

# NAME OF ULB- AMROHA

## 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)

**We have DPR of the project AMROHA WATER SUPPLY REORGANIZATION SCHEME “andwas prepared by the U.P. Jal Nigam, Amroha in the year 2010-11. The project consists of reorganization of existing water supply system with reference to water supply production, treatment and distribution of water supply lines. Water supply related information is with NPP Amroha and city is divided into 6 nos. of zones.**

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 2011 data and we have correlated the data with departmental data.

S.No	Source	Particulars	Numbers	Tap Water Connection
01	Census 2011	Total Population	197135	
		Household	33472	11571
		Within the premises	31314	11126
		Near the premises	1850	374
		Away	308	71
02	Departmental Data 2015	Total Population	197135	
		Household	35480	11199

Table: Status of Water Supply service levels

Sr. No.	Indicators	Present Status	MOUD Benchmark	Reliability
1	Coverage of water supply connections	31.56%	100%	D
2	Per capita supply of water	45 LPCD	135 LPCD	D
3	Extent of metering of water connections	0.0 %	100%	A
4	Extent of non-revenue water	30%	20%	D
5	Quality of water supplied	80%	100%	D
6	Cost recovery in water supply services	18%	100%	D
7	Efficiency in collection of water supply related charges	25.9%	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 connections – 68.44
2. Gap in Per capita supply of water – 90
3. Gap in Extent of metering of water connections - 100
4. Gap in Extent of non-revenue water – 10%.
5. Gap in Quality of water supplied – 20 %
6. Gap in Cost recovery in water supply services – 82 %.
7. Efficiency in collection of water supply related charges - 64.1%

## 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?

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?

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.?

**Ground Water – Number of 12 Tube wells-Avg. Discharge-0.75 MLD-Total -----9 MLD.The existing source of water is ground water. Yes treatment is provided to these sources by chlorinationat present, LPCD of Water supply is(9 MLD/0.197) 45 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?

**City has been divided into 6 nos. of 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

<b>Zone No.</b>	<b>Total No. of Households</b>	<b>Households with Water tap Connection</b>	<b>Households without Water tap Connection</b>
<b>1</b>	<b>4350 HH</b>	<b>1500 HH</b>	<b>2850 HH</b>
<b>2</b>	<b>9450 HH</b>	<b>3488 HH</b>	<b>5962 HH</b>
<b>3</b>	<b>6400 HH</b>	<b>3003 HH</b>	<b>3397 HH</b>
<b>4</b>	<b>8500 HH</b>	<b>2008 HH</b>	<b>6492 HH</b>
<b>5</b>	<b>3900 HH</b>	<b>1200 HH</b>	<b>2700 HH</b>
<b>6</b>	<b>2880 HH</b>	<b>-</b>	<b>2880 HH</b>
<b>Total</b>	<b>35480 HH</b>	<b>11199 HH</b>	<b>24281 HH</b>

## 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?

**There are total 5 Nos. of Over Head Tanks having a capacity of 1.195ML.**

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

**No, City does not require ground level reservoirs to store raw treated water.**

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

**Both types of methods are used to serve the consumers i.e. through direct pumping and elevated reservoirs.**

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

No, Total Demand 31.914 MLD and about 11 ML storage capacity is required and only there is only 1.195 ML storage capacity.

## 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?

**75 kms.(Approx.) pipe line is laid in the city.**

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 is about 230.58kms. No, all the streets are not covered with pipe line.**

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

**PVC, CI, DI & AC pressure pipe are used in Distribution lines.**

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

Table: Zone Wise length of distribution network

<b>Zone No.</b>	<b>Total Street Length</b>	<b>Street length with water distribution pipe line</b>	<b>Street length without water distribution pipe line</b>
<b>1</b>	<b>34.75 Km</b>	<b>5.00 Km</b>	<b>29.75 Km</b>

Zone No.	Total Street Length	Street length with water distribution pipe line	Street length without water distribution pipe line
2	39.25 Km	16.95 Km	22.30 Km
3	35.20 Km	8.65 Km	26.55 Km
4	54.65 Km	32.05 Km	22.60 Km
5	39.30 Km	12.35 Km	26.95 Km
6	27.43 Km	-	27.43 Km
<b>Total</b>	<b>230.58 Km</b>	<b>75 KM</b>	<b>155.58 Km</b>

## 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, Amroha	UP Jal Nigam, Amroha	ULB, Amroha

Question: How city is planning to execute projects ?

**A scheme named " AMROHA WATER SUPPLY REORGANIZATION SCHEME" had been already sanctioned under State Programme. At present, said scheme is under execution and expected to be completed by Dec. 2016.**

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 Nagar palikaparishad Amroha as well as State Level Parastatal Agency U.P. Jal Nigam. Nagar Palika Parishad Amroha 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 of Compilation	Status (as on dd mm 2015)
1	AMROHA WATER SUPPLY REORGANIZATION SCHEME	State Sector	3541.00 Lacs	31-12-2016	40% as on 31-08-2015

Question: How much the existing system will be 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)

**After the completion of the project, coverage in respect of water supply will be 100% and collection efficiency will also increase.**

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

**Yes city is required additional work like NRW reduction, Improve water quality, collection efficiency.**

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?

**Enhancement in the service levels will be done on the basis of low cost more coverage approach.**

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

**Yes, the ULB had conducted assessment of Non Revenue Water. NRW level is 25%. To reduce the NRW level following actions will taken:- 1. Leakages in pipe line will be controlled. 2. Illegal connection will be regularized. 3. Old pipe lines will be replaced.**

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	9 MLD	39 MLD	48 MLD	48 MLD	No Gap
Treatment capacity	9 ML	39ML	48 ML	48 ML	No Gap
Elevated Storage capacity	1.19MLD	11.50ML	12.69ML	12.69ML	No Gap
Distribution network coverage	75 km	155.58 km	230.58 KM	230.58 KM	No Gap

## 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.

- 1. Completion of Incomplete project.**
- 2.Public Awareness to increase household connections for 24281 HH**
- 3.NRW ReductionLeakage detection and its removal**
- 4. To improve the quality of water**
- 5. Efficiency in charges collection**

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

**Yes, each identified objectives will be evolved from the outcome of assessment. Details are given below.**

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

**Yes, the objective meets the opportunity to bridge the gap and details are given below.**

### 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)

**GOI, State & ULB and details are given below.**

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

**No projects are funded under JICA/ADB.**

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

**Ongoing project will be completed upto Dec. 2016.**

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

**Bottleneck in the existing project is land unavailability and now there is no problem of land.**

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

**Revenue collection, metering of connection, Leakage maintenance and increasing population coverage will be adopted to recover the O&M costs.**

Question: Will metering system for billing introduced?

**Yes, Metering system will be introduced.**

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

**Yes**

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	Completion of ongoing project	Laying of distribution lines, installation of tubewells ,rising main etc.	State Govt.
2	Universal coverage	Public Awareness to increase household connections for 24281 HH	AMRUT/State Government / ULBs/PPP
3	NRW reduction Leakage detection and its removal	Leakage detection and its removal(2000 rs per leakage x 100) Replacement of old lines 5 km Metering 35480 H.H x 2000 Rs	AMRUT/State Government / ULBs/PPP
4	To improve the quality of water	Establishment/rehab of water testing lab	AMRUT/State Government / ULBs/PPP
5	Efficiency in charges collection	Online billing , tracking system & spot billing machine	AMRUT/State Government / ULBs/PPP

## 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 are involved in the consultation on 21st August 2015 at Nagar Palika office.**

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

**Yes, ward/ zone level consultations were held on 05 Oct 2015 at Ambedkar Park Amroha and 07 Oct 2015 NaiBastiMadarsa.**

Question: Has alternative proposed above are crowd sourced?

**No**

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

**Proposal prepared with feedback & received suggestions.**

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

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

Question: What methodology adopted for prioritizing the alternatives?

**More benefit with low cost.**

## 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?

**GOI, State and ULB.**

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

**Yes, projects is being converged with other program and schemes**

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

**Yes, projects have been prioritized based on “more with less” approach**

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

**Yes, the universal coverage approach indiated in AMRUT guidelines are being 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.

**As the water distribution lines is being laid on the roads and streets of PWD and ULB. So land is available & NOC of PWD is also available. No further clearances and NOCs 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.

**ULB will ensure environmentally sustainable water supply scheme and resilience factor would be built in.**

## 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?

**Project will be funded by GOI, State & ULB funds under AMRUT..**

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

**Project will be funded by GOI, State & ULB funds under AMRUT**

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 financial structure is sustainable.**

Question: Have the financial assumptions been listed out ?

**Yes, 50% funds will be provided by GOI and remaining will be provided by state and uLB.**

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 includes percentage share of different stakeholders ( Centre,State,ULBs)**

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, it provides year-wise milestones and outcomes**

**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	Completion of ongoing project Cost of the project 35.41 Cr	Laying of distribution lines, installation of tubewells ,rising main etc.	2010-2011	Dec 2016	
2	Regularization of illegal connection 24281 HH	1	2016	2017	0.12 Cr.
3	NRW Reduction LEAKAGE DETECTION AND ITS REMOVAL (2000 Rs per Leakage x 100)		2016	2017	0.02 Cr

S.No.	Project Name	Priority number	Year in which to be implemented	Year in which to be completed	Estimated Cost
	REPLACEMENT OF OLD LINES ( DAMAGED,LEAKED, DEFUNGED, CHOCKED,SLUICE VALVE ETC) WITH HOUSE HOLD CONNECTION (5 KM x 30 Lakhs)	2	2016	2017	1.50 Cr
	100% IMPLEMENTATION OF METERING 35480 x 2000 Rs		2016	2018	7.09 Cr
4	<b>TO IMPROVE THE QUALITY OF WATER</b> ESTABLISHMENT/REHAB OF WATER TESTING LAB	3	2016	2018	0.04 Cr
5	<b>EFFICIENCY IN CHARGES COLLECTION</b> ONLINE BILLING , TRACKING SYSTEM & SPOT BILLING MACHINE	4	2016	2018	0.04 Cr
<b>Total</b>					<b>8.81 Cr</b>

## 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)	
1.	<b>Universal Coverage</b>	<b>Regularization of illegal connection 24281 HH</b>	<b>100%</b>	<b>34.56</b>	<b>100%</b>	<b>0.12 Cr.</b>
2.	<b>NRW Reduction</b>	<b>LEAKAGE DETECTION AND ITS REMOVAL (2000 Rs per Leakage x 100)</b>	<b>20%</b>	<b>30%</b>	<b>20%</b>	<b>8.61Cr</b>

Sr. No.	Project Name	Physical Components	Change in Service Levels			Estimated Cost
			Indicator	Existing (As-Is)	After (To-be)	
	<b>AND ITS REMOVAL</b>	<b>REPLACEMENT OF OLD LINES 5 KM METERING 35480 H.H x 2000 Rs</b>				
<b>3.</b>	<b>TO IMPROVE THE QUALITY OF WATER</b>	<b>ESTABLISHMENT/REHAB OF WATER TESTING LAB</b>	<b>100%</b>	<b>80%</b>	<b>100%</b>	<b>0.04 Cr</b>
<b>4.</b>	<b>EFFICIENCY IN CHARGES COLLECTION</b>	<b>ONLINE BILLING , TRACKING SYSTEM &amp; SPOT BILLING MACHINE</b>	<b>90%</b>	<b>25.91%</b>	<b>90%</b>	<b>0.04 Cr</b>
<b>Total</b>						<b>8.81Cr</b>

## 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
01	<b>Universal Coverage</b>	<b>0.12 Cr.</b>	<b>0.06 Cr</b>	<b>0.06 Cr</b>			<b>0.12 Cr</b>
02	<b>Nrw Reduction Leakage Detection And Its Removal</b>	<b>8.61Cr</b>	<b>4.305 Cr</b>	<b>4.305Cr</b>			<b>8.79 Cr</b>
03	<b>To Improve The Quality Of Water</b>	<b>0.04 Cr</b>	<b>0.02 Cr</b>	<b>0.02 Cr</b>			<b>0.04 Cr</b>

Sr. No.	Name of Project	Total Project Cost	Share				
			GOI	State	ULB	Others	Total
04	<b>Efficiency In Charges Collection</b>	<b>0.04 Cr</b>	<b>0.02 Cr</b>	<b>0.02 Cr</b>			<b>0.04 Cr</b>
<b>Total</b>		<b>8.81 Cr</b>	<b>4.405Cr</b>	<b>4.405cr</b>			<b>8.81 Cr</b>

## 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			
01	<b>Universal coverage</b>	<b>50%</b>		<b>50%</b>						<b>100%</b>	
02	<b>NRW reduction Leakage detection and its removal</b>	<b>50%</b>		<b>50%</b>						<b>100%</b>	
03	<b>To improve the quality of water</b>	<b>50%</b>		<b>50%</b>						<b>100%</b>	
04	<b>Efficiency in charges collection</b>	<b>50%</b>		<b>50%</b>						<b>100%</b>	

## YEAR WISE PLAN FOR SERVICE LEVELS IMPROVEMENTS

(As per Table 2.5 of AMRUT guidelines)

