

NAME OF ULB - SAHARANPUR

Water Supply

1. Assess the Service Level Gap

The first step is to assess the existing situation and service levels gaps for Water Supply (AMRUT Guidelines; para 3 & 6). This will also include existing institutional framework for the sector. AMRUT is focused on improvement in service levels. The zone wise data shall be used in identifying the gaps. These zone-wise gaps will be added to arrive at city level service gaps. While assessing service level gap reply following questions not more than word indicated against each question.

Question: What kind of baseline information is available for water supply system of the city? Detail out the data, information, plans, reports etc related to sector. Is zone wise information available? (75 words)

Master plan of saharanpur is with SDA. DPR of water supply prepared in 2007 is with nagar nigam and UP Jal Nigam, in this project no work executed. Other records regarding water supply is with nagar nigam saharanpur.

Yes, Zone wise information is available with nagar nigam saharanpur

Question: Have you collected census 2011 data? Are you aware of baseline survey data of MoUD? Have you correlated data from these and other sources? (75 words)

Yes, we have collected and correlated the data from censuses 2011 details are as follows-

Total Population (Census, 2011)	Location of source of drinking water Population	Total Number of Households	Tap Water from treated source
-705478	Total	126156	68548
	Within the premises	117416	66238
	Near the premises	7727	2059
	Away	1013	251
Departmental Data (2015) Population - 769638	Total	80070	40277

Note – 32 villages were added in 2009 when nagar nigam was declared. Only 80070 HH are accessed as per nagar nigam record.

What are existing service levels for water supply in the city? What is the coverage of water supply Connections? What is per capita supply of water? How much is the extent of metering? How much is non-revenue water? Provide information in table

Table: Status of Water Supply service levels

Sr. No.	Indicators	Present Status	MOUD Benchmark	Reliability
1	<u>Coverage of water supply connections</u> (40277/126156)	32%	100%	D
2	<u>Per capita supply of water</u> 103.32 MLD/0.769	134 LPCD	135 LPCD	D
3	<u>Extent of metering of water connections</u>	0%	100%	A
4	<u>Extent of non-revenue water</u>	40.00%	20%	D
5	<u>Quality of water supplied</u>	99.80%	100%	B
6	<u>Cost recovery in water supply services</u>	37.45%	100%	
7	<u>Efficiency in collection of water supply related charges</u>	37.45%	90%	B

Question: What is the gap in these service levels with regard to benchmarks prescribed by MoUD? (75 words)The service level Gaps are under –

- 1- Gap in Coverage of water supply is 68%
- 2- Gap in Per Capita water availability is 1 LPCD.
- 3- Gap in metering is 100%
- 4- Gap in NRW is about 20%. which includes leakage and free water supply to social gathering on festivals, supply through stand post
- 5- Gap in quality of supplied water 0.2%
- 6- Gap in cost recovery is 62.55%.
- 7- Gap in efficiency of water charges and water tax collection is 52.55%.

SOURCE OF WATER AND WATER TREATMENT SYSTEM.

Please provide information in 150 words on the above responding to (however not limited to) following questions.

Question: What is the existing source of water? Is it surface water source or under ground water source? What is the capacity of these sources?

Ground water, 86 Tub well X @ 1.20 MLD = 103.32 MLD, discharge 1500LPM

Question: **Is there any treatment provided to water from these sources? How much water is required to be treated daily? What is the treatment capacity installed in the city?**

Chlorination is provided on all tube wells. Each tube well has separate dozers.

Question: **What per capita water supply in LPCD (liter per capita per day) comes out, if you divide total water supply by the total population?**

Per capita water supply = $103.32/0.769=134.35$ LPCD

DISTRIBUTION ZONES

Please provide information in 150 words on the above responding to (however not limited to) following questions.

Question: **City is divided in how many zones for water supply ?**

Yes, city is divided in to 4 zones

Table: Zone Wise Coverage of Households

Question: **Provide details of total no of Households (HH) in each zone, no of HH with and without water tap connections in the Table**

Zone No.	Total No. of Households (as per 2015)	Households with Water tap Connection	Households without Water tap Connection
1	20690 HH	13530 HH	7160 HH
2	32844 HH	16303 HH	16541 HH
3	20164 HH	6330 HH	13834 HH
4	6372 HH	4064 HH	2308 HH
Total	80070 HH	40277 HH	39793 HH

STORAGE OF WATER

Please provide information in 150 words on the above responding to (however not limited to) following questions.

Question: **What is the total water storage capacity in the city ? What is capacity of elevated and ground water reservoirs?**

Water storage capacity (elevated)-10.225 ML
Elevated reservoirs – 11 No's - 10.225 ML

Question: **In case of surface water, does city need to have ground level reservoirs to store raw treated water?**

NA

Question: **Is water being supplied to consumers through direct pumping or through elevated reservoirs?**

The water is supplied to consumers through over head tank and direct pumping

Question: **Is storage capacity sufficient to meet the cities demand?**

No, The storage capacity is not sufficient to meet the cities demand

DISTRIBUTION NETWORK

Please provide information in 150 words on the above responding to (however not limited to) following questions.

Question: **What is the total length of water supply distribution pipe line laid in the city?**

The total length of water supply distribution pipe line laid in the city is 447 KM.

Question: **What is the total road length in the city? Is the pipe lines are laid in all streets? Is the objective of universal coverage of water supply pipe line is achieved?**

The total road length is 820 KM Pakka Road, 30 KM (State Highway and National Highway). In present situation universal coverage is not achieved. 333 KM streets are not having pipeline hence required to be laid to get universal coverage.

Question: **What are the kinds of pipe materials used in distribution lines?**

The material used in distribution system lines are CI Pipe, AC Pipe and PVC Pipe.

Question: **Provide zone wise details of street length with and without water distribution lines in the Table?**

Table: Zone Wise length of distribution network

Zone No.	Total Street Length	Street length with water distribution pipe line	Street length without water distribution pipe line
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Zone No.	Total Street Length	Street length with water distribution pipe line	Street length without water distribution pipe line
1	202 KM	153 KM	49 KM
2	239 KM	208 KM	31 KM
3	143 KM	70 KM	73 KM
4	236 KM	56 KM	180 KM
Total	820 KM	487 KM	333 KM

INSTITUTIONAL FRAMEWORK

Please provide information in 150 words on the above responding to (however not limited to) following questions.

Question: **Define role and responsibilities in terms of O&M, policy planning, funding, service provision in table**

Table: Functions, roles, and responsibilities

Planning and Design	Construction/ Implementation	O&M
U.P Jal Nigam	U,P. Jal Nigam & ULB	Nagar Nigam Sharanpur

Question: **How city is planning to execute projects ?**

Work related for universal coverage of HH with pipeline, for increasing press elevated tanks, new tube wells is to be done by UP jal Nigam. For regularization of illegal connections and to motivate people to connect with water supply line is to be done by ULB saharmpur

Question: **Shall the implementation of project be done by Municipal Corporation or any parastatal body? Please refer para 8.1 of AMRUT guidelines.**

Implementation of water supply project for

SMALLER WORKS WILL BE EXECUTED BY NN SAHARANPUR AND CAPITAL PROJECTS WILL BE EXECUTED BY UP JAL NIGAM.

2. Bridge the Gap

Once the gap between the existing Service Levels is computed, based on initiatives undertaken in different ongoing programs and projects, objectives will be developed to bridge the gaps to achieve universal coverage. (AMRUT Guidelines; para 6.2 & 6.3, Annexure-2; Table 2.1). Each of the identified objectives will be evolved from the outcome of assessment and meeting the opportunity to bridge the gap.

Question: **List out initiatives undertaken in different ongoing programs and projects to address these gaps. For this provide details of ongoing projects being carried out for sector under different schemes with status and when the existing projects are scheduled to be completed? Provide information in Table**

Table: Status of Ongoing/ Sanctioned

S.No.	Name of Project	Scheme Name	Cost	Month of Compilation	Status (as on dd mm 2015)
	Nil	NA	NA	NA	NA

Question: **How much the existing system will able to address the existing gap in water supply system? Will completion of above will improve the coverage of network and collection efficiency? If yes, how much. (100 words)**

NA

Question: **Does the city require additional infrastructure to improve the services? What kind of services will be required to fulfill the gap?**

YES. For filling the Gap in water supply system project is being prepared by U.P jal nigam (i.e. new tube wells, overhead tanks, rising and distribution mainline and connecting HH with the newly laid lines

Question: **How does the city visualize to take the challenge to rejuvenate the projects by changing their orientation, away from expensive asset replacement programs, to focusing on optimum use of existing assets?**

By changing the orientation main focus is to enhance HH connection through regularization an motivating citizens to take connection for optimizing the existing infrastructure only then universal coverage can be achieved

Question: **Has city conducted assessment of Non Revenue Water?if yes, what is the NRW level? Is city planning to reduce NRW ?**

No, NRW level is 40%

Yes, city is planning to reduce NRW by changing old pipelines.

Question: **Based on assessment of existing infrastructure and ongoing / sanctioned projects, calculate existing gaps and estimated demand by 2021 for water supply pipe network, number of household to be provided with tap connections, and required enhancement in capacity of water source/ treatment plant (MLD). Gaps in water supply service levels be provided as per Table**

Component	2015			2021	
	Present	Ongoing	Total	Demand	Gap
Source (MLD) Ground Water	103.32 MLD	-	103.32 MLD	136 MLD	33 MLD
Treatment capacity (MLD)	0	0	0	0	0
Elevated Storage capacity (ML)	10.225 ML	0	10.225 ML	45 ML	35 ML
Distribution network coverage (KM)	447 KM	40 KM	487 KM	890 KM	403KM

OBJECTIVES

Based on above, objectives will be developed to bridge the gaps to achieve universal coverage. While developing objectives following question shall be responded so as to arrive at appropriate objective.

Please provide List out objectives to meet the gap in not more than 100 words.

Question: **Does each identified objectives will be evolved from the outcome of assessment?**

Objectives are identified from the GAP in services and those objectives will be involved from the outcome of the assessment

Objectives	Activities to be performed to bridge the GAP
To achieve universal coverage	GAP in existing water supply line with HH connections for un covered areas. 403 KM of pipeline to be laid.
To make system efficient by NRW reduction	Leak detection and removal Replacement of old pipelines along with HH connections.

To increase per capita water supply	28 no's of new tube wells to be bored to meet the demand of 2021 along with the scada system.
	For increasing water supply pressure 35 ML capacity of elevated tanks to be added
To improve the quality of water	To establish a Lab for water testing

Question: **Does each objective meet the opportunity to bridge the gap?**

Yes

3. Examine Alternatives and Estimate Cost

The objective will lead to explore and examine viable alternatives options available to address these gaps.. These will include out of box approaches. (AMRUT Guidelines; Para 6.4 & 6.8 & 6.9). This will also include review of smart solutions. The cost estimate with broad source of funding will be explored for each. While identifying the possible activities, also examine the ongoing scheme and its solutions including status of completion, coverage and improvement in O&M. Please provide information on the above responding to (however not limited to) following questions.

Question: **What are the possible activities and source of funding for meeting out the objectives? (75 words)**

Information is provided in table 1.6.

Question: **How can the activities be converged with other programme like JICA/ ADB funded projects in the city etc? (100 words)**

No on going project like JICA/ ADB

Question: **What are the options of completing the ongoing activities? (75 words)**

NA

Question: **How to address the bottlenecks in the existing project and lessons learnt during implementation of these projects? (75 words)**

No project is implemented at saharanpur since long. Previously full concentration was on having infrastructure only but at present the project is based on HH connections and HH coverage with pipeline.

Question: **What measures may be adopted to recover the O&M costs? (100 words)**

Regularization of illegal connections, enhancement of HH connection with respect to existing water supply system, enhancement of converge area. Revision of water supply charges.

Question: **Will metering system for billing introduced?**

Yes,

Question: **Whether reduction in O&M cost by addressing NRW levels be applied? (75 words)**

Yes, by removal of leakages, replacement of old pipe lines

Question: **Does each objective meet the opportunity to bridge the gap?**

Yes

THE ALTERNATIVE ACTIVITIES TO MEET THESE ACTIVITIES BE DEFINED AS PER TABLE

Table: Alternative Activities To Meet Objectives

Sr. No.	Objective	Activities	Financing Source
1	To achieve universal coverage	GAP in existing water supply line with HH connections for un covered areas. 403 KM of pipeline to be laid.	AMRUT
2	To make system efficient by NRW reduction	Leak detection and removal	AMRUT
		Replacement of old pipelines along with HH connections.	AMRUT
3	To increase per capita water supply	28 no's of new tube wells to be bored to meet the demand of 2021 along with the scada system.	AMRUT
		For increasing water supply pressure 35 ML capacity of elevated tanks to be added	AMRUT
4	To improve the quality of water	To establish a Lab for water testing	AMRUT

4. Citizen Engagement

ULBs will organize and conduct city level citizen consultation and receive feedback on the suggested alternatives and innovations. Each alternative will be discussed with citizens and activities to be

taken up will be prioritized to meet the service level gaps. ULB will prioritize these activities and their scaling up based on the available resources. (AMRUT Guidelines; Para 6.6, 6.7 & 7.2). Please explain following questions in not more than 200 words detailing out the needs, aspirations and wishes of the local people.

Question: Has all stakeholders involved in the consultation?

Yes, all stockholders are evolved while preparing the projects. Discussions were held with citizen groups, Ex cooperators, Public representatives, NGO's etc.

Question: Has ward/ zone level consultations held in the city?

Yes. Zone level consultation with group of people and ex cooperators was held on 29-09-15 to 07-10-15

Question: Has alternative proposed above are crowd sourced?

No

Question: What is feedback on the suggested alternatives and innovations?

Groups of citizens advised regular and adequate water supply because at present electricity is the main hindrance in continuous water supply. Automation of tube wells are under consideration.

Question: Has alternative taken up for discussions are prioritized on the basis of consultations?

Yes,

Question: What methodology adopted for prioritizing the alternatives?

Through departmental officers and citizens consultations .

5. Prioritize Projects

Based on the citizen engagement, ULB will prioritize these activities and their scaling up based on the available resources to meet the respective objectives. While prioritizing projects, please reply following questions in not more than 200 words.

Question: What are sources of funds?

AMRUT

Question: Has projects been converged with other program and schemes?

No

Question: Has projects been prioritized based on “more with less” approach?

Yes

Question: Has the universal coverage approach indicated in AMRUT guidelines followed for prioritization of activities?

Yes,

6. Conditionalities

Describe in not more than 300 words the Conditionalities of each project in terms of availability of land, environmental obligation and clearances, required NOC, financial commitment, approval and permission needed to implement the project.

ULB does not require any NOC/ LAND/ Environmental clearance for increasing universal coverage, New tube wells, over head tanks

7. Resilience

Required approvals will be sought from ULBs and competent authority and resilience factor would be built in to ensure environmentally sustainable water supply scheme. Describe in not more than 300 words regarding resilience built in the proposals.

Disaster and environmental resilience related factors will be considered while preparing DPR.

8. Financial Plan

Once the activities are finalized and prioritized after consultations, investments both in terms of capital cost and O&M cost has to be estimated. (AMRUT Guidelines; para 6.5) Based on the investment requirements, different sources of finance have to be identified. Financial Plan for the complete life cycle of the prioritized development will be prepared. (AMRUT Guidelines; para 4, 6.6, 6.12, 6.13 & 6.14). The financial plan will include percentage share of different stakeholders (Centre, State and City) including financial convergence with various ongoing projects. While preparing finance plan please reply following questions in not more than 250 words

Question: How the proposed finance plan is structured for transforming and creating infrastructure projects?

The structured plan of the project has been developed as per guidelines of AMRUT.

Question: list of individual projects which is being financed by various stakeholders?

Nil (No project is ongoing)

Question: Has financial plan prepared for identified projects based on financial convergence and consultation with funding partners?

Yes,

Question: Is the proposed financial structure is sustainable? If so then whether project has been categorized based on financial considerations ?

Yes, the proposed financial structure is sustainable and project has been categorized based on financial considerations.

Question: Have the financial assumptions been listed out ?

Yes,

Question: Does financial plan for the complete life cycle of the prioritized development?

Yes,

Question: does financial plan include percentage share of different stakeholders (Centre, State, ULBs)

Yes, financial plan include percentage share of different stakeholders (Centre, State and ULB)

Question: Does it include financial convergence with various ongoing projects.

No,

Question: Does it provide year-wise milestones and outcomes ?

Yes, year-wise milestones and outcomes have been provided and it will be given in DPR.

DETAILS IN FINANCIAL PLAN SHALL BE PROVIDED AS PER TABLE 8.1, 8.2, 8.3, 8.4 AND 8.5. THESE TABLES ARE BASED ON AMRUT GUIDELINES TABLES 2.1, 2.2, 2.3.1, 2.3.2, AND 2.5.

Table 8.1 Master Plan of Water Supply Projects for Mission period

(As per Table 2.1of AMRUT guidelines)

(Amount in Rs. Cr)

S.No.	Project Name	Priority number	Year in which to be implemented	Year in which to be completed	Estimated Cost
1	<ul style="list-style-type: none">GAP in existing water supply line with HH connections for un covered areas. 403 KM of pipeline to be laid.	2	2016	2019	26.86 Cr
2	<ul style="list-style-type: none">Leak detection and removalReplacement of old pipelines along with HH connections	3	2017	2019	0.99 Cr
3	<ul style="list-style-type: none">28 no's of new tube wells to be bored to meet the demand of 2021 along with the scada system.For increasing water supply pressure 35 ML capacity of elevated tanks to be added	4	2017	2019	45.85Cr
4	<ul style="list-style-type: none">To establish a Lab for water testing	5	2017	2019	0.30 Cr

TOTAL 74.00 CR

MASTER SERVICE LEVELS IMPROVEMENTS DURING MISSION PERIOD

(As per Table 2.2 of AMRUT guidelines)

(Amount in Rs. Cr)

Sr. No.	Project Name	Physical Components	Change in Service Levels			Estimated Cost
			Indicator	Existing (As-Is)	After (To-be)	

Sr. No.	Project Name	Physical Components	Change in Service Levels			Estimated Cost
			Indicator	Existing (As-Is)	After (To-be)	
1	<ul style="list-style-type: none"> GAP in existing water supply line with HH connections for uncovered areas. 403 KM of pipeline to be laid. regularization of unauthorized connections 	1- connection regularization 27000@100/C onnection 403KM@0.06 6 Cr/Km	HH Connection Coverage HH Coverage with Pipeline and water connection	32%	100%	26.86 Cr
2	<ul style="list-style-type: none"> Leak detection and removal Replacement of old pipelines along with HH connections 	15KM @ 0.066 Cr/Km	NRW Reduction	40 %	20%	0.99 Cr
3	<ul style="list-style-type: none"> 28 no's of new tube wells to be bored to meet the demand of 2021 along with the scada system. For increasing water supply pressure 35 ML capacity of elevated tanks to be added 	28 New Tube wells @ 0.418 Cr/tube well 35 ML OHT @0.88 Cr/ML	To sustain pre capita water supply To increase pressure in distribution system		100% 100%	15.06 Cr 30.79 Cr
4	<ul style="list-style-type: none"> To establish a Lab for water testing 	On lab @0.30 Cr	Quality Improvement	0		0.30 Cr

74.00 Cr

ANNUAL FUND SHARING PATTERN FOR WATER SUPPLY PROJECTS

(As per Table 2.3.1 of AMRUT guidelines)

(Amount in Rs. Cr)

Sr. No.	name of Project	Total Project Cost	Share				
			GOI	State	ULB	Others	Total
1	<ul style="list-style-type: none"> GAP in existing water supply line with HH connections for un covered areas. 403 KM of pipeline to be laid. regularization of un authorized connections, 	26.86 Cr	13.43	13.43			26.86Cr
2	<ul style="list-style-type: none"> Leak detection and removal Replacement of old pipelines along with HH connections 	0.99 Cr	0.495	0.495			0.99 Cr
3	<ul style="list-style-type: none"> 28 no's of new tube wells to be bored to meet the demand of 2021 along with the scada system. For increasing water supply pressure 35 ML capacity of elevated tanks to be added 	45.85Cr	22.925	22.925			45.85Cr
4	<ul style="list-style-type: none"> To establish a Lab for water testing 	0.30 Cr	0.15	0.15			0.30 Cr

ANNUAL FUND SHARING BREAK-UP FOR WATER SUPPLY PROJECTS

(As per Table 2.3.2 of AMRUT guidelines)

Sr. No.	Project	GOI	State			ULB			Convergence	others	Total
			14th FC	Others	Total	14th FC	Others	Total			
1	<ul style="list-style-type: none"> GAP in existing water supply line with HH connections for un covered areas. 403 KM of pipeline to be laid. regularization of un authorized connections, 	50%	-	50%	50%	-	-	-	-	-	100%
2	<ul style="list-style-type: none"> Leak detection and removal Replacement of old pipelines along with HH connections 	50%	-	50%	50%	-	-	-	-	-	100%
3	<ul style="list-style-type: none"> 28 no's of new tube wells to be bored to meet the demand of 2021 along with the scada system. For increasing water supply pressure 35 ML capacity of elevated tanks to be added 	50%	-	50%	50%	-	-	-	-	-	100%
4	<ul style="list-style-type: none"> To establish a Lab for water testing 	50%	-	50%	50%	-	-	-	-	-	100%

YEAR WISE PLAN FOR SERVICE LEVELS IMPROVEMENTS

(As per Table 2.5of AMRUT guidelines)

Proposed Projects	Project Cost	Indicator	Baseline	Annual (Increment from the Baseline Value)					Targets		
				FY 2016		FY 2017	FY 2018	FY 2019	FY 2020		
				H1	H2						
<ul style="list-style-type: none"> GAP in existing water supply line with HH connections for uncovered areas. 403 KM of pipeline to be laid. regularization of unauthorized connections 	26.86 Cr	100%	32%		50%	55%	60%	100%,			
<ul style="list-style-type: none"> Leak detection and removal Replacement of old pipelines along with HH connections 	0.99 Cr	100%	40%			35%	25%	20%			
<ul style="list-style-type: none"> 28 no's of new tube wells to be bored to meet the demand of 2021 along with the scada system. For increasing water supply pressure 35 ML capacity of elevated tanks to be added 	45.85 Cr	135 LPCD	134 LPCD					135 LPCD			
<ul style="list-style-type: none"> To establish a Lab for water testing 	0.30 Cr	100%	99.80%			100%		100%			