

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)

The baseline information of existing water supply system is available in detail project report prepared by U.P. Jal Nigam, Budaun in the year 2009-10. The detail project report consist reorganization of existing water supply system of Budaun under UIDSSMT Scheme with reference to water supply production, treatment and distribution of water supply line. In that DPR city has been divided into 2 zones, the Trans Railway zone and the main city zone. The main city zone is divided into 6 subzones.

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 Nagar Palika Parishad Budaun and the source is NIC. Nagar Palika Parishad, Budaun is aware of census 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	Tap Water from treated source
Total Population (Census, 2011)	159285		
	Total	29202	4682
	Within the premises	25056	4168
	Near the premises	3146	477
	Away	1000	37
Departmental Data (2015)	175200	28851	10913

What are the existing services 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> (10913/28851)	37.83%	100%	D
2	<u>Per capita supply of water</u> (37.92 MLD/0.175)	216 LPCD	135 LPCD	D
3	<u>Extent of metering of water connections</u>	0 %	100%	A
4	<u>Extent of non-revenue water</u>	60%	20%	D
5	<u>Quality of water supplied</u>	95%	100%	D
6	<u>Cost recovery in water supply services</u>	35%	100%	D
7	<u>Efficiency in collection of water supply related charges</u>	50%	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 62.17 %
2. Per Capita Supply of Water Gap Is 0 Lpcd
3. Extend Of Metering Of Water Connections Gap Is 100 %
4. Extend Of Non-Rvenue Water Gap Is 40%
5. Quality of Water Supplied Gap 5%
6. Cost Recovery in Water Supply Services Gap Is 65 %
7. Efficiency in Collection of Water Supply Related Charges Gap Is 40 %

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 underground water source? What is the capacity of these sources?

Existing source of water is underground water, no of Tub well=21
16 x2000 LPM X16 Hour =30.72 MLD
5 X 1500 LPM X 16 Hour =7.2 MLD

Total water capacity = 37.92 ML

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

Chlorination is being done in Chloroformed by using liquid chlorine. The treatment capacity is 37.92 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 Is 37.92 Mld. As Per Rules ($=37.92/0.175 = 216.68$ LPCD) Per Capita Of Water Supply 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 2 zones of water supply network, the Trans Railway zone and the main city zone. The main city zone is divided in 6 subzones.

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	2578	1249	1329
2A	5009	1593	3416
2B	5150	2207	2943
2C	3187	1539	1648
2D	2097	1042	1055
2E	2670	1208	1462
2F	8420	2295	6125
Total	29111	11133	17978

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?

21 nos. of OHT capacity =14.7 ML Total storage capacity = 14.7 ML

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

Not applicable

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

Water is supplied through elevated reservoir only.

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

**Yes, required storage capacity is sufficient to meet the demands. (37.92 MLD/3=12.64 MLD)
Existing Capacity is 14.7 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 distribution pipeline- 299.46 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?

Total road length in the city- 311.62km • Pipelines are not laid in 12.16 km of road and approximately 69 km pipelines are in damaged condition. • Pipelines are laid along all the streets and roads but due to damaged condition of pipeline universal coverage of water supply have not been achieved

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

PVC, DI, CI and AC pipe materials 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

Zone No.	Total Street Length	Street length with water distribution pipe line	Street length without water distribution pipe line

Zone No.	Total Street Length	Street length with water distribution pipe line	Street length without water distribution pipe line
1	50.90	48.90	2.00
2A	48.51	47.71	0.80
2B	49.32	48.06	1.26
2C	19.79	19.19	0.60
2D	18.03	17.53	0.50
2E	52.41	49.91	2.50
2F	72.66	58.16	4.50
	311.62 km	299.46 km	12.16

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, BUDAUN	UP JAL NIGAM, BUDAUN	NAGAR PALIKA PARISHAD, BUDAUN

Question: How city is planning to execute projects?

By Nodal Agency Jal Nigam Budaun. 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 Budaun

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 project will be done by UP Jal Nigam, Budaun and O&M will be done by the Nagar Palika Parishad, Budaun. 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 able to address the existing gap in water supply system? Will completion of above will improve the coverage of network and collection efficiency? If yes, how much. (100 words)

NA

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

Yes, City requires work like regularization of unregistered connections, increase the coverage and reduction of NRW, replacing of old and damage pipeline of distribution network.

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?

Nagar Palika Parishad Budaun will focus on increasing the universal coverage of water supply. Npp Budaun 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?

No assessment of NRW has been done till date. But on basis of approximate calculations NRW is about 60 %. Yes, city is planning to reduce NRW by regularizing the illegal connections.

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	37.92 MLD	-	37.92 MLD	29.67 MLD	0 MLD
Treatment capacity	37.92 MLD	-	37.92 MLD	29.67 MLD	0 MLD
Elevated Storage capacity	14.7 ML	-	14.7 ML	9.89 ML	0 ML
Distribution network coverage	299.46 KM	-	299.46 KM	311.62 KM	12.16 KM

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.

- 1. Regularization of illegal connection for 14143**
- 2. To universal coverage by regularizing –2669 HH,**
- 3. Laying of New pipe line 12.16 Km**
- 3. Reduction of NRW Old Pipe line replacement 69 KM. Metering of Household 29111 HH, zoning and automation of tube well.**
- 5. To improve the quality of water establishment/rehab of water testing lab and implementation of online water testing & monitoring systems and water testing van.**

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

Yes,

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 source of funding of activities shall be: 1. AMRUT, 2. 14th Finance Commission 3. State Government Funds, The funding for meeting out the each objective will 50% from Gol and remaining 50% from state and ULB.

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

No ongoing 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)

NA

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

Nagar palika parishad Budaun will maximize coverage of water supply, non-revenue water by regularising unregistered water connections & make more efforts from collection staff & introducing metering system & automation of tubewells.

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, By regularizing, water connection through IEC activities, metering of water connections & calling meeting -workshop NPP Budaun will make proper efforts by public awareness to minimize NRW.

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 Cr.	Financing Source
1	To achieve the universal coverage	To achieve universal coverage by regularizing – 2669 HH 2669 HH X2772 Rs	0.74Cr	AMRUT/State and ULB
		Laying of Pipe line in uncovered areas 12.16 KM X 0.20Cr	2.43 Cr	AMRUT/State and ULB
2	To make the system efficient	Replacing damaged pipeline 69 km @ 0.15 Cr + Household level metering 28851 HH @2000 Rs	16.12Cr	AMRUT/State and ULB
3	To improve the quality of water	Establishment of water treatment plant and implementation of online water testing & monitoring systems and water testing van 2 Nos.	0.20 Cr	AMRUT/State and ULB
4	Efficiency of charges collection	Metering system in water supply system, and online billing, tracking system & spot billing machine	0.20 Cr	AMRUT/State and ULB
	Total		19.69 Cr	

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 passes the proposals which are put up by ward members. Thus all stakeholders were involved in the consultation on 06 December, 2014.

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

**Yes, In Nagar Palika Parishad Budaun Ward Level Consultations has held under the chairmanship of ward members on
1st July, 2015- Ward 23
3rd July, 2015- Ward 12
5th July, 2015- Ward 13**

Question: Has alternative proposed above are crowd sourced?

No. for the alteration NNP Badaun invited suggestions on www.budaun.nic.in

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

The people agree to take the connection.

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 universal coverage.

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?

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?

No ongoing Schemes

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.

Yes. No land is required in regularization and metering of water supply.

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. 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 in which 50% from GOI and remaining by STATE and ULB.

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

NA

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& 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,

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

Yes, 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.

No,

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

Yes,

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.	Objectives	Project Name	Priority number	Year in which to be implemented	Year in which to be completed	Estimated Cost
1	To achieve the universal coverage	To achieve universal coverage by regularizing – 2669 HH 2669 HH X2772 Rs	1	2017	2020	3.17 Cr
		Laying of Pipe line in uncovered areas 12.16 KM X 0.20Cr				

S.No.	Objectives	Project Name	Priority number	Year in which to be implemented	Year in which to be completed	Estimated Cost
2	NRW	Replacing damaged pipeline 69 km @ 0.15 Cr + Household level metering 28851 HH @2000 Rs	2	2017	2020	16.12Cr
3	To improve the quality of water	Establishment of water treatment plant and implementation of online water testing & monitoring systems and water testing van 2 Nos.	3	2017	2020	0.20 Cr
4	Efficiency of charges collection	Metering system in water supply system, and online billing, tracking system & spot billing machine	4	2017	2020	0.20 Cr
		Total				19.69 CR

MASTER SERVICE LEVELS IMPROVEMENTS DURING MISSION PERIOD

(As per Table 2.2 of AMRUT guidelines)

(Amount in Rs. Cr)

Sr. No.	Objectives	Project Name	Physical Components	Change in Service Levels			Estimated Cost
				Indicator	Existing (As-Is)	After (To-be)	
1	To	To achieve universal	Survey	100%	37.83%	100%	3.17 Cr

Sr. No.	Objectives	Project Name	Physical Components	Change in Service Levels			Estimated Cost
				Indicator	Existing (As-Is)	After (To-be)	
	achieve universal coverage	coverage by regularizing – 2669 HH 2669 HH X2772 Rs Laying of Pipe line in uncovered areas 12.16 KM X 0.20Cr	Regularization of illegal connection of 14143 HH + Regularizing 2669 HH + Laying new pipe lines 12.16 km				
2	NRW	Replacing damaged pipeline 69 km @ 0.15 Cr + Household level metering 28851 HH @2000 Rs	Replacement of old pipe line 69 kms and metering 28851 HH	20%	60%	20%	16.12Cr
3	To improve the quality of water	Establishment of water treatment plant and implementation of online water testing & monitoring systems and water testing van 2 Nos.	Water testing lab and implementing online water testing and monitoring.	100%	95%	100%	0.20 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 and spot billing.	90%	50%	90%	0.20 Cr
		Total					19.69

ANNUAL FUND SHARING PATTERN FOR WATER SUPPLY PROJECTS

(As per Table 2.3.1 of AMRUT guidelines)

(Amount in Rs. Cr)

Sr. No.	Objectives	Name of Project	Total Project Cost	Share				
				GOI	State	ULB	Others	Total
1	To achieve the universal coverage	To achieve universal coverage by regularizing – 2669 HH (2669 HH X 2772 Rs)	3.17 Cr	1.585	1.585	-	-	3.17 Cr
		Laying of Pipe line in uncovered areas 12.16 KM X 0.20Cr						
2	To make the system efficient	Replacing damaged pipeline 69 km @ 0.15 Cr + Household level metering 28851 HH @2000 Rs	16.12Cr	8.06	8.06	-	-	16.12Cr
3	To improve the quality of water	Establishment of water treatment plant and implementation of online water testing & monitoring systems and water testing van 2 Nos.	0.20 Cr	0.10	0.10	-	-	0.20 Cr
4	Efficiency of charges collection	Metering system in water supply system, and online billing, tracking system & spot billing machine	0.20 Cr	0.10	0.10	-	-	0.20 Cr
		Total	19.69	9.845	9.845			19.69

ANNUAL FUND SHARING BREAK-UP FOR WATER SUPPLY PROJECTS

(As per Table 2.3.2 of AMRUT guidelines)

Sr. No.	Objectives	Project	GOI	State			ULB			Convergence	others	Total
				14th FC	Others	Total	14th FC	Others	Total			
1	To achieve the universal coverage	To achieve universal coverage by regularizing – 2669 HH 2669 HH X2772 Rs	50%	-	50%	50%	-	-	-	-	-	100%
		Laying of Pipe line in uncovered areas 12.16 KM X 0.20Cr										
2	To make the system efficient	Replacing damaged pipeline 69 km @ 0.15 Cr + Household level metering 28851 HH @2000 Rs	50%	-	50%	50%	-	-	-	-	-	100%
3	To improve the quality of water	Establishment of water treatment plant and implementation of online water testing & monitoring systems and water testing van 2 Nos.	50%	-	50%	50%	-	-	-	-	-	100%
4	Efficiency of charges collection	Metering system in water supply system, and online billing, tracking system & spot billing machine	50%	-	50%	50%	-	-	-	-	-	100%

Sr. No.	Objectives	Project	GOI	State			ULB			Convergence	Others	Total
				14th FC	Others	Total	14th FC	Others	Total			
		Total										100%

YEAR WISE PLAN FOR SERVICE LEVELS IMPROVEMENTS

(As per Table 2.5 of AMRUT guidelines)

Objectives	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				
To achieve the universal coverage	To achieve universal coverage by regularizing – 2669 HH 2669 HH X2772 Rs	3.17Cr	100%	37.83%	-	-	40%	80%	100%	100%
	Laying of Pipe line in uncovered areas 12.16 KM X 0.20Cr									
NRW	Replacing damaged pipeline 69 km @ 0.15 Cr + Household level metering 28851 HH @2000 Rs	16.12Cr	20%	60%	-	-	50%	40%	30%	20%

