

NAME OF ULB - SHAHJAHANPUR

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 Shahjahanpur is with regulatory authority, DPR of water supply with UP jal Nigam and water supply related data with NPP Shahjahanpur

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 Census data and the current format is being filled after procuring data correlation with data in below table

S.No	Source	Particulars	Numbers	Tap Water Connection
01	Census 2011	Total Population= 327965		
		Household	56032	
		Within the premises	50594	9713
		Near the premises	4309	664
		Away	1129	136
02	Departmental Data 2015	Total Population = 343616		
		Household	58,159	33,939

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> 33939/58159	58%	100%	D
2	<u>Per capita supply of water</u> 20.16 MLD/0.343	59 LPCD	135 LPCD	D
3	<u>Extent of metering of water connections</u>	0 %	100%	D
4	<u>Extent of non-revenue water</u>	22.69%	20%	A
5	<u>Quality of water supplied</u>	100%	100%	D
6	<u>Cost recovery in water supply services</u>	48.36%	100%	D
7	<u>Efficiency in collection of water supply related charges</u>	87.98%	90%	D

Question: What is the gap in these service levels with regard to benchmarks prescribed by MoUD? (75 words)

As per above table it is clear that gap in service levels are as under:

1. Gap in coverage of water supply is 42 %
2. Gap in Per capita water availability is about 76 LPCD.
3. Gap in Metering is 100%.
4. NRW is about 2.69% which include leakage and free water supply to social gathering festivals along with water supply through stand posts.
5. No gap in Quality of supplied water as per PHE norms.
6. Gap in Cost recovery is 51.64% with expenditure on electricity and power.
7. Gap in efficiency of water charges/tax collection is about 2.02%.

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?

Existing source of water is under ground water source 20.16 M L D.24 Nos. of Tube wells produced total water 20.16 MLD

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?

Yes, Chlorination is provided for treatment of water.

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.?

20.16 MLD water / 3,43,616 Population = 59 LPCD with NRW

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 ?

As per D P R prepared by UP Jal Nigam city is divided into 9 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	Households with Water tap Connection	Households without Water tap Connection
1	6925 HH	4022 HH	2903 HH
2	6900 HH	4586 HH	2314 HH
3	6217 HH	3685 HH	2532 HH
4	7886 HH	5585 HH	2301 HH
5	9209 HH	4892 HH	4317 HH
6	7387 HH	3899 HH	3488 HH
7	5216 HH	3882 HH	1334 HH

Zone No.	Total No. of Households	Households with Water tap Connection	Households without Water tap Connection
8	5465 HH	3388 HH	2077 HH
9	2954 HH	0	2954 HH
Total	58159 HH	33939 HH	24220 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?

In city there are 6 O H T available 2250 KL + 1900 KL +2250 KL+ 1500 KL +2250 KL + 1000 KL Total: 11150 KL = 11.15 ML

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

No surface water in the Shahjahanpur City.

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

Water is being supplied through Elevated reservoirs.

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

Yes storage capacity is sufficient to meet the city demand per watertotal water production 20.16 MLD/3 = 6.72 ML Storage capacity requiredbut existing storage capacity is 11.15 ML

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?

Total length of water supply distribution pipe line laid in the city 151.94 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?

Total road length in the city 269.81 Km. No there is no pipe lines are laid in all streets. No, the objective of universal coverage of water supply pipe line is not achieved.

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

CI, DI,PVC etc.

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 (In Km)	Street length with water distribution pipe line (In Km)	Street length without water distribution pipe line (In Km)
1.	32.13KM	18.17KM	13.95KM
2.	32.01KM	20.15KM	11.86KM
3.	28.84KM	16.2KM	12.65KM

Zone No.	Total Street Length (In Km)	Street length with water distribution pipe line (In Km)	Street length without water distribution pipe line (In Km)
4.	36.58KM	24.65KM	11.93KM
5.	42.72KM	22.73KM	19.99KM
6.	34.27KM	17.56KM	16.71KM
7.	24.2KM	17.9KM	6.3KM
8.	25.35KM	14.58KM	10.77KM
9.	13.7 KM	0KM	13.7KM
Total	269.8KM	151.94KM	117.86KM

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
UP Jal Nigam	UP Jal Nigam	Nagar Palika Parishad, Shahjahanpur

Question: How city is planning to execute projects ?

The schemes of water supply are formulated by UPJN and also executed by UPJN. after execution such schemes are handover to Jalkal Vibhag Shahjahanpur.

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 the project shall be done by State Level Parastatal Agency U.P. Jal Nigam. Shahjahanpur will follow the para 8.1 of the AMRUT Guidelines while execution of the project.

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 Compilation	of	Status (as on dd mm 2015)
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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)

As per existing system No zone is fully covered by water supply system.

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

Yes, city requires additional infrastructure to improve the services. Like laying of pipelines to unserved areas, augmentation of storage of raw water, augmentation of storage capacity in different zones.

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?

The focus under AMRUT shall be to increase the coverage, thus focus will be on optimum utilisation of existing assets.

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

No. yes city is planning to reduce NRW

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 T.W	29.93 MLD	---	29.93 MLD	49.17 MLD	19.24 MLD
TREATMENT CAPACITY	29.93 MLD	---	29.93 MLD	49.17 MLD	19.24 MLD
ELEVATED STORAGE CAPACITY(60.H.T)	11.150 ML		11.150 ML	16.39ML	5.24ML
DISTRIBUTION NETWORK COVERAGE	151.95 km	---	151.95 km	269.81 KM	117.86 km

OBJECTIVES

PBased 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?

Yes. The objective is to increase the coverage to unserved areas and to reduce NRW and enhance storage capacity of raw water.

Qestion: Does each objective meet the opportunity to bridge the gap?

Yes.

Objectives	ACTIVITIES TO BE PERFORMED TO BRIDGE THE GAP
TO ACHIEVE UNIVERSAL COVERAGE	GAP IN EXISTING WATER SUPPLY NETWORK WITH HOUSEHOLD CONNECTIONS
	EXPANSION OF WATER SUPPLY DISTRIBUTION NETWORK WITH HOUSEHOLD CONNECTION IN UNCOVERED POCKETS
TO MAKE SYSTEM EFFICIENT BY NRW REDUCTION	LEAKAGE DETECTION AND ITS REMOVAL
	REPLACEMENT OF OLD LINES (DAMAGED,LEAKED, DEFUNGED, CHOCKED,SLUICE VALVE ETC) WITH HOUSE HOLD CONNECTION
	WATER SUPPLY ZONING OF SERVICE AREA .
	100% IMPLEMENTATION OF METERING .
TO INCREASE PER CAPITA SUPPLY (LPCD)	NEW TUBEWELL
	ENHANCEMENT IN EFFICIENCY OF EXISTING WATER WORKS
TO IMPROVE THE QUALITY OF WATER	REHAB OF WATER TESTING LAB
	IMPLEMENTATION OF ONLINE WATER TESTING &MONITORING SYSTEMS

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)

The source of funding of activities shall be: 1. AMRUT, 2. 14th Finance Commission 3. State Government Funds

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 Ongoing Project.

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

The O&M cost shall be recovered by: 1. Increasing the coverage of water supply to unserved areas, 2. By increasing user charges 3. By reducing NRW

Question: Will metering system for billing introduced?

Yes, Metering System will introduced.

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

Yes, NRW levels will be reduced to enhance O&M Cost .

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

Yes, objectives have been identified to bridge the current service level gaps

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

Table: Alternative Activities To Meet Objectives

Objectives	Activities to be performed to bridge the gap	Financing Source
TO ACHIEVE UNIVERSAL COVERAGE	GAP IN EXISTING WATER SUPPLY NETWORK WITH HOUSEHOLD CONNECTIONS	AMRUT IEC
	EXPANSION OF WATER SUPPLY DISTRIBUTION NETWORK WITH HOUSEHOLD CONNECTION IN UNCOVERED POCKETS	AMRUT/State/ULB
TO INCREASE PER CAPITA SUPPLY (LPCD)	NEW TUBEWELL	AMRUT/State/ULB
	ENHANCEMENT IN EFFICIENCY OF EXISTING WATER WORKS	AMRUT/State/ULB
TO MAKE SYSTEM EFFICIENT BY NRW REDUCTION	LEAKAGE DETECTION AND ITS REMOVAL	AMRUT/State/ULB
	REPLACEMENT OF OLD LINES (DAMAGED,LEAKED, DEFUNGED, CHOCKED,SLUICE VALVE ETC) WITH HOUSE HOLD CONNECTION	AMRUT/State/ULB
	WATER SUPPLY ZONING OF SERVICE AREA .	AMRUT/State/ULB
	100% IMPLEMENTATION OF METERING .	AMRUT/State/ULB
TO IMPROVE THE QUALITY OF WATER	REHAB OF WATER TESTING LAB	AMRUT/State/ULB
	IMPLEMENTATION OF ONLINE WATER TESTING & MONITORING SYSTEMS	AMRUT/State/ULB

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 stakeholders is being involved in the consultation. Dated 19 September 2015 Board meeting at Nagar PalikaParishad,Shahjahanpur

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

Yes, ward/ zone level consultations is being held in the cityDated 29 September 2015Mahmand Jalal Nagar Near Shaheed Ramesh Park

Question: Has alternative proposed above are crowd sourced?

No

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

Feedback on the suggested alternatives and innovations are being considered.

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

Yes, alternatives taken up for discussions are prioritized on the basis of consultations

Question: What methodology adopted for prioritizing the alternatives?

Alternatives have been prioritized based on demand raised through consultation with citizens, officials and parastatal agencies.

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?

The source of funding of activities shall be: 1. AMRUT, 2. 14th Finance Commission 3. State Government Funds

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

The convergence factor has been considered while designing and funding of project.

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

Yes the projects are being prioritized based on “more with less” approach

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

Yes, universal coverage approach indicated in AMRUT guidelines has been followed for prioritization of activities

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.

Land is Available.all clearances is obtained. No further NOC's Required.

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.

Yes, resilience factor would be built in to ensure environmentally sustainable water supply scheme.

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?

As per the guidelines of the AMRUT, the structured plan of the project has been developed.

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

There is no such individual project.

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

Yes, financial plan prepared for identified projects are based on financial convergence and consultation with funding partners.

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, financial assumptions have been listed out

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

Yes, financial plan has been done for the complete life cycle of the prioritized development

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.

Yes, it includes financial convergence with various ongoing projects

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

Yes, year-wise milestones and outcomes have been provided.

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	Objective	Project Name	Priority number	Year in which to be implemented	Year in which to be completed	Estimated Cost
1.	TO ACHIEVE UNIVERSAL COVERAGE	Water supply connections for 440HH @5000 Rs	1	2016	2019	0.22Cr
2.	TO ACHIEVE UNIVERSAL COVERAGE	Enlargement of water distribution lines for 117.86 Km @ Rs. 15 lakhs per Km	2	2016	2019	17.67 Cr
3.	TO INCREASE PER CAPITA SUPPLY (LPCD)	Construction of tubewell16 Nos @ Rs. 40 lakhs and OHT (5240 kl) @ Rs. 5.5 Cr.	3	2016	2019	12.0 Cr
4.	TO MAKE SYSTEM EFFICIENT BY NRW REDUCTION	Replacement of Maintenance of old OHT & Tube well, Zoning	4	2016	2019	5.0 Cr
Total						34.89 Cr.

MASTER SERVICE LEVELS IMPROVEMENTS DURING MISSION PERIOD

(As per Table 2.2 of AMRUT guidelines)(Amount in Rs. Cr)

Sr. No.	Objective	Project Name	Physical Components	Change in Service Levels			Estimated Cost
				Indicator	Existing (As-Is)	After (To-be)	
1	TO ACHIEVE UNIVERSAL COVERAGE	Water supply connections for 440HH @5000 Rs	house connections	coverage of water supply connections	56.22 %	100%	0.22Cr
2	TO ACHIEVE UNIVERSAL COVERAGE	Enlargement of water distribution lines for 117.86 Km @ Rs. 15 lacks per Km	distribution network	coverage of water supply connections	151.95 km	269.81 km	17.67 Cr
3	TO INCREASE PER CAPITA SUPPLY (LPCD)	Construction of tubewell 16 Nos @ Rs. 40 lakhs and OHT (5240 kl) @ Rs. 5.5 Cr.	construction of tube wells&OHT	Per capita supply of water	87.25 LPCD	135LPCD	12.0 Cr
4	TO MAKE SYSTEM	Replacement of	Maintenance of	Extended of Non-revenue	22.69	20%	5.0 Cr

Sr. No.	Objective	name of Project	Total Project Cost	Share				
				GOI	State	ULB	Others	Total
1	TO ACHIEVE UNIVERSAL COVERAGE	Water supply connections for 440HH @5000 Rs	0.12Cr	0.06cr	0.06cr	-	-	0.22Cr
2	TO ACHIEVE UNIVERSAL COVERAGE	Enlargement of water distribution lines for 117.86 Km @ Rs. 15 lakhs per Km	17.67 cr.	8.83 cr.	8.84 cr.	-	-	17.67 Cr
3	TO INCREASE PER CAPITA SUPPLY (LPCD)	Construction of tubewell 16 Nos @ Rs. 40 lakhs and OHT (5240 kl) @ Rs. 5.5 Cr.	12.0 cr.	6.0 cr.	6.0 cr.	-	-	12.0 Cr
4	TO MAKE SYSTEM EFFICIENT BY NRW REDUCTION	Replacement of Maintenance of old OHT & Tube well, Zoning	5 Cr.	2.5 Cr.	2.5 Cr.	-	-	5.0 Cr
Total						-	-	34.89 Cr.

Sr. No	Objective	Project	GOI	State			ULB			Convergence	others	Total
				14th FC	Others	Total	14th FC	Others	Total			
		Zoning										

YEAR WISE PLAN FOR SERVICE LEVELS IMPROVEMENTS

(As per Table 2.5 of AMRUT guidelines)

Proposed Projects	Project Cost	Indicator	Baseline	Annual Targets (Increment from the Baseline Value)						
				FY 2016		FY 2017	FY 2018	FY 2019	FY 2020	
				H1	H2					
Water supply connections for	0.22Cr	0.06cr	58%		65%	75%	90%	100%		

Proposed Projects	Project Cost	Indicator	Baseline	Annual Targets (Increment from the Baseline Value)					
				FY 2016		FY 2017	FY 2018	FY 2019	FY 2020
				H1	H2				
440HH @5000 Rs									
Enlargement of water distribution lines for 117.86 Km @ Rs. 15 lacks per Km	17.67 cr.	8.83 cr.							
Construction of tubewell 16 Nos @ Rs. 40 lakhs and OHT (5240 kl) @ Rs. 5.5 Cr.	12.0 cr.	Per capita supply of water	87.25 LPCD		95 LPCD	105 LPCD	125 LPCD	135 LPCD	
Replacement of Maintenance of old OHT & Tube well, Zoning	5.0 Cr.	Extended of Non-revenue water	22.69 %		22%	21%	20.5%	20%	