

City Name - Etawah

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 and DPR related to water supply is available with Nagar Palika Parishad Etawah and Zone wise information is available with JaNigam Etawah.

Question: Have you collected census 2011 data? Are you aware of baseline survey data of MoUD? Have you correlated data from these and other sources? (75 words)

Yes we have collected Census 2011 data table is mentions below:-

| S.No | Source | Particulars | Numbers | Tap Water Connection |
|------|------------------------|----------------------------------|--------------|----------------------|
| 01 | Census 2011 | Total Population - 256790 | | |
| | | Household | 42423 | 24719 |
| | | Within the premises | 32090 | 21242 |
| | | Near the premises | 8641 | 2925 |
| | Away | 1692 | 552 | |
| 02 | Departmental Data 2015 | Total Population- | | |
| | | Household | 44601 | 26609 |

Yes we have correlated census data 2011 with departmental data

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 | Coverage of water supply connections-26609/44601 | 59.66% | 100% | D |

| Sr. No. | Indicators | Present Status | MOUD Benchmark | Reliability |
|---------|--|----------------|----------------|-------------|
| 2 | Per capita supply of water (With NRW) | 140 LPCD | 135 LPCD | D |
| 3 | Extent of metering of water connections | 0% | 100% | A |
| 4 | Extent of non-revenue water | 35% | 30% | D |
| 5 | Quality of water supplied | 95% | 100% | D |
| 6 | Cost recovery in water supply services | 60 % | 100% | D |
| 7 | Efficiency in collection of water supply related charges | 60% | 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 40.34 % 3. Gap in Metering is 100%. 4.NRW is about 15% which include leakage and free water supply to social gathering festivals along with water supply through stand posts. 5. 5% gap in Quality of supplied water as per PHE norms. 6. Gap in Cost recovery is 40% with expenditure on electricity and power. 7. Gap in Efficiency of water charges/tax collection is about 30%.

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?

Ans. Source of water-Ground water 48 Tube well Avg. discharge 0.75 MLD , At present Total capacity of water is 36MLD

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?

Ans. Yes Under Ground 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?

Ans. Per Capita water supply= 36 MLD/0.256 Population = 140LPCD.

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 ?

Yes City Divided in 36 Wards by Nagar palikaetawah for water supply .

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. | 1264 | 976 | 288 |
| 2. | 1739 | 406 | 1333 |
| 3. | 852 | 647 | 205 |
| 4. | 2525 | 329 | 2196 |
| 5. | 815 | 789 | 26 |
| 6. | 2151 | 746 | 1405 |
| 7. | 1010 | 980 | 30 |
| 8. | 1231 | 510 | 721 |
| 9. | 761 | 566 | 195 |
| 10. | 1148 | 866 | 282 |
| 11. | 792 | 786 | 6 |
| 12. | 1105 | 317 | 788 |
| 13. | 2034 | 872 | 1162 |
| 14. | 1365 | 830 | 535 |
| 15. | 1014 | 603 | 411 |
| 16. | 1250 | 904 | 346 |
| 17. | 1009 | 774 | 235 |

| Zone No. | Total No. of Households | Households with Water tap Connection | Households without Water tap Connection |
|-----------------|--------------------------------|---|--|
| 18. | 811 | 683 | 128 |
| 19. | 808 | 697 | 111 |
| 20. | 1753 | 468 | 1285 |
| 21. | 1106 | 681 | 425 |
| 22. | 812 | 692 | 120 |
| 23. | 1480 | 1207 | 273 |
| 24. | 1315 | 1041 | 274 |
| 25. | 1011 | 838 | 173 |
| 26. | 1333 | 713 | 620 |
| 27. | 1012 | 676 | 336 |
| 28. | 819 | 744 | 75 |
| 29. | 841 | 798 | 43 |
| 30. | 546 | 376 | 170 |
| 31. | 2425 | 886 | 1539 |
| 32. | 1366 | 847 | 519 |
| 33. | 2141 | 1081 | 1060 |
| 34. | 1120 | 1042 | 78 |
| 35. | 738 | 631 | 107 |
| 36. | 1099 | 607 | 492 |
| Total | 44601 | 26609 | 17992 |

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 in city 11.2 MLD

Elevated Water Reservoirs—12 O.H.T =-----Capacity 11.2 MLD

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

NA

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

Water is supplied to consumers through direct pumping and elevated reservoir both.

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

Yes, Capacity is sufficient. Currently storage capacity is 11.2 MLD, we have also proposed storage capacity in ongoing project

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?

105.50 Km existing.

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 length of the road in city is 275.00 Km. Yes, the pipe lines are laid in all streets under ongoing project.

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

PVC, AC & DI K-7 pipes 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

| Zone No. | Total Street Length (km) | Street length with water distribution pipe line (km) | Street length without water distribution pipe line (km) |
|----------|--------------------------|--|---|
| 1. | 6.00 | 3.00 | 3.00 |
| 2. | 8.00 | 2.90 | 5.10 |
| 3. | 6.10 | 2.85 | 3.25 |
| 4. | 8.25 | 3.10 | 5.15 |

| Zone No. | Total Street Length (km) | Street length with water distribution pipe line (km) | Street length without water distribution pipe line (km) |
|-----------------|---------------------------------|---|--|
| 5. | 7.25 | 2.75 | 4.50 |
| 6. | 9.25 | 4.00 | 5.25 |
| 7. | 5.10 | 2.80 | 2.30 |
| 8. | 6.85 | 2.90 | 3.95 |
| 9. | 6.40 | 2.80 | 3.60 |
| 10. | 9.10 | 3.15 | 5.95 |
| 11. | 8.25 | 2.90 | 5.35 |
| 12. | 9.65 | 2.70 | 6.95 |
| 13. | 9.60 | 3.00 | 6.60 |
| 14. | 10.20 | 3.10 | 7.10 |
| 15. | 10.15 | 2.80 | 7.35 |
| 16. | 9.25 | 2.70 | 6.55 |
| 17. | 4.80 | 2.50 | 2.30 |
| 18. | 6.30 | 2.90 | 3.40 |
| 19. | 7.25 | 2.00 | 5.25 |
| 20. | 9.75 | 3.05 | 6.70 |
| 21. | 10.40 | 3.70 | 6.70 |
| 22. | 7.25 | 2.40 | 4.85 |
| 23. | 8.25 | 2.70 | 5.55 |
| 24. | 5.90 | 2.40 | 3.50 |
| 25. | 6.30 | 2.60 | 3.70 |
| 26. | 5.40 | 2.50 | 2.90 |
| 27. | 7.80 | 2.40 | 5.40 |

| Zone No. | Total Street Length (km) | Street length with water distribution pipe line (km) | Street length without water distribution pipe line (km) |
|----------|--------------------------|--|---|
| 28. | 4.00 | 2.60 | 1.40 |
| 29. | 5.70 | 2.70 | 3.00 |
| 30. | 8.50 | 3.05 | 5.45 |
| 31. | 9.65 | 3.60 | 6.05 |
| 32. | 7.35 | 3.25 | 4.10 |
| 33. | 6.40 | 3.40 | 3.00 |
| 34. | 9.30 | 3.05 | 6.25 |
| 35. | 5.50 | 2.90 | 2.60 |
| 36. | 6.30 | 4.35 | 1.95 |
| | 271.50 KM | 105.50 KM | 166.00 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

Table: Functions, roles, and responsibilities

| Planning and Design | Construction/ Implementation | O&M |
|---------------------|------------------------------|-----------------------|
| UP Jal Nigam | UP Jal Nigam | Nagar Palika Parishad |

Question: How city is planning to execute projects ?

Ans. To achieve universal coverage the palika will legalize all illegal connection and metering will be executed by UP Jal Nigam.

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 State Level Parastatal Agency U.P.Jal Nigam, Nagar Palika Parishd Etawah will follow the para 8.1 of the AMRUT Guidelines while execution of the project.

2. Bridge the Gap

Once the gap between the existing Service Levels is computed, based on initiatives undertaken in different ongoing programs and projects, objectives will be developed to bridge the gaps to achieve universal coverage. (AMRUT Guidelines; para 6.2 & 6.3, Annexure-2; Table 2.1). Each of the identified objectives will be evolved from the outcome of assessment and meeting the opportunity to bridge the gap.

Question: List out initiatives undertaken in different ongoing programs and projects to address these gaps. For this provide details of ongoing projects being carried out for sector under different schemes with status and when the existing projects are scheduled to be completed? Provide information in Table

Table: Status of Ongoing/ Sanctioned

| S.No. | Name of Project | Scheme Name | Cost | Month of Compilation | Status (as on dd mm 2015) |
|-------|---|------------------------|---------------|----------------------|---------------------------|
| 1 | Etawah city (NPP) Reorganization water supply scheme CWR -01 O.H.T -15 Tube well -24 Pipeline-168.5 KM Re-bore Tubewell-10 | State Sector Programme | 12403.16 Lakh | March 2016 | 80% (25/08/15) |

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)

Coverage of water supply - 100%, Per capita supply of water –180 LPCD.

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

Yes City is requires Metering for reduce NRW.

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?

Public awareness and citizen consultation during digging of pipeline in the city.

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

No, NRW 35%. Yes City is planning to reduce NRW in AMRUT .

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 (MLD) Under Ground Water | 36MLD(48 T.W) | 36 MLD | 72 ML D | 0 | Surplus |
| Treatment capacity | 36MLD | 36 MLD | 72 ML D | 0 | Surplus |
| Elevated Storage capacity (MLD) | 11.2ML(120.HT) | 22.47 ML | 33.6 7 ML | 0 | Surplus |
| Distribution network coverage | 105.50 Km | 166 Km | 271. 50 Km | 0 | 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.

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?

Yes the objective is to reduce NRW and introduce metering at all level.

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

Yes

| Objectives | Activities to be performed to bridge the gap |
|-----------------|--|
| Ongoing Project | CWR -01 O.H.T -15 Tube well -24 |

| | |
|---|--|
| | Pipeline-168.5 KM Re-bore Tubewell-10 |
| To Achieve universal Coverage | Ongoing Project. |
| To Make system efficient by NRW reduction | 100% implementation of metering. |
| Efficiency in charges collection | By ULB |

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

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)

On going project are being executed as per the approved DPR.

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

Not yet. Project are still ongoing.

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

Regularize of illegal connection, enhancement of coverage area, house hold connection and metering.

Question: Will metering system for billing introduced?

Yes, Metering System will introduce.

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

| Objectives | Activities to be performed to bridge the gap |
|---|--|
| Ongoing Project | |
| To Achieve universal Coverage | Ongoing Project |
| To Make system efficient by NRW reduction | 100% implementation of metering under AMRUT |
| Efficiency in charges collection | By 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 30 July 2015 Board Meeting at Nagar Palika Parishad

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

Yes, ward/ zone level consultations was held in the city on 5 oct,2015 at purviyaTola Maidan

Question: Has alternative proposed above are crowd sourced?

No

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

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 consultations

Question: What methodology adopted for prioritizing the alternatives?

Alternatives have been prioritized based on demand raised through consultation with citizens, group discussion, 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?

The convergence factor has been considered while designing and funding of project.

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

Yes the projects are being prioritized based on “more with less” approach

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

Yes, universal coverage approach indicated in AMRUT guidelines has been followed for prioritization of activities

6. Conditionalities

Describe in not more than 300 words the Conditionalities of each project in terms of availability of land, environmental obligation and clearances, required NOC, financial commitment, approval and permission needed to implement the project.

No NOC Required

7. Resilience

Required approvals will be sought from ULBs and competent authority and resilience factor would be built in to ensure environmentally sustainable water supply scheme. Describe in not more than 300 words regarding resilience built in the proposals.

Yes, Resilience factor would be built in to ensure environmental sustainability of the project.

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 has been developed.

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

1. Project by State Govt. 2. Proposed under AMRUT 3. Rest by ULB through PPP/own source

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)

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.No. | Objective | Project Name | Priority number | Year in which to be implemented | Year in which to be completed | Estimated Cost |
|-------|---|------------------------------------|-----------------|---------------------------------|-------------------------------|----------------|
| 1 | To Make system efficient by NRW reduction | Metering, Raw water & Distribution | 1 | 2016 | 2017 | 0.50 cr |
| | | Metering at Households | 1 | 2016 | 2017 | 12.00 cr |

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 Make system efficient by NRW reduction | | | | | | |
| | | Metering | AMRUT | Installation | 0 | 100 | 12.50 cr |

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 Make system efficient by NRW reduction | Metering | 12.50 cr | 6.25 Cr | 6.25 Cr | | | 12.50 Cr |

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 | Metering | 6.25 Cr | | 6.25 Cr | | | | | | 12.50 cr. | |

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) | | | | | |
|------------------------------------|--------------|--|----------|---|-----|---------|---------|---------|---------|
| | | | | FY 2016 | | FY 2017 | FY 2018 | FY 2019 | FY 2020 |
| | | | | H1 | H2 | | | | |
| Metering raw water and householder | 12.50 Cr | Introduce Metering , Introduce Traffic, Reduce NRW | 35 % | | 35% | 25% | 20% | - | - |