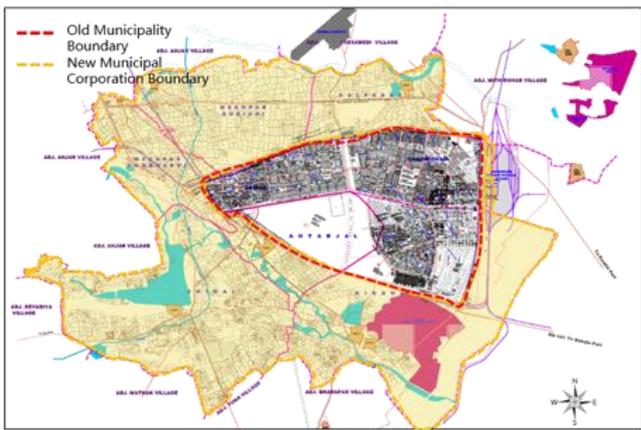
Source: [1] - The value of 24/7 water - <https://thesourcemagazine.org/the-value-of-247-water/>, [2] Impacts of intermittent water supply on household electricity demand: An econometric analysis for the Pune Metropolitan Region, India <https://www.sciencedirect.com/science/article/pii/S2212428424000148>, [3] Chary (2009) and The value of 24/7 water - <https://thesourcemagazine.org/the-value-of-247-water/>

About 1/3rd cities in Gujarat are not supplying water on daily basis Average 2 hours of water supply...



Source: Service Level Benchmarking for Water Supply and Sanitation, Performance Assessment System (PAS), UDD, GoG
<https://cwass.org.in/interactivedashboards/9>

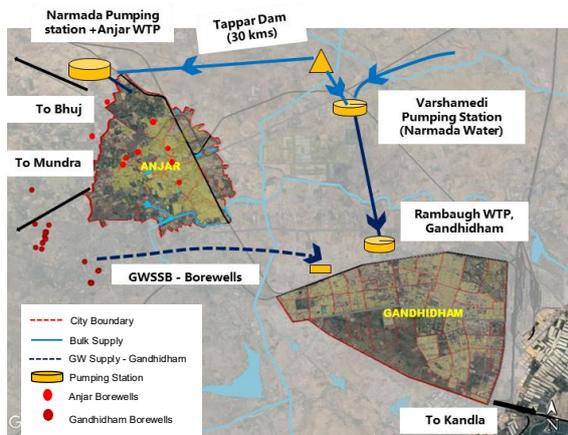
Gandhidham is a planned city and recently transitioned to Municipal Corporation in September 2025...



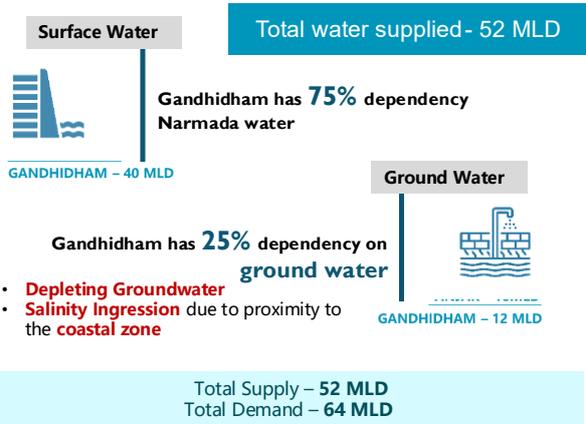
Old boundary	30+ sq.km	4,10,000 (2021)
+ Extended boundary	110+ sq.km (13 Wards & Sectors + 11 Villages)	5,89,000 (69,880 Slum population)

New villages added to the city boundary – Antarjal, Kidana, Meghpar-Borichi, Galpadar, Shinay, Bharapar, Meghpar-Khumbadi, Padana, Mithi Rohar, Chudva, Khari Rohar

The water source for the cities has made a radical shift from ground water to distant surface water source, post implementation of Narmada Project

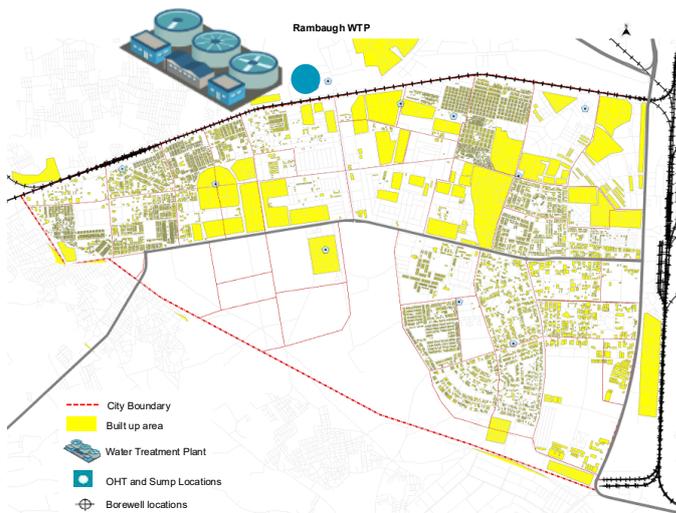


Before Narmada, the city had a dependency on 40 tube wells (situated in Anjar taluka), out of which 12 tube wells are currently dysfunctional



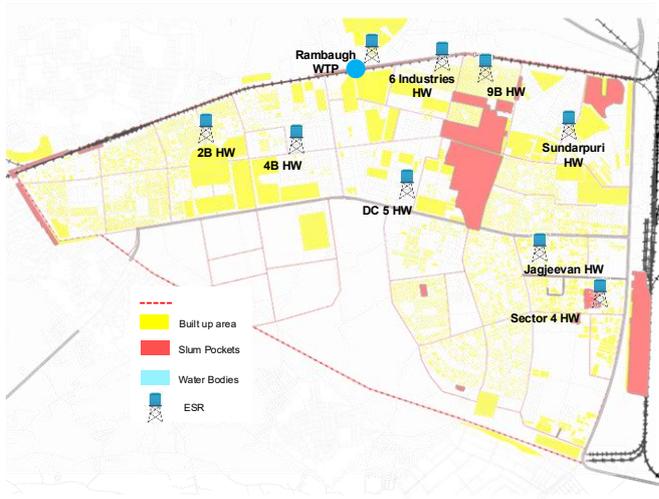
Focus should be on source sustainability and augmentation of sources

Gandhidham has installed Water Treatment Plant (WTP) of 40MLD capacity, however the WTP is non functional...



- Gandhidham has **40 MLD Water Treatment Plant**
- Chlorination is done at WTP, to ensure safe supply
- New WTP of **27 MLD** is under construction at Rambaugh under Jal se Jal program

Gandhidham has ~10 ML Elevated Service Reservoir and ~21 ML Sump storage capacity which distributes water across the city...

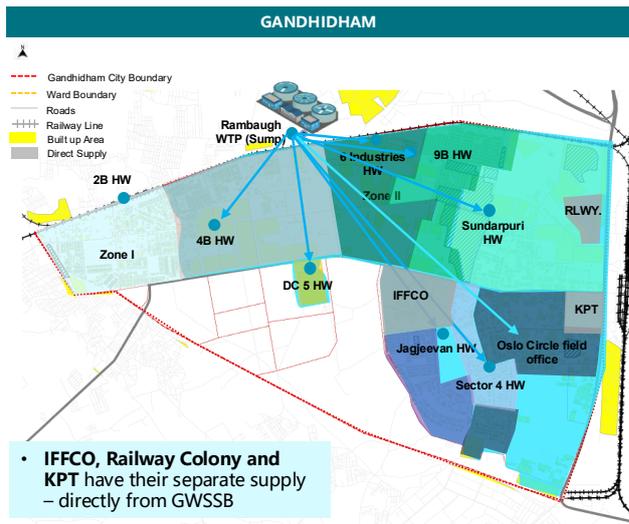


Existing storage capacity

- Gandhidham has **9 ESRs** with **total 10 ML** capacity
- Gandhidham has **12 UG sumps** with **total 21 ML** storage capacity (sumps are additional storage structures which does not supply water directly to the system)
- So total storage capacity is **31 ML**
- Augmentation in Process under "Nal Se Jal" Project ESR + Sump – **36.9 ML**

Post Nal se Jal implementation, storage capacity would be sufficient; however, require assessment of newly added areas

City has two water supply zones, based on available water sources...

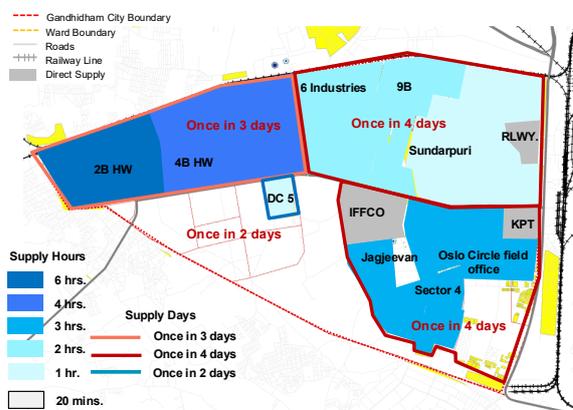


- IFFCO, Railway Colony and KPT have their separate supply – directly from GWSSB

- The coverage of water supply connection is **70%**
- Field assessment indicates the fully geographical water supply coverage in the city with limited water supply network in selected sums like **Khodiyar Nagar, Cargo slums, with limited connections**
- Data systems improvement measures are needed. Drive on regularization of existing connections are needed.
- The per capita supply is **90 LPCD**
- Existing water distribution network length **360 kms (old boundary)**

Gandhidham city has intermittent supply system with once in 3 or 4 days supply and the supply hours vary from 1hr to 6 hours

GANDHIDHAM – City Area Supply Hours



- Water is supplied **once in 3-4 days**
- **Spatial discrepancy** in supply hours is observed in city areas
- Slum pockets **have pressure issues**; some slums have continuous supply for 2 days and then supply is skipped for 2 days
- **Private water supply tankers/ bottled** drinking water have gained importance in the city

Move from intermittent to daily water supply

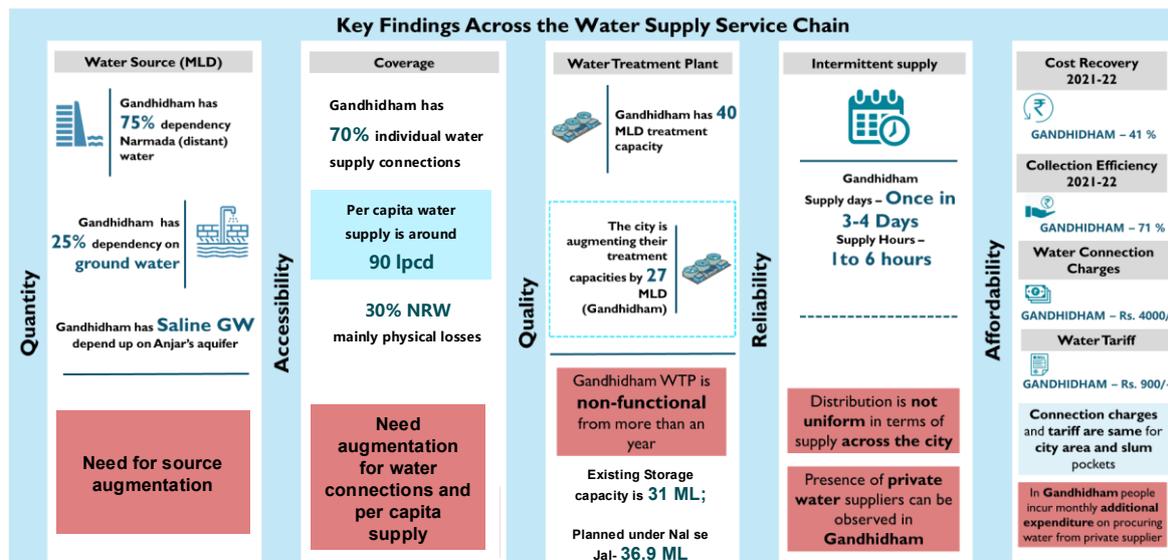
Spatial variations in supply hours is observed in city areas

30% leakage can be identified in the transition/ distribution system... Water Audit study is needed as efficiency improvement measures

GANDHIDHAM System Input Volume (52 MLD)	Authorized Consumption (36.9 MLD)	Billed Authorized Consumption (36 MLD) 70 %	Billed Metered Consumption (NA)	Revenue Water (36 MLD) 70 %
	71 %	Unbilled Authorized Consumption (0.9 MLD) 1 %	Billed Unmetered Consumption (36 MLD) 70 %	
	Water Losses (15.1 MLD)	Apparent Losses 0 %	Unauthorized-Consumption 0 %	Non-Revenue Water (16 MLD) 30 %
	29 %	Real Losses (15.1 MLD) 29 %	Leakage on Transmission and/or Distribution mains (15.1 MLD) 29 %	

- Need to conduct **water audits** to identify actual water supplied and NRW in distribution network.

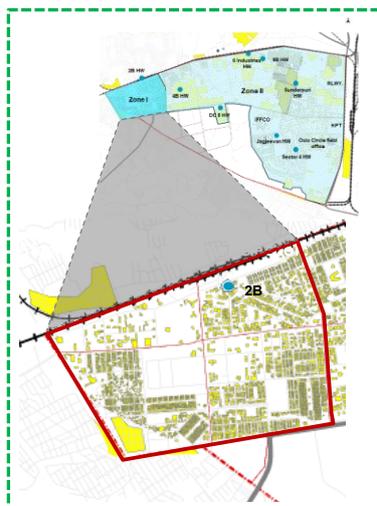
Key findings across water supply service chain



Technical Feasibility assessment for intermittent to daily supply



Trail run in 2B area for Intermittent to daily water supply...



Zone selection- Ground water Supply GWSSB 2B area (2B ESR)

Steps planned to move towards daily supply:

- Meeting with valve operators- understand current operation, workout timings
- Identify 1st and last house for each supply zone to understand pressure
- Proposed water distribution plan- daily supply for 30 min instead of 1.5 hrs.

DETAILS TIME TABLE OF WATER SUPPLY for 2B Area			
SR.NO.	CURRENT TIME	ZONE	PROPOSED TIME
1	6:30AM TO 7 AM	CITY AREA ADIPUR	6:00 – 6:30
2	8AM TO 10AM	3A MAITRI ROAD	7:00 – 7:30
3	3AM TO 5 AM	DG AREA 600,1200	8:00 – 8:30
4	8:30AM TO 10:30AM	JANTA 2B	9:00 – 9:30
5	10:30AM TO 11:30AM	SARDAR JOIN 4A	10:00 – 10:30
6	4AM TO 7 AM	SATWARI-3	11:00 – 11:30

- Awareness session with the residents- one week trial for daily supply
- Discuss challenges that were faced during the trial period and address these challenges to develop implementation strategies.



OPEN DISCUSSION

What are the critical technical, operational, and institutional changes Gandhidham must prioritise—to transition from intermittent (once in 3–4 days) to daily water supply with its existing and planned infrastructure?”



THANK YOU

CWAS CENTER FOR WATER AND SANITATION

CRDF CEPT RESEARCH AND DEVELOPMENT FOUNDATION

CEPT UNIVERSITY

About us

The Center for Water and Sanitation (CWAS) is a part of CEPT Research and Development Foundation (CRDF) at CEPT University. CWAS undertakes action-research, implementation support, capacity building and advocacy in the field of urban water and sanitation. Acting as a thought catalyst and facilitator, CWAS works closely with all levels of governments - national, state and local to support them in delivering water and sanitation services in an efficient, effective and equitable manner.



cwas.org.in
pas.org.in



cwas@cept.ac.in
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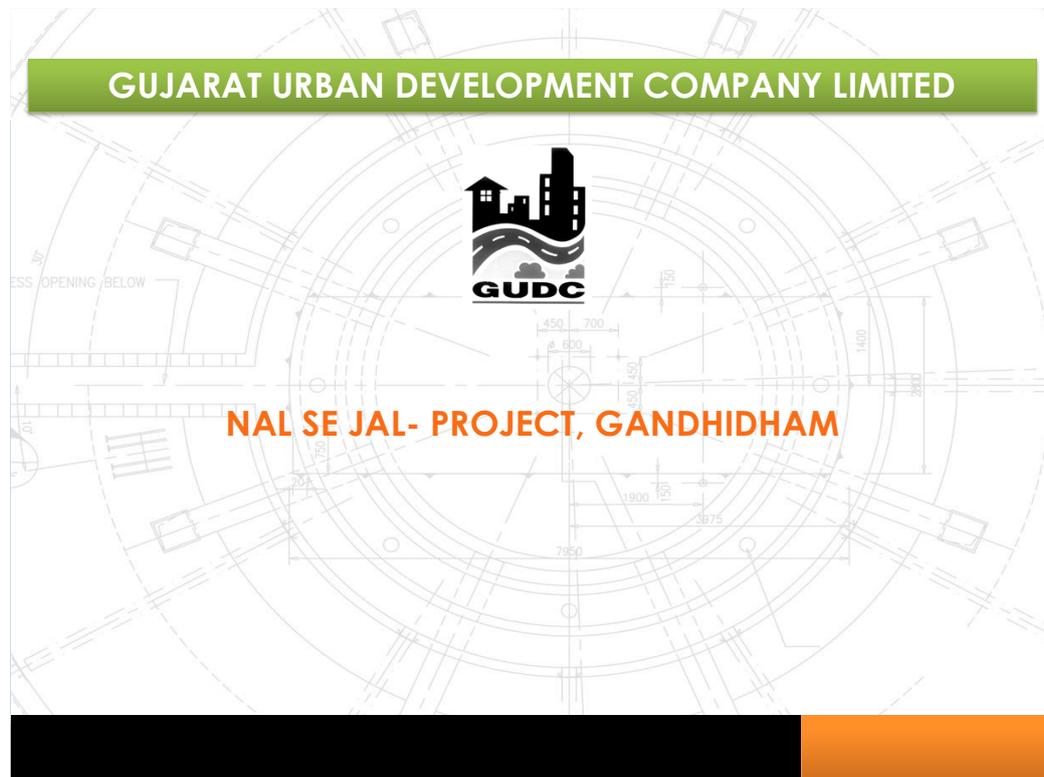
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Presentation by GUJARAT URBAN DEVELOPMENT COMPANY LIMITED

NAL SE JAL- PROJECT, GANDHIDHAM



WATER, SJMMSVY	
Name of the Agency	M/s Jayanti Super Co nstruction Pvt.Ltd, Mehsana
Name of the PMC	M/s MaRS Planning & Engineering Service Pvt. Ltd. Ahmedabad.
Concerned GUDC – PIU, Zonal Office	Rajkot
Original Contract Value	Rs. 130.21 Crore
Date of Work Order	21-10-2022
Stipulated Date for Completion	21-10-2024 Extended upto 21-07-2026
Contract Period	24 Months
Physical Progress	87%
Financial Progress	64.5%

PHYSICAL PROGRESS			
Sr No	Major Work Components	Quantity of works	
		BOQ Scope	Completed
1	Pipeline Network (Km)		
2	Total DI Pipe line Network (KM)	79.439	68.676
3	Total PVC Pipe line Network (KM)	265.003	182.91
4	Total House connection (MRT)	16,866	15403



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COMPANY LTD.
www.gudcltd.com

contact@gudcltd.com

WATER SUPPLY PROJECT-GANDHIDHAM

PHYSICAL PROGRESS

Sr No	Major Work Components	Land allocation	
		CAPACITY	Allotted on
1	WTP (Ram bag Head Works)	27 MLD/ 40 lakh Sump	20-12-2023
2	GSR/ESR-Zone-4,W-2(5&6)	35 lakh Sump/ 18 lakh ESR	26-04-2023
3	GSR/ESR-Sundarpuri	20 lakh Sump/ 10 lakh ESR	09-05-2023
4	GSR/ESR-Ward-1	27 lakh Sump/ 14 lakh ESR	23-09-2025
5	GSR/ESR-Sector 8 (Ram-lila medan)	20 lakh Sump/ 10 lakh ESR	26-02-2024
6	GSR/ESR Gujarat Housing board	20 lakh Sump/ 10 lakh ESR	07-05-2025
7	GSR/ESR 9/B	27 lakh Sump/ 13 lakh ESR	06-12-2024
8	GSR/ESR DC -2	70 lakh Sump/ 35 lakh ESR	10-06-2023
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WATER SUPPLY PROJECT-GANDHIDHAM

PHYSICAL PROGRESS

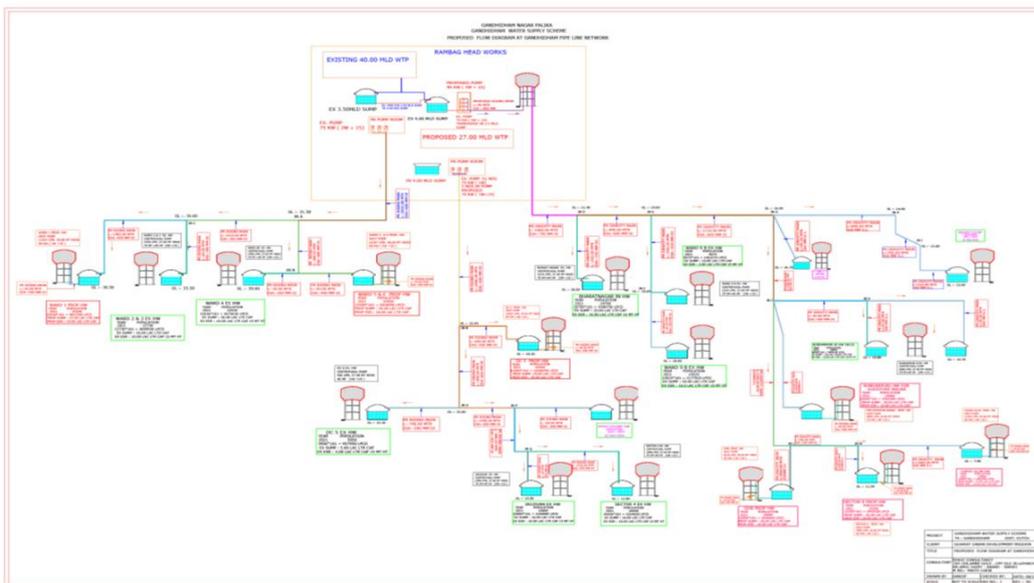
Sr No	Major Work Components	Quantity of works	
		CAPACITY	Completed
1	WTP (Ram bag Head Works)	27 MLD/ 40 lakh Sump	Civil Work Completed
2	GSR/ESR-Zone-4,W-2(5&6)	35 lakh Sump/ 18 lakh ESR	Civil Work Completed
3	GSR/ESR-Sundarpuri	20 lakh Sump/ 10 lakh ESR	Civil Work Completed
4	GSR/ESR-Ward-1	27 lakh Sump/ 14 lakh ESR	Work in Progress.
5	GSR/ESR-Sector 8 (Ram-lila medan)	20 lakh Sump/ 10 lakh ESR	Halted due to court order
6	GSR/ESR Gujarat Housing board	20 lakh Sump/ 10 lakh ESR	Work in Progress.
7	GSR/ESR 9/B Slum Area	27 lakh Sump/ 13 lakh ESR	Civil Work Completed
8	GSR/ESR DC -2	70 lakh Sump/ 35 lakh ESR	Civil Work Completed
		--	

WATER SUPPLY PROJECT-GANDHIDHAM

PHYSICAL PROGRESS

Sr No	Location		Quantity of works	
			Distribution Network	House Connection
1	W-1	Ward – 1A,1B	65%	0%
2	2-B	Ward – 2A	80%	80%
3	4-B	Ward-6,Dubai Textile, DC-3, Ward-5	100%	100%
4	Bharat Nagar	Ward-9A, Subhash Nagar, 6-Industries	100%	100%
5	9-B	Ward-9B,11-A,11-B, Maheshwari Nagar	25%	0%
6	DC-2	DC-2, Ward-7,Ward-10A,10B, Vidya Nagar, New and Old Sundarpuri	65%	60%
7	Khodiyar Nagar	Khodiyar Nagar Slums	100%	100%
8	DC-5	DC-5	0%	0%
9	Jagjivan	Sapna Nagar, Sec-7	100%	100%
10	Sec-4	Sec-1,2,3,4,5,6	90%	75%
11	GHB	Vavajhoda Nagar, GHB, GHB Slums	80%	80%
12	SEC-8	Sec-8	95%	0%

Flow Diagram

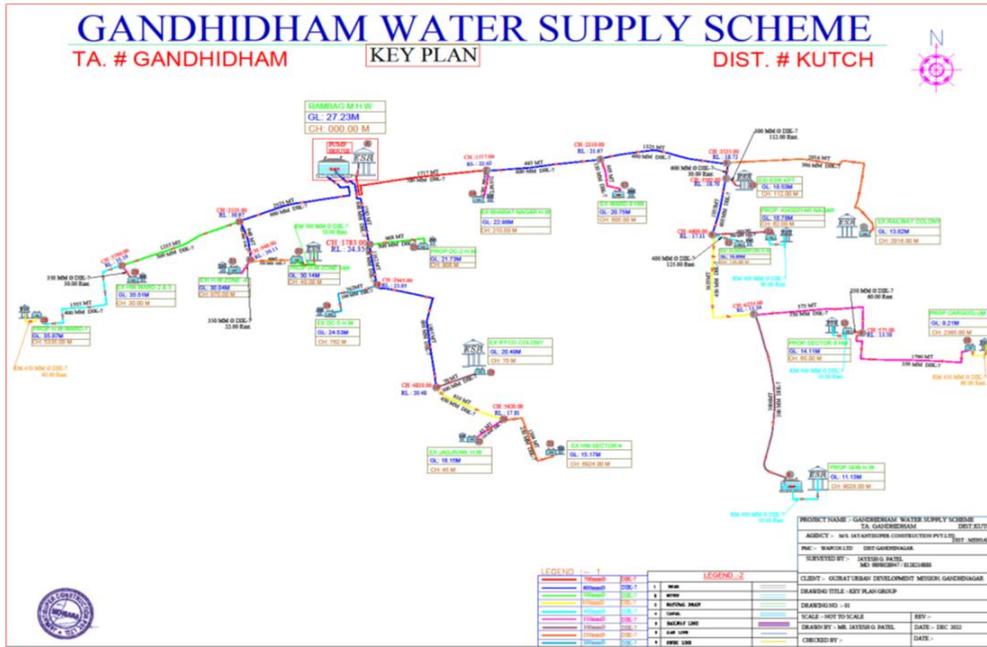




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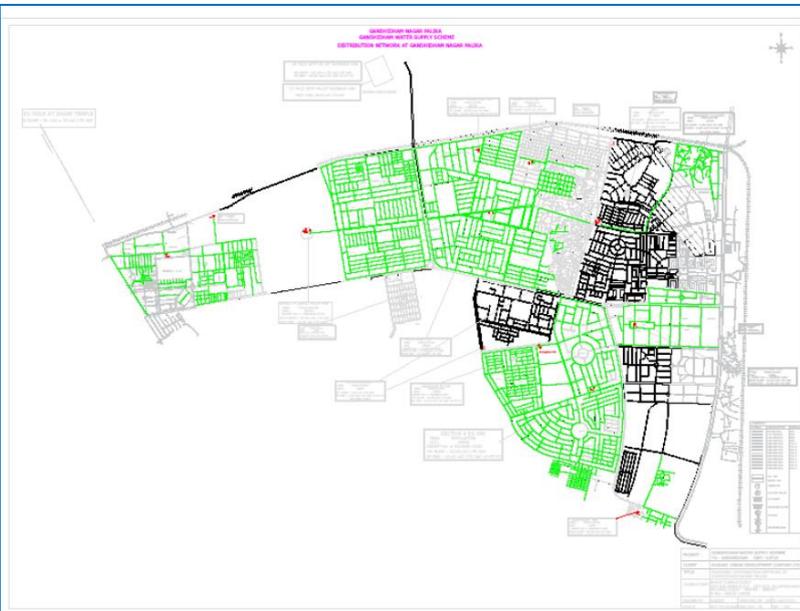
Rising main & Gravity Main



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Distribution Network



Daily water demand in Adipur-Gandhidham

Design (161 liter per capita daily)

	Population	Demand
2011	247992	
2021	415000	66.82 MLD
2036	575000	92.58 MLD
2051	785000	126.39 MLD

Hydraulic Design

Gravity Main	56.948	Rising Main-1	37.225	Rising Main-2	32.213
Bharat nagar	6.392	DC-2	17.102	W-4	6.802
9B	7.139	DC-5	1.623	W-5&6	10.579
Railway colony	5.249	Iffco	5.258	W-2	6.54
KPT	5.86	Jagjivan	7.21	W-1	8.292
Khodiyar nagar	5.864	Sec-4	6.032		
Sundarpuri	8.048				
Sec-8	4.975				
Cargo	8.14				
GHB	5.281				
Total		126.386			

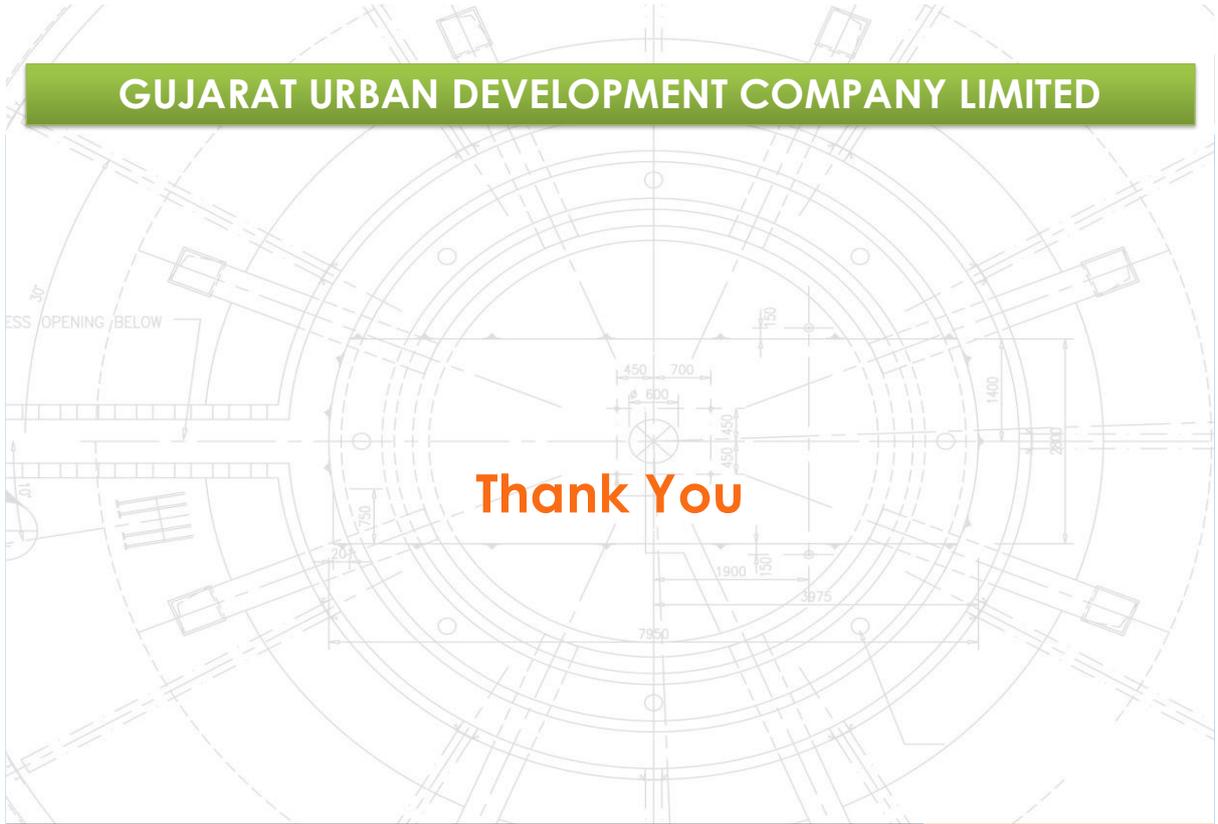
As per 2021 Census Calculation

	Population	Demand	LPCD
as per requirement	415000	67 MLD	161.45
current supply	415000	40 MLD	96.39

GANDHIDHAM NAGAR PALIKA													
GANDHIDHAM WATER SUPPLY SCHEME													
SR. NO.	Location	Population to be covered				Gross Water Demand in MLD @ 140 LPCD +15% = 161.00				HR OF PUMPING	Daily Water Supply in MLD	As per 40 MLD supply (80%) 96.39 LPCD	
		2011	2021	2036	2051	2011	2021	2036	2051				
GRAVITY MAIN													
1	BHARAT NAGA R HW	14398	20750	28700	39700	2.32	3.34	4.62	6.39	2.00	2.00	1.2	1 hr 12 m
2	WARD 9 IND HW	6259	10475	12500	17100	1.01	1.69	2.01	2.75	2.00	1.01	1.2	1 hr 12 m
3	WARD 9 B HW	9366	15675	20288	27243	1.51	2.52	3.27	4.39	3.00	1.51	1.8	1 hr 48 m
4	RAILWAY COLONY	9650	16150	22050	32600	1.55	2.60	3.55	5.25	1.50	1.56	0.9	54 m
5	KPT	9082	15200	24230	36400	1.46	2.45	3.90	5.86	1.50	1.47	0.9	54 m
6	SUNDARPURI HW (FOR W - 12)	18520	30995	38900	49990	2.98	4.99	6.26	8.05	4.00	2.99	2.4	2 hr 24 m
7	SUNDARPURI HW FOR KHODIYAR NAGAR	10725	17950	26250	36420	1.73	2.89	4.23	5.86	3.00	1.73	1.8	1 hr 48 m
8	SECTOR - 8 HW	9112	15250	23500	30900	1.47	2.46	3.78	4.97	2.00	1.48	1.2	1 hr 12 m
9	GHB HW	5241	16400	24500	32800	0.84	2.64	3.94	5.28	3.00	1.58	1.8	1 hr 48 m
10	CARGO SLUM	14854	24860	33990	50560	2.39	4.00	5.47	8.14	-	2.40		
RISING MAIN - 1 (ADIPUR)													
11	WARD 1 HW	18631	25200	34442	51500	3.00	4.06	5.55	8.29	4.50	2.44	2.7	2 hr 42 m
12	WARD 2 HW (2 & 3)	14270	22730	30860	40620	2.30	3.66	4.97	6.54	4.50	2.20	2.7	2 hr 42 m
13	WARD 4 HW	14631	22830	30120	42250	2.36	3.68	4.85	6.80	5.00	2.21	3	3 hr
14	WARD 4 PROP HW (FOR WARD OF 5 & 6)	22101	32950	48260	65705	3.56	5.30	7.77	10.58	8.00	3.18	4.8	4 hr 48 m
RISING MAIN - 2 (SECTOR)													
15	DC- 02 HW (FOR WARD 7 & 10 & SOME PART OF SUNDARPURI)	33250	63905	88160	106224	5.35	10.29	14.19	17.10	10.00	6.17	6	6 hr
16	DC- 5	3410	5950	7500	10080	0.55	0.96	1.21	1.62	2.50	0.58	1.5	1 hr 30 m
17	IFFCO COLONY	9727	16280	22900	32660	1.57	2.62	3.69	5.26	2.00	1.57	1.2	1 hr 12 m
18	JAGJIVAN EX HW	12428	20800	30450	44780	2.00	3.35	4.90	7.21	3.50	2.01	2.1	2 hr 6 m
19	SECTOR -4 HW	12338	20650	27400	37468	1.99	3.32	4.41	6.03	3.50	1.99	2.1	2 hr 6 m
		247992	415000	575000	785000	39.93	66.82	92.58	126.39	22 hrs/day	40.09	Reduced	13 hrs/day
		POP	POP	POP	POP	MLD	MLD	MLD	MLD	Average	MLD	Hrs.	Average

GUJARAT URBAN DEVELOPMENT COMPANY LIMITED

Thank You





CENTER FOR WATER AND SANITATION

The Center for Water and Sanitation (CWAS) is a part of CEPT Research and Development Foundation (CRDF) at the CEPT University in Ahmedabad, India. CWAS undertakes action-research, implementation support, capacity building and advocacy in the field of urban water and sanitation. Acting as a thought catalyst and facilitator, CWAS works closely with all levels of governments - national, state and local to support them for delivery of water and sanitation services in an efficient, effective and equitable manner.

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