

# NAME OF ULB– MUGHALSARAI

## 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)

**Water supply status report is available with U.P.JaiNigam, Mughalsarai. The status report consists of existing water supply system with reference to water supply production, and distribution of water supply lines. In that DPR city has divided into 8 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. Data of census 2011 is available with agar Palika Parishad Mughalsarai and the source is NIC. Nagar Palika Parishad Mughalsarai is aware of MOUD survey data. The data available is being used as reference to develop the slip.**

	Location of source of drinking water Population	Total Number of Households	Tapwater from treated source
Total Population (Census, 2011)	Population-110000		
	Total	16638	5583
	Within the premises	13180	5212
	Near the premises	2660	302
	Away	798	69
Departmental Data (2015)	Population-146742	22200	5105

\*As per the existing data of ULB

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
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Sr. No.	Indicators	Present Status	MOUD Benchmark	Reliability
1	Coverage of water supply connections (5105/22200)	22.99 %	100%	D
2	Per capita supply of water ( 11.13/0.146)	76 LPCD	135 LPCD	D
3	Extent of metering of water connections	0%	100%	A
4	Extent of non-revenue water	60%	20%	D
5	Quality of water supplied	90%	100%	D
6	Cost recovery in water supply services	45 %	100%	D
7	Efficiency in collection of water supply related charges	80%	90%	D

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

1. Coverage of water supply connections gap is 77.01%
2. Per capita supply of water gap is 59 LPCD
3. Extent of metering of water connections gap is 100 %
4. Extent of non-revenue water gap is 40%
5. Quality of water supplied gap 10%
6. Cost recovery in water supply services gap is 55 %
7. Efficiency in collection of water supply related charges gap is 10%

## 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 underground water, total no of tub well is 7. Capacity of these sources 7 tube well X 1.59 MLD = 11.13 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?

**Underground water chlorination is being done. Treatment capacity of ground water is 11.13 MLD.**

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.?

**Source of water Capacity 11.13 MLD and Per Capita of Water Supply is =  $11.13 \text{ MLD} / 0.11 = 102 \text{ LPCD}$  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 ?

**There are 8 zones for water supply in Nagar Palika Parishad Mughalsarai.**

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>
1	4523 HH	1040 HH	3483 HH
2	6093 HH	1401 HH	4692 HH
3	2315 HH	532 HH	1783 HH
4	1921 HH	442 HH	1479 HH
5	2021 HH	465 HH	1556 HH
6	2928 HH	673 HH	2255 HH
7	1457 HH	335 HH	1122 HH
8	942 HH	217 HH	725 HH
<b>Total</b>	<b>22200 HH</b>	<b>5105 HH</b>	<b>17095 HH</b>

**As per the departmental data total number of household is 68906 and as per the census total household is 69333 in this above statement as per departmental data 23747 HH without tap connection and per census 24174 HH without tap water connection**

## 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 Nagar Palika Parishad Mughalsarai water production is 11.13 MLD and 4elevatedreservoirs andthe storage capacity is1.9 ML.**

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

**Not apply in Nagar Palika Parishad Mughalsarai.**

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

**In Nagar Palika Parishad Mughalsarai water is being supplied to consumers through direct pumping as well as elevated reservoirs.**

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

**Yes storage capacity is sufficient to meet the city demand. In Nagar Palika Parishad Mughalsarai water production is 11.13 MLD and storage capacity is 0.1.9 ML. Total city storage capacity demand is 11.13 MLD/3 = 3.71 ML but availability is 1.9 ML Gap is (3.71-1.9 = 1.81 SAY 2 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?

**The total length of water supply distribution pipe line is 46 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 54KM. Pipe lines are not laid in 8 KM and universal coverage of water supply is not achieved.**

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

**PVC, DI, CI and GI pipe materials 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>
1	12 KM	12 KM	0
2	8.5 KM	8.5 KM	0
3	6 KM	5KM	1 KM
4	7.5 KM	7.5KM	0
5	8 KM	8 KM	0

<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>
6	3.6 KM	Nil	3.6 KM
7	5 KM	5 KM	0
8	3.4 KM	Nil	3.4 KM
Total	54 KM	46 KM	8 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

<b>Planning and Design</b>	<b>Construction/ Implementation</b>	<b>O&amp;M</b>
UP JAL NIGAM MUGHALSARAI	JAL NIGAM MUGHALSARAI	N.P.P. MUGHALSARAI ON CONTRACT BASE

Question: How city is planning to execute projects ?

**The execution of the projects will be done as per instructions given by the state government as well as MOUD & smaller projects like branch lines, gaps in pipe lines will be done by Nagar Palika Parishad Mughalsarai and nodal agency Jal Nigam Mughalsarai.**

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 Palika Parishad Mughalsarai as well as State Level Parastatal Agency U.P. Jal Nigam. Nagar Palika Parishad Mughalsarai 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)

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)

No on going project.

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

**Yes. City required additional work like regularization of unregistered connections, and to motivate citizens to take connection will increase coverage and reduction of NRW, Per Capita of Water, Improve Quality of Water as well as metering will improve efficiency of collection and operation.**

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

**Nagar Palika Parishad Mughalsarai will make its people aware of the importance of drinking water. Nagar Palika Parishad Mughalsarai will make efforts by meetings & registering water connections by advertisements.**

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

**City has not conducted any assessment related to NRW Nagar Palika Parishad Mughalsarai have approximate NRW level is 60 %**

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	11.13 MLD	-	11.13 MLD	17.0 MLD	5.87 MLD
Treatment capacity	11.13 MLD	-	11.13 MLD	17.07 MLD	5.87 MLD

Component	2015			2021	
	Present	Ongoing	Total	Demand	Gap
Elevated Storage capacity	1.9ML	-	1.9ML	5.69 ML	3.79 ML
Distribution network coverage	46 KM	-	42KM	54KM	8KM

## 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?

- **Universal Coverage by Regularizing of 2358Household and laying of pipe line 8 KM in uncovered area**
- **Reduction of NRW by Leakage Detection**
- **Digging of 6 Tub well and 04 OHT**
- **Improve the quality of Water through establishment of Lab and implementation of online water testing and Monitoring System**
- **Efficiency of charges collection-. Metering system in water supply system and online billing, tracking system & spot billing machine.**

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)

**The funding for meeting out the each objective will 50% from AMRUT and remaining 50% from state and Nagar Palika Parishad Mughalsarai.**

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

**There are no ongoing project under JICA/ADB**

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

**In this above ongoing project no need of money for completion of the project.**

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

**In Nagar Palika Parishad Mughalsarai there is a staff shortage for running the project and focusing toward enhancement of coverage. During the implementation of water supply scheme awareness among public was most challenging activities.**

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

**Nagar Palika Parishad Mughalsarai will minimize non-revenue water by regularizing unregistered water connections & make more efforts from collection staff & introducing metering.**

Question: Will metering system for billing introduced?

**Yes. Nagar Palika Parishad Mughalsarai will introduce metering system for billing under AMRUT scheme.**

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

**By regularizing of water connection through IEC activities, Introduce metering of water connections, improve the collection efficiency.**

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	Cost (Cr)	Financing Source
1	To achieve the universal coverage	To universal coverage by regularizing – 2358 HH 2358 HH X2162 Rs	0.51 Cr	AMRUT/State and ULBs
		Laying of Pipe line in uncovered areas 8 KM X 0.20Cr	2.05Cr	AMRUT/State and ULBs
2	Per Capita Of Water Supply	Digging of 6 Tub well 6 X 0.35 Cr	2.1 Cr	AMRUT/State and ULBs



		O.H.T 5 x 1.36 Cr	6.81 Cr	AMRUT/State and ULBs
3	To make the system efficient by reduction of NRW water	Household Level Metering 22200 HH X2500 Rs	5.55 Cr	AMRUT/State and ULBs
4	Efficiency of charges collection	Metering system in water supply system, and online billing, tracking system & spot billing machine	0.20Cr	AMRUT/State and ULBs
	<b>Total</b>		<b>17.22 Cr</b>	

## 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?

**Nagar Palika Parishad Mughalsarai passes the proposals which are put up by ward members. Thus all stakeholders involve in the consultations on 07 September 2015**

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

**In Nagar Palika Parishad Mughalsarai ward/zone level consultations has held under the chairmanship of ward memberson 15 September, 2015 – ward -16, 18 September, 2015 – ward -21,20 September, 2015 – ward -09**

Question: Has alternative proposed above are crowd sourced?

**No**

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

**90% of the people are agreed to regularization of connection and improvement of quality of water supply , Per capita of water, water pressure,& metering of water connections.**

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

**Yes.**

Question: What methodology adopted for prioritizing the alternatives?

**After the consultation made in Nagar Palika Parishad Mughalsarai board meetings as the discussion regularization of water connections ,laying of pipe lines, digging of tub -well, OHT,metering of water connections, .**

## 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?

**There is no other scheme running in the city.**

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

**Yes the projects are being prioritized based on “more with less” approach universal coverage through IEC activities.**

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.

**Public awareness to increase the coverage of water supply, Augmentation of water supply system Land is available for TW and OHT., environment clearance and NOC for meet the GAP for universal coverage and quality of water.**

## 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 related factor will be considered while preparation of DPRs**

## 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 will be developed. The share of State and ULB will be decided in High power committee.**

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. GOI, State and ULB**

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 2.1 of 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 Cr
1	To achieve the universal coverage	To universal coverage by regularizing – 2358 HH 2358 HH X2162 Rs	1	2017	2019	2.56 Cr
		Laying of Pipe line in uncovered areas 8 KM X 0.20Cr				
2	Per Capita of Water	Digging of 6 Tub well 6 X 0.35 Cr	2	2017	2019	8.91 Cr
		O.H.T 5 x 1.36 Cr				
3	To make the system efficient by reduction of NRW water	Household Level Metering 22200 HH X2500 Rs	3	2018	2019	5.55 Cr
4	Efficiency of charges collection	Metering system in water supply system, and online billing, tracking system & spot billing machine	4	2018	2019	0.20Cr
<b>Total</b>						<b>17.22 Cr</b>

## 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 the universal coverage	To universal coverage by regularizing – 2358 HH X2162 Rs	– 2358 HH 2358 HH X2162 Rs	100%	22.99 %	100%	<b>2.56 Cr</b>
		Laying of Pipe line in uncovered areas 8 KM X 0.20Cr	Pipe line in uncovered areas 8 KM X 0.20Cr				
2	Per Capita of Water	Digging of 6 Tub well 6 X 0.35 Cr	6 Tub well X 0.36 Cr	135 LPCD	76 LPCD	135 LPCD	8.91 Cr
		O.H.T 5 x 1.36 Cr	5 OHT X 1.36 Cr				
3	To make the system efficient by reduction of NRW water	Household Level Metering 22200 HH X2500 Rs	Metering 22200 HH X2500 Rs	20%	41%	20%	5.55 Cr
4	Efficiency of charges collection	Metering system in water supply system, and online billing, tracking system & spot billing machine	Metering system in water supply system, and online billing, tracking system & spot billing machine	90%	80%	90%	0.20Cr
Total							<b>17.22 Cr</b>

## ANNUAL FUND SHARING PATTERN FOR WATER SUPPLY PROJECTS

(As per Table 2.3.1 of AMRUT guidelines)

(Amount in Rs. Cr)

Sr. No.	Objective	NAME OF PROJECT	Total Project Cost	Share

				GOI	State	ULB	Others	Total
1	To achieve the universal coverage	To universal coverage by regularizing – 2358 HH 2358 HH X2162 Rs Laying of Pipe line in uncovered areas 8 KM X 0.20Cr	<b>2.56 Cr</b>	1.28 Cr	1.28 Cr			<b>2.56 Cr</b>
2	Per Capita of Water	Digging of 6 Tub well 6 X 0.35 Cr, O.H.T 5 x 1.36 Cr	8.91 Cr	4.455 Cr	4.455 Cr			<b>8.91 Cr</b>
2	To make the system efficient by reduction of NRW water	Household Level Metering 22200 HH X2500 Rs	5.55 Cr	2.775 Cr	2.775 Cr			5.55 Cr
4	Efficiency of charges collection	Metering system in water supply system, and online billing, tracking system & spot billing machine	0.20Cr	0.10 Cr	0.10 Cr			0.20 Cr
		<b>TOTAL</b>	<b>17.22 Cr</b>	<b>8.61 Cr</b>	<b>8.61 Cr</b>			<b>17.22 Cr</b>

## ANNUAL FUND SHARING BREAK-UP FOR WATER SUPPLY PROJECTS

(As per Table 2.3.2 of AMRUT guidelines)



