

CITY- FIROZABAD

SECTOR WISE SLIP TEMPLATE: 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)

U P jalnigam project report of Firozabad town water supply through ganga canal 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)

YES. DATA OF CENSUS 2011 IS AVAILABLE WITH NAGAR PALIKA PARISHAD FIROZABAD AND THE SOURCE IS NIC. NAGAR PALIKA PARISHD IS AWARE OF MOUD SURVEY DATA. THE DATA AVAILABLE IS BEING USED AS REFERENCE TO DEVELOP THE SLIP.			
Total Population (Census, 2011)	Location of source of drinking water Population	Total Number of Households	Tapwater from treated source
604214	Total	101745	7844
	Within the premises	53911	28747
	Near the premises	34626	6539
	Away	13208	842
Departmental Data (2015)	6,63,000	60372	40562

QUESTION: 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 1.1

Table 1.1 Status of Water Supply service levels

Sr. No.	Indicators	Present status	MOUD Benchmark	RELIBILITY
1	Coverage of water supply connections 40562/101745	39.86%	100%	D
2	Per capita supply of water with NRW 141.75 MLD/0.663	214LPCD	135 LPCD	D
3	Extent of metering of water connections	0%	100%	A
4	Extent of non-revenue water	50%	20%	D
5	Quality of water supplied	90%	100%	D
6	Cost recovery in water supply services	59.33%	100%	D
7	Efficiency in collection of water supply related charges	88.8%	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 60.14 %
2. No Gap in Per capita water availability.
3. Gap in Metering is 100%.
4. Gap in NRW is 30%
5. Gap in Quality of supplied water as per PHE norms is 10%
6. Gap in Cost recovery is 40.67% with expenditure on electricity and power.
7. Gap in efficiency of water charges/tax collection is about 1.2%.

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, TOTAL NO OF TUBWELL IS 189 X.75 MLD discharge per T.W. = 141.75 MLD TOTAL OUTPUT.

Source of water-Surface water ongoing –Firozabad pyajal reorganization scheme(GANGA CANAL) -----120 MLD .

Ground Water -189Tube wells X Avg.Discharge 0.75 MLD=Total 141.75 MLD

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

Yes, Underground water chlorination is being done.

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 watersupply= 141.75 MLD/6,63,000(Census 2011)=213 LPCD. However Earliar Per capita was calculated after deducting NRW is

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 ?

Currently there is noZoning in the city. But New DPR is under process in Jal Nigam in which city is divided in 6 water supply Zones. Total No. Ward is 25.

QUESTION: Provide details of total no of Households (HH) in each zone, no of HH with and without water tap connections in the Table 1.2.

Table 1.2: Ward Wise Coverage of Households

ZON E No	Zone Name	Total No of Household s(As per census)	Total No of Househo lds(As per municip al)	House olds with Water tap Conne ction	House holds withou t water tap conne ctions
1	Ganesh Nagar	710	477	233	244
2	Vibhav Nagar	3555	2388	1167	1221
3	Sati Ashram	1320	887	433	454
4	ParshwnathMarg	1688	1134	554	580
5	Suhag Nagar	2027	1362	665	697
6	MahaveerNgar	1863	1252	611	641

7	Agra Gate	3013	2024	989	1035
8	Nagla Bari	2921	1963	958	1005
9	Ambedkar Nagar	1771	1190	581	609
10	Rasoolpur	1812	1217	595	622
11	Pemeshwar gate	2541	1707	834	873
12	Old Munshiffee	1739	1168	571	597
13	Labour colony	979	658	321	337
14	Sant Nagar	3386	2275	1111	1164
15	HimayupurDholpura(NaglaPachiy a)	1655	1112	543	569
16	DholpurHimayupur	1618	1087	531	556
17	Rehanakakarau	1953	1312	641	671
18	Tapa Kalan	2706	1818	888	930
19	Sailai	2748	1846	902	944
20	Deedamai	5071	3407	1664	1743
21	Ramghar Thana	5713	3838	1875	1963
22	Lalpur	679	456	223	233
23	Asfabad	2962	1990	972	1018
24	Datauji	725	486	239	247
25	PrempurRaipura	981	657	324	333
26	Naglapasi	2118	1419	699	720
27	Tapa khurd	2118	1432	699	733
Total		60372 HH	40562 HH	19823 HH	20739 HH

STORAGE OF WATER

Please provide information in 150 words on the above responding to (however not limited to) following questions.

QUESTION: What is the total water storage capacity in the city ? What is capacity of elevated and ground water reservoirs?

Total Water Storage Capacity- 20.90 MLD 20 OHT

Elevated Water Reservoirs-----20 O.H.T =350 KL x1+1500kl x3+ 1600 KL x 3 No+1000 KI x2 +1200kl x3+1650 kl x1+1600 kl x1 +1365 kl x1 +20 kl x11225 kl x1+1500 kl x1 + 400 k x1+ 1100 kl x3 = capacity20.90MLD

Ground Water Reservoir-----0 Nos-----capacity ---0 MLD

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

No not present.

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

Water is supplied to consumers through both by direct supply using tube wells 189 no ,and by elevated reservoirs .

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

No. Required total storage capacity is not sufficient to meet cities demand as of now production is 141 mld one third comes to be 47.25 MLD currently only 20.90MLD = 26.35 MLD

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 is 656 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-----710 KM.No54 KM streets are not having pipelines in the city .No

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

PVC,GI,DI and HDP Pipe materials are being used.

QUESTION: Provide zone wise details of street length with and without water distribution lines in the Table 1.3.

Table 1.3: Ward Wise length of distribution network

Total ward No	Total Street Length(As per LNN data)	Street length with water distribution pipe line(LJS data)	Street length without water distribution pipe line
1	26.30	24.30	2.00
2	24.18	22.30	1.88
3	27.20	25.10	2.10
4	23.15	21.38	1.77
5	30.12	27.82	2.30

6	26.05	24.06	1.99
7	27.08	25.02	2.06
8	23.18	21.42	1.76
9	26.15	24.16	1.99
10	27.18	25.12	2.06
11	26.12	24.12	2.00
12	23.18	21.42	1.76
13	24.05	22.22	1.83
14	27.12	25.06	2.06
15	28.16	26.16	2.00
16	23.15	22.15	1.00
17	24.15	22.15	2.00
18	27.18	25.12	2.06
19	26.08	24.12	1.96
20	27.18	25.12	2.06
21	26.29	24.30	1.99
22	24.16	22.16	2.00
23	24.52	22.52	2.00
24	24.17	23.00	1.17
25	30.18	30.12	0.06
26	32.12	25.49	6.63
27	31.60	30.09	1.51
Total	710.00 KM	656.00 KM	54.00 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 1.4.

Table 1.4: Functions, roles, and responsibilities

Planning and Design	Construction/ Implementation	O&M
UP jal Nigam & ULB's	UP jal Nigam & ULB's	ULB'

QUESTION: How city is planning to execute projects ?

BY NODAL AGENCY JAL NIGAM. 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 WIL BE DONE BY NAGAR PALIKA PARISHAD SAMBHAL

QUESTION: Shall the implementation of project be done by Municipal Corporation or any parastatal body? Please refer para 8.1 of AMRUT guidelines.

THE IMPLEMENTATION OF THE PROJECTS WILL BE DONE BY PARA STATAL AGENCIES AS PER INSTRUCTIONS OF STATE GOVERNMENT AS WELL AS MoUD. SMALLER PROJECTS LIKE BRANCH LINES ,GAPS IN PIPE LINES WILL BE DONE BY NAGAR PALIKA PARISHAD CHANDAUSI.

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 1.4

Table 1.4: Status of Ongoing/ Sanctioned NA

S. No.	Name of Project Scheme Name	Project components	Cost	Month of Completion	Status (as on dd mm 2015)
1	Firozabad Water Supply scheme.	22 CWR No of 16 OHT INTAKE RISING MAIN- FEDER MAIN- PUMPING STATION	44946.83 Lakhs	36 Months	-

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)

At present available total storage capacity is 2.750 ML which will be adjusted against required total storage capacity is 1.750 ML. OHT. And old pipe line 54km replacement. New Pipe line 130km is required.

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

Yes, City require new infrastructure of water supply. Replacement of old pipe line. Construction of OHT and 3 tube wells. Awareness of water connection program in no. 25 ward of Nagar Palika Chandausi. Promote of water connection programs.

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?

Yes, optimum use of existing assets are being consider in DPR.

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

No, NRW Level 35%. Yes city is planning to reduce NRW in AMRUT. Old Pipe line replacement and regulised of illegal connections. Promote of water connection Programs. Extra pipe line networking in existing pipe line.

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 1.5.

Table 1.5. Demand Gap Assessment for Water Supply Sector

Component	2015			2021	
	Present	Ongoing projects	Total	Demand	Gap
Source augmentation MLD)	141.75MLD (189 T.W)	120MLD	261	102	Nil
Treatment capacity(MLD)	141.75	120	261	102	Nil
Elevated Storage	20.910ML	19.73	40.64ML	34ML	Nil

capacity (ML)		ML			
Distribution network coverage (KM)	656KM	54KM	710KM	710KM	Nil

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.

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

1. To complete ongoing project

1for Universal coverage IEC activates to increase the house hold connection.

3 To improve the quality of water

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

yes

Please provide List out objectives to meet the gap in not more than 100 words.

1. To complete ongoing project

1 for Universal coverage IEC activites to increase the house hold connection.

3 To improve the quality of water

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. (AMRUTGuidelines; 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 Govt. and ULB are the source of funding for meeting out the objectives. The possible activities and source of funding for O&M is tax revenue.

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

At present, There is ongoing project in the city which is being financed by state Govt.

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

100% financed by State Govt.

QUESTION: What are the lessons learnt during implementation of similar projects? (100 words)

Now we are focusing for universal coverage and reduction on NRW.

QUESTION: Have you analyzed best practices and innovative solutions in sector? Is any of the practice be replicated in the city? (75 words)

Yes we have analyzed the best practices and proposing SCADA in water supply system

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

Regularize of illegal connection, enhancement of coverage area, house hold connections and use of ICT in collection of tax/charges

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

Yes, Reorganization of water supply scheme is in progress.

QUESTION: Are different options of PPP such as Design-build-Operate-Transfer (DBOT), Design Built Finance Operate and Transfer (DBFOT) are considered? (100 words)

O/M activities will be explored under PPP option.

The alternative activities to meet these activities be defined as per Table 1.6

Table 1.6 Alternative Activities To Meet Objectives

Sr. No.	Objective	Activities	Cost	Financing Source
1	Incomplete the ongoing project	Intake, pumping station, wtp ,rising main ,distribution main, feeder main, OHT,CWR etc	449.46	State Govt.
2	Coverage of house hold water connections	For Universal coverage	0.60	AMRUT/State and ULB
3	To improve the quality of water	Establishment of Lab,MobileVan,Electronic dozers	2	AMRUT/State and ULB

4. Citizen Engagement

ULBs will organize and conduct city level citizen consultation and receive feedback on the suggested alternatives and innovations. Each alternative will be discussed with citizens and activities to be taken up will be prioritized to meet the service level gaps. ULB will prioritize these activities and their scaling up based on the available resources. (AMRUT Guidelines; Para 6.6, 6.7 & 7.2). Please explain following questions in not more than 200 words detailing out the needs, aspirations and wishes of the local people.

QUESTION: Has all stakeholders involved in the consultation?

Yes, all stakeholders is being involved in the consultation

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

Yes, ward consultationsis being held in the city by Nagar PalikaChandausihas conducted dated 5-10-2015

QUESTION: Has alternative proposed above are crowd sourced?

Yes, the alternatives proposed above are crowd sourced. Nagar PalikaChandausi invited the suggestion of consultation through newspaper, mass media and face book.

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

Yes, Feedback on the suggested alternatives and innovations are being considered.

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

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

QUESTION: What methodology adopted for prioritizing the alternatives?

Through departmental and public consultation.

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 Govt. & ULB. AMRUT

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

Yes Project has been converged with State Govt. reorganization scheme.

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

Yes

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

Yes our priority is to firstly increase coverage with minimum cost ,then household level connections followed by laying of branching and sub branching .

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
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.

Resilience factor will be built in the project components.

7. Financial Plan

Once the activities are finalized and prioritized after consultations, investments both in terms of capital cost and O&M cost has to be estimated. (AMRUT Guidelines; para 6.5) Based on the investment requirements, different sources of finance have to be identified. Financial Plan for the complete life cycle of the prioritized development will be prepared. (AMRUT Guidelines; para 4, 6.6, 6.12, 6.13 & 6.14). The financial plan will include percentage share of different stakeholders (Centre, State and City) including financial convergence with various ongoing projects. While preparing finance plan please reply following questions in not more than 250 words

QUESTION: How the proposed finance plan is structured for transforming and creating infrastructure projects?

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

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

Project will be financed by State Govt. GOI and ULB

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

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

QUESTION: Is the proposed financial structure is sustainable? If so then whether project has been categorized based on financial considerations ?

Yes, the proposed financial structure is sustainable and project has been categorized based on financial considerations.

QUESTION: Have the financial assumptions been listed out ?

Yes, financial assumptions have been listed out

QUESTION: does financial plan for the complete life cycle of the prioritized development?

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

QUESTION: does financial plan include percentage share of different stakeholders (Centre, State, ULBs and)

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 1.7,1.8,1.9,1.10 and 1.11. These tables are based on AMRUT guidelines tables 2.1, 2.2, 2.3.1, 2.3.2, and 2.5.

Table 1.7 MasterPlan of Water Supply Projects for Mission period

(As per Table 2.1of AMRUT guidelines)

(Amount in Rs. Cr)

Sr. No.	Project Name	Priority number	Year in which to be implemented	Year in which proposed to be completed	Estimated Cost
1	Coverage of house hold water connections	1	2015	2017	0.60 CR
2	To improve the quality of water	2	2016	2018	2.0 CR

Table 1.8 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 (Cr)
			Indicator	Existing (As-Is)	After (To-be)	
1	Coverage of house hold water connections	IEC	Coverage of house hold water connections	39.86%	100%	0.60 CR
2	To improve the quality of water	Establishment of Lab, Mobile Van, EI	Quality of water	90%	100%	2.00 CR
Total						2.60 CR

Table 1.9 Annual Fund Sharing Pattern for Water Supply Projects

(As per Table 2.3.1of AMRUT guidelines)

(Amount in Rs. Cr)

Sr. No.	Name of Project	Total Project Cost	Share				
			GOI	State	ULB	Others	Total
1	Coverage of house hold water connections	0.60CR	50%	50%		--	
2	To improve the quality of water	2.00 CR	50%	50%		--	

Table 1.10 Annual Fund Sharing Break-up for Water Supply Projects
(As per Table 2.3.2 of AMRUT Guidelines)

(Amount in Rs.Cr)

Sr. No.	Project	Gol	State			ULB			Convergence	Others	Total
			14 th FC	Others	Total	14 th FC	Others	Total			
1	Coverage of house hold water connections	50%		50%		--	--	--	--	--	100%
2	To improve the quality of water	50%		50%		--	--	--	--	--	100%

Table 1.11 Year wise Plan for Service Levels Improvements
(As per Table 2.5 of AMRUT guidelines)

Proposed Projects	Project Cost	Indicator	Baseline	Annual Targets (Increment from the Baseline Value)					
				FY2016		FY 2017	FY 2018	FY 2019	FY 2020
				H1	H2				
Water Supply									
Coverage of house hold water connections	0.60 CR	Coverage of water supply connections	39.86		60	75	100	-	-
To improve the quality of water	2.0 CR	Coverage of water supply connections	90%				100		