

# City Name – Loni

## 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 with regulatory authority, water supply DPR with Jal Nigam and water supply details are available with Nagar palikaLoni . Zone wise information is available.

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)

Location of source of drinking water	Total Number of Households	Tap Water from treated source
Total Population= 512296		
Total	91138	21912
Within the premises	63370	17115
Near the premises	20726	3895
Away	7042	902
Departmental Data	91138	18775

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	<b>Coverage of water supply connections (18775/91138)</b>	<b>20.60%</b>	100%	D
2	<b>Per capita supply of water (45 MLD /0.512)</b>	<b>88 LPCD</b>	135 LPCD	D

Sr. No.	Indicators	Present Status	MOUD Benchmark	Reliability
3	Extent of metering of water connections	0%	100%	A
4	Extent of non-revenue water	40%	20%	D
5	Quality of water supplied	70%	100%	D
6	Cost recovery in water supply services	50%	100%	D
7	Efficiency in collection of water supply related charges	30%	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 is as under:**

1. Gap in coverage of water supply is 79.40%
2. Gap in Per capita water availability is about 47 LPCD.
3. Gap in Metering is 100%.
4. NRW is about 20%
5. Gap in Quality of supplied ofwater is 50% as per PHE norms.
6. Gap in Cost recovery is 50%
7. Gap in efficiency of water charges/tax collection is about 60%.

## 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 –45 Tube,-well avg Discharge = 1.0 with the capacity of – 45MLD**

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, for the underground water system we provide chloronizationby dozer system.**

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 =  $45/0.512 = 88$  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?

**City has divided in 14 zone.**

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>	7110 HH	915 HH	6195 HH
<b>2</b>	7552 HH	1118 HH	6434 HH
<b>3</b>	5725 HH	1475 HH	4250 HH
<b>4</b>	6320 HH	1312 HH	5008 HH
<b>5</b>	6415 HH	1082 HH	5333 HH
<b>6</b>	6074 HH	1590 HH	4484 HH
<b>7</b>	5935 HH	818 HH	5117 HH
<b>8</b>	5975 HH	1235 HH	4740 HH
<b>9</b>	5636 HH	1325 HH	4311 HH
<b>10</b>	6223 HH	1423 HH	4800 HH
<b>11</b>	6138 HH	1875 HH	4263 HH

<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>12</b>	6983 HH	1942 HH	5041 HH
<b>13</b>	8769 HH	1165 HH	7604 HH
<b>14</b>	6283 HH	1500 HH	4783 HH
<b>Total</b>	<b>91138HH</b>	<b>18775HH</b>	<b>72363HH</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?

**Total storage capacity of NPP Loni is 18.7MLcapacities, no of OHT is 12 nos.**

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

**No Surface water in Loncity, city dependent on ground water.**

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

**NPP Loni supplied water supply through only OHT.**

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

**No, Total water Demand  $135 \times 0.512 = 69.15$  MLD Therefore storage Capacity  $= 70/3 = 24$ ML. and existing storage capacity is 18.7 (24 ML-18.7)= 5.3 ML Gap**

## 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 651 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 in the city 807 KM, for universal coverage we required 156 km more pipeline.**

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

**CI, DI,PVC etc. pipe material are being used**

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>Zone No.1</b>	45 Km.	38 Km.	7 Km.
<b>Zone No.2</b>	58 Km.	52 Km.	6 Km.
<b>Zone No.3</b>	72 Km.	64 Km.	8 Km.
<b>Zone No.4</b>	55 Km.	48 Km.	7 Km.
<b>Zone No.5</b>	50 Km.	42 Km.	8 Km.
<b>Zone No.6</b>	68 Km.	62 Km.	6 Km.
<b>Zone No.7</b>	70 Km.	60 Km.	10 Km.
<b>Zone No.8</b>	40 Km.	30 Km.	10 Km.
<b>Zone No.9</b>	55 Km.	40 Km.	15 Km.
<b>Zone No.10</b>	75 Km.	60 Km.	15 Km.
<b>Zone No.11</b>	60 Km.	40 Km.	20 Km.

<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>Zone No.12</b>	62 Km.	50 Km.	12 Km.
<b>Zone No.13</b>	55 Km.	40 Km.	15 Km.
<b>Zone No.14</b>	42 Km.	25 Km.	17 Km.
<b>Total</b>	<b>807 Km.</b>	<b>651 Km.</b>	<b>156 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

<b>Planning and Design</b>	<b>Construction/ Implementation</b>	<b>O&amp;M</b>
UP Jal Nigam	UP Jal Nigam	ULB's

Question: How city is planning to execute projects ?

**NPP Loni plan the first universal coverage of water supply &and augmentation of water supply and then NPP has reduce the NRW ,Energy efficiency and increase the cost recovery in water supply system.**

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 PalikaParishadLoni as well as State Level Parastatal Agency U.P. Jal Nigam. Nagar PalikaParishadLoniwill 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



Component	2015					2021	
	Present	Ongoing	Total	Demand	Gap	Demand	Gap
Source	45 MLD	-	45MLD	69.15 MLD	24.15 MLD	81MLD	36 MLD
Treatment capacity	45 MLD	-	45MLD	69.15 MLD	24.15 MLD	81 MLD	36 MLD
Elevated Storage capacity	18.7 KL	-	18.7 KL	24ML	6ML	27ML	9ML
Distribution network coverage	651 KM	-	651 KM	807 KM	156 KM	890KM	239KM

## 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.

**The main objective of NPP Loni is,**

**1.To increase the universal coverage regularization of illegal connection, motivate the hh for taking the connection and increase the coverage area by laying new pipelines.**

**2.Reduce NRW water by providing zoning system**

**3 Increase in Per capita water supply**

**4 Improve quality of water**

**5 Improve operational efficiency by providing SCADA**

**6. Efficiency in charges collection.**

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

**Yes, the each following objective evolved from the assessment,**

Objectives	Activities for fill the GAP
To achieve the Universal coverage	Regularized illegal connection and 156 km line is be required to achieved 100% coverage where as 156 km new pipe line will be required to fulfill the demand of 2021
To reduce the NRW	Automation of Tubewell through SCADA, Strengthening the Zoning of water supply system
To increase in capita supply of water	Rebore of tubwell- 4Tubewell, Augmentation of new water production system- 16 new Tubewell
Improve quality of water	Establishment of water testing LAB, Mobile Water testing LAB and Introduce of automation chlorination dozer system.



Efficiency in charges collection

E- billing, spot billing machine, Expansion of payment collection center

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 possible activities is mention in table, and the funding for meeting out the each objective is follow the AMRUT funding pattern.50% funding by GOI and remaining by State and NPP Loni.**

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

**No ongoingproject .**

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

**No Ongoing Project.**

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

**Earliar scheme focus was to increase the infrastructure not on increasing coverage.**

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 unservice areas, 2. By increasing user charges 3. By reducing NRW with automation in system 4.Efficiency in charges collection**

Question: Will metering system for billing introduced?

**Yes, NPP Loni will introduce in future.**

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

Sr. No.	Objective	Activities	Cost	Financing Source
1	To achieve the Universal coverage	156 km line is be required to achieved 100% coverage and legalized the connection	14.20 Cr	AMRUT/State and ULB
2	To increase in capita supply of water	Rebore of tubwell- 4Tubewell, Augmentation of new water production system- 16 new Tubewell,	5.60 Cr	AMRUT/ STATE/ ULBs
3	To reduce the NRW	Automation of Tubewell through SCADA, Strengthening the Zoning of water supply system	1.60 Cr	AMRUT/ STATE/ ULBs
4	Improve quality of water	Establishment of water testing LAB, Mobile Water testing LAB with full equipment -8Nos	4.80 Cr	AMRUT/ STATE/ ULBs
5	Efficiency in charges collection	E-billing, spot billing machine, Expansion of payment collection center	0.60 Cr	AMRUT/ STATE/ ULBs

## 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- Board member, citizen, ward elected member, is being involved in the consultation and meeting in NPP Loni on AMRUT & SBM on 28-08-2015 at meeting hall in Nagar PalikaParishadLoni**

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

**Yes, ward/ zone level consultations is being held in the city, and meeting in NPP Loni on AMRUT & SBM on 09-09-2015 and 10-10-2015 meeting in ward 22 and ward 12**

Question: Has alternative proposed above are crowd sourced?

**No**

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

**Each Feedback & suggested alternatives and innovations are being considered in formulation of project.**

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?

**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 indiated 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 coverage, Augmentation of water supply system No need of Land, environment clearance and NoC for meet the GAP for universal coverage,**

## 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 2.1of AMRUT guidelines)  
(Amount in Rs. Cr)

S.N.	Project Name	Priority Number	Year in which to be implemented	Year to which to be completed	Estimated cost
1	156 km line is be required to achieved 100% coverage and legalized the connection	1	2016	2017	14.20 Cr
2	Rebore of tubwell- 4Tubewell, Augmentation of new water production system- 16 new Tubewell,	2	2016	2017	5.60 Cr
3	Automation of Tubewell through SCADA, Strengthening the Zoning of water supply system	3	2016	2017	1.60 Cr
4	Establishment of water testing LAB, Mobile Water testing LAB with full equipment -8 Nos	4	2016	2018	4.80 Cr
5	E-billing, spot billing machine, Expansion of payment collection center	5	2016	2018	0.60Cr
<b>Total</b>					<b>26.80Cr</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	156 km line is be required to achieved 100% coverage and legalized the connection	Survey & 156 Km new pipe line	Universal coverage of water supply	20.00	100	14.20 Cr
2	Rebore of tubewell- 4 Tubewell, Augmentation of new water production system- 16 new Tubewell,	Rebore of tubewell, construction of OHT & Tubewell	Per capita water supply	88LPCD	135 LPCD	5.60 Cr
3	Automation of Tubewell through SCADA, Strengthening the Zoning of water supply system	Automation	Extent of non-revenue water	40%	20 %	1.60 Cr
4	Establishment of water testing LAB, Mobile Water testing LAB with full equipment -8 Nos	Water treatment Lab	Quality of water supplied	70%	100%	4.80 Cr
5	E-billing, spot billing machine, Expansion of payment collection center	Automation & online	Cost recovery in water supply services	50%	100%	0.60 Cr
<b>Total</b>						<b>26.80 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.	name of Project	Total Project Cost	Share				
			GOI	State	ULB	Others	Total
1	156 km line is be required to achieved 100% coverage and legalized the connection	14.20 Cr	50%	50%	0	0	14.20 Cr
2	Rebore of tubwell-4Tubewell, Augmentation of new water production system- 16 new Tubewell,	5.60 Cr	50%	50%	0	0	5.60 Cr
3	Automation of Tubewell through SCADA, Strengthening the Zoning of water supply system	1.60 Cr	50%	50%	0	0	1.60 Cr
4	Establishment of water testing LAB, Mobile Water testing LAB with full equipment -8 Nos	4.80 Cr	50%	50%	0	0	4.80 Cr
5	E-billing, spot billing machine, Expansion of payment collection center	0.60 Cr	50%	50%	0	0	0.60 Cr
	<b>Total</b>	<b>26.80 Cr</b>	50%	50%	0	0	<b>26.80 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			
1	<b>156 km line is be required to achieved 100% coverage and legalized the connection</b>	7.10 Cr		7.10 Cr	-			-	-	-	14.20 Cr
2	Rebore of tubwell- 4 Tubewell, Augmentation of new water production system- 16 new Tubewell,	2.80 Cr	-	2.80 Cr	-	-	-	-	-	-	5.60 Cr
3	Automation of Tubewell through SCADA, Strengthening the Zoning of water supply system	0.80 Cr		0.80 Cr				-	-	-	1.60 Cr
4	Establishment of water testing LAB, Mobile Water testing LAB with full equipment -8 Nos	2.40 Cr		2.40Cr				-	-	-	4.80 Cr
5	E-billing, spot billing machine, Expansion of payment	0.30 Cr		0.30Cr				-	-	-	0.30 Cr



Sr. No.	Project	GOI	State			ULB			Convergence	others	Total
			14th FC	Others	Total	14th FC	Others	Total			
	collection center										
	<b>Total</b>	<b>13.40 Cr</b>		<b>13.40 Cr</b>							<b>26.80 Cr</b>

## YEAR WISE PLAN FOR SERVICE LEVELS IMPROVEMENTS

(As per Table 2.5 of 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						
Public awareness 156 km line is be required to achieved 100% coverage and legalized the connection	14.20 Cr	Coverage of water supply connection	20%		50%	100%					
Rebore of tubwell- 4Tubewell, Augmentation of new water production system- 16 new Tubewell,	5.60 Cr	Per capita water supply	88 LPCD		100 LPCD	135LPCD					
Automation of Tubewell through SCADA, Strengthening the Zoning of water	1.60 Cr	Non Revenue water	40%		30%	20%					

