City Name –Mathura-Vrindavan

Sewerage and Septage Management

1. Assess the Service Level Gap

The first step is to assess the existing situation and service levels gaps for Sewerage (AMRUT Guidelines; para 3 & 6). This will also include existing institutional framework for the sector. For this City has to review all policy, plans, scheme documents etc. To identify service level gaps and hold discussions with officials and citizens. 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 sewerage system of the city? Detail out the data, information, plans, reports etc related to sewerage available with city? Is zone wise information available? Have you correlated your data with census 2011 data? (100 words)

A general information has been obtained from records of municipal corporation and Jal Nigam. A general survey has been conducted by municipal corporation to cover the number of house hold present within the municipal limit. At present Mathura-Vrindavan Nagar Nigam is divided into five sewerage zones. Yes, the data has been correlated with census 2011 data.

Total Population (Census, 2011)	**Location of source of drinking water Population**	**Total Number of Households**	**Total Number of Households with toilets**
	Total Population -349336		
	Within the premises	**42908**	**40945**
	Near the premises	**8084**	**6093**
	Away	**4094**	**2669**
	Total number of households	**55068**	**49707**
Departmental Data (2015)	**Population-372780**	**82246**	**80046**
Departmental Data (2017 NPP)	**Population- 393420**	**82246**	**79595**
Departmental Data (2011) Mathura - Vrindavan)	**Population- 626808**	**90942**	**83223**

Project Manager
Drainage & Sewerage Unit
U. P. Jal Nigam, Mathura

Waste water outlet connected	Close Drainage	Open Drainage	No Drainage
Number of HH	11218	71028	-
Departmental Data 2017	17553	64693	-
Departmental Data Mathura - Vrindavan	24053	66289	-

* As per ULB data and number of actual existing connection.*The house hold information of the 51 village will be included in the abov table after the survey is conducted.

What are existing service levels for sewerage for coverage of sewerage network services, efficiency of collection of sewerage and efficiency in treatment. Provide information in table

Table 2.1 : Status of sewerage network and Service Levels

Sr. No.	Indicators	Existing Service Level 2015	NPP Mathura		Mathura - Vrindavan		MOUD Benchmark
			Existing Service Level (2017)	Reliability	Existing Service Level (2017)	Reliability	
1	Coverage of latrines (individual or community)	97%	96.77%	C	91.51%	C	100%
2	Coverage of sewerage network services	13.64%	21.34%	B	26.44%	C	100%
3	Efficiency of collection of sewerage	13%	26.69%	C	30.02%	C	100%
4	Efficiency in Treatment: Adequacy of sewerage treatment capacity	80%	56.04 %	C	63.54%	C	100%

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

Sr.No	Indicator	Gap 2015	Gap 2017 (Mathura)	Gap 2017 (Mathura - Vrindavan)
1	Coverage of latrines (individual or community)	3 %	3.23%	8.49%
2	Coverage of sewerage network services	86.36%	78.66%	73.56%

3	**Efficiency of collection of sewerage**	**87%**	**73.31%**	**69.98%**
4	**Efficiency in Treatment: Adequacy of sewerage treatment capacity**	**20%**	**43.96%**	**36.46%**

Question: Does city has separate drainage system or sewer lines take care of storm water? (50 words)

Yes, City has separate drainage system.

Coverage of latrines (individual or community), Please provide information in Table 2.2 A

Zone	Total number of HH a	Total number of HH with individual or community toilets within walking distance b	Total number of HH with individual or community toilets within walking distance b (2017)	Coverage of latrines (%), (b/a)*100%	Coverage of latrines (%), (b/a)*100% 2017 data
Masani	17927	17194	16399	95.91 %	91.47%
Trans - Yamuna	21200	21200	18900	100 %	89.15%
Koyla Alipur	14779	14012	13412	94.81%	90.75%
Masoom Nagar	28340	27640	26040	97.53%	91.88%
Vrindavan	8696	-	8472	-	97.42%
Total	90942	80046	83223	88.02%	91.51%

SEWERAGE NETWORK AND COLLECTION OF SEWERAGE

Question: How much of the area of the city is covered by sewerage network? What is the status of household connections in each zone? What are the areas covered under septage? Provide information in **Table**

Table: Zone/Ward Wise Coverage of Households**

There is 5% sewerage network in the city.91.12% household have septic tank.

Zone	Total No. of Households (HH) a 2015	Total No. of Households(HH) a 2017	Households with Sewerage Network b	Households with Sewerage Network b year 2017	Coverage of sewerage network services (b/a)*100%	2017 coverage of network services
Masani	17927	17927	1122	1122	6.26%	6.26%
Trans Yamuna	21200	21200	10096	16431	47.62%	77.50%
Koyla Alipur	14779	14779	-	-	-	-
Masoom Nagar	28340	28340	-	-	-	-
Vrindavan	-	8696	-	6500	-	74.74%
Total	82246	90942	11218	24053	13.63%	26.44%

***There is no data available of Household Connections of Sewerage Network, we have taken Sewerage User Charges data as per provided by Tax Department. It is mentioned that in Mathura-Vrindavan only 26.44% area covered with sewer line network.*

Question: Are there any areas where sewer lines have been laid but still households are not connected to sewer lines? Are there any areas where toilets may be connected to sewer lines but kitchen or bathroom waste are not connected to sewerage system? (75 words)

214 Km Sewer Line is Existing in Nagar Nigam Mathura-Vrindavan about 32000 HH can be connected in the future.

Question: Is there any systematic and organized method to collect and treat waste from septic tanks? What is the duration of cleaning of septic tanks (monthly, quarterly, semiannually or annually)? Indicate status of overflows of septic tanks, either in the nearby drains /open fields/ sewerage lines etc? (75 words)

Currently sewer waste from existing 11218 is treated. However, there is no systematic method to collect sewage from septic tank.

Question: What is the situation of O&M of the existing sewerage system? Does the city has routine maintenance system or breakdown maintenance system? What is the duration of cleaning of sewer lines (monthly, quarterly, semiannually or annually)? Indicate infrastructure available for O&M of the sewerage system i.e sewer jetting machines etc? (100 words)

Sewer line is laid currently by Jal Nigam after hand over O & M is done by Nagar Nigam Mathura-Vrindavan. Semi Annually cleaning of sewer is done.

SEWAGE TREATMENT SYSTEM

Question: Does city has Sewage Treatment Plant (STP)? Which areas are covered under each of the STPs? Provide details in Table 2.3

Table 2.3: There are three operational STPs in Mathura city.

Sr. No.	Location	Capacity (MLD)	Inflow in the STP (MLD)		Efficiency in %	
			2015	2017	2015	2017
1	Trans Yamuna	(1) 14.50 (2) 16.00	(1) 15.00 (2) 10.00	(1) 6.00 (2) 5.00	81.96%	36.06%
2	Masani	13.59	15.00	11.00	110.37%	80.94%
3	Pagal Baba	4.00	-	2.5	-	62.50%
4	Maat Road Near 100 bed Hospital	8.00	-	3.0	-	37.50%
	TOTAL	56.09	40.00	27.50	90.72%	49.56%

Question: Does decentralized waste treatment system exist or planned in the city? If yes, provide details (75 words)

Yes, decentralized waste treatment has been planned in the city. The DPR prepared by Jal Nigam proposes to have 5 nos STP for all the remaining zones of the city.

Question: How much of sewerage is generated in the city? How much of this sewerage generated reaches the STPs? What is the Biological Oxygen Demand (BOD) of incoming and outgoing sewage of each STP? (100 words)

The total sewage generation in the city is approximately 75 MLD. The sewage generated reaches STP is 27.5 MLD. BOD of influent and effluent for various STPs in the city are mentioned below

S.N.	Name of STPs	Influent B.O.D.	Effluent B.O.D.
1	Trans Yamuna 16 MLD	206.71	17.65
2	Trans Yamuna 14.5 MLD	206.71	48.00
3	Masani 13.59 MLD	215.80	52.00
4	Pagal Baba 4 MLD	181.94	42.00
5	Maat Road 8 MLD	181.94	24.87

Question: Is treated sewage being reused or recycled? Is treated water being used for irrigation or industrial purpose? Does the option of power generation being explored? (75 words)

Yes, treated water is used for irrigation purposes.

INSTITUTIONAL FRAMEWORK

Question: Define role and responsibilities in terms of O&M, policy planning, funding, service provision in table

Table: 2.4: Functions, roles, and responsibilities

Planning and Design	Construction/ Implementation	O&M
UP Jal Nigam	UP Jal Nigam	Nagar Nigam Mathura-Vrindavan

Question: Please also detail that how city is planning to execute projects. Shall the implementation of project be done by Municipal Corporation or any parastatal body? (75 words)

Planning and execution of Sewerage system will be implemented by UP Jal Nigam.

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 sewerage system 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 in Rs Crore	Month of Completion	Status (as on DD MM 2015)
01	**Mathura sewerage House Connecting Chamber & Connection Trans Yamuna zone-II project of sewer is on going**	AMRUT	55.2257 (with centage)	28-Feb.-2018	Work in process

Question: How much the existing system will able to address the existing gap in sewerage system? Will completion of above will improve the coverage of network and collection efficiency? If yes, how much. (100 words)

After completion of ongoing projects under AMRUT scheme a total of 21200 new HH will be connected to sewerage system.

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

Yes, the city needs additional STPs, Sewerage System and House Hold Connection to addressed the gap between existing system and service level bench mark.

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?

U.P. Jal Nigam/Nagar Nigam Mathura-Vrindavan are determined to Rehabilitate the existing system and augment its capacity wherever needed and possible, so that the existing system can be put to its optimum usage.

Provide information in Table 2.6

Table 2.6: Demand Gap Assessment,

Component	Status				2021	
	2015	2017	Ongoing projects	Total	Demand	Gap
Sewerage network (km)	18	214	-	214	1305	1091
No of Households covered under sewerage system	10756	6550	14650	31956	108000	97250
No. of HH covered in Septage Management	80046	0	-	-	-	-
Sewerage Treatment Plant (MLD)	13.59	56.09	-	56.09	134.09	78.00

OBJECTIVES

Based on assessment of existing infrastructure and ongoing / sanctioned projects, calculate existing gaps and estimated demand by 2021 for sewerage network, number of household to be provided with connections, and required enhancement in capacity of STP (MLD), area to be covered under septage management. Based on the demand and gap assessment, evolve objectives to achieve bridging these gap.

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

YES,

THE MAIN OBJECTIVE OF N.N.M.V. IS:-

1- **CONSTRUCTION OF NEW LATRINES 2200HH.**
2- **IEC TO PROMOTE AND CONNECT 21200HH FROM NEW(TRANS YAMUNA ZONE-2) SEWER LINE.**
3- **FOR TREATMENT OF EXISTING LATRINES SUCTION MACHINE IS REQUIRED FOR 50290HH TO TRANSPORT WASTE TO STP.**
4- **WE PROPOSED NEW SEWER LINE 1091.0 KM TO COVER MASANI, KOYLA ALIPUR, MASOOM NAGAR ZONE AND NEW ADDED AREA 51 VILLAGES.**
5- **CONSTRUCTION OF 5 NEW STP IN MATHURA WITH E&M WORKS.**
6- **CONSTRUCTION OF RISING MAIN OF 21.5 KM. IN KOYLA ALIPUR, MASOOM NAGAR ZONE AND NEW ADDED AREA 51 VILLAGES.**
7- **UPGRADATION AND RENOVATION OF EXISTING STP IN MASANI, TRANS YAMUNA &VRINDAVAN WITH E&M WORKS.**
8- **CONSTRUCTION OF 13NOS. NEW PUMPING STATIONS WITH E&M WORKS.**
9- **PROVISION FOR LAND COST, SHIFTING OF SERVICES, POWER CONNECTION, NHAI/RAILWAY CHARGES.**

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 alternative. While identifying the possible activities, also examine the ongoing scheme and its solutions including status of completion, coverage and improvement in O&M. Please reply following questions in not more than 200 words.

Question: What are the possible activities and source of funding for meeting out the objectives?

The funding for meeting out the each objective will 50% GOI, 30% GOUP and remaining 20% from Nagar Nigam Mathura-Vrindavan.

Question: How can the activities be converged with other programmes like JICA/ ADB funded projects in the city etc?

Mathura Sewerage House Connecting Chamber & Connection Trans Yamuna Zone-II Project of Sewer is ongoing Under AMRUT Programme

Question: What are the options of completing the ongoing activities?

1- **Mathura Sewerage Scheme Trans Yamuna Zone - Complete**
2- **Vrindavan Sewerage Scheme – Complete**
3- **Mathura Sewerage House Connecting Chamber & Connection Trans Yamuna Zone-Ii – 31% Complete**

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

Land acquisition demand and environmental clearances should be done before starting of project.

Question: Has projects includes O&M of sewerage system?

No,

Question: What measures may be adopted to recover the O&M costs? Can the option of sale of treated wastewater be applicable to recover the O&M cost.

O&M cost could be recovered by selling the treated wastewater for industrial use.

Question: What are innovative alternative solutions explored in achieving objectives?

Nagar Nigam Mathura-Vrindavan will explore the possibility of decentralized treatment plant.

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

Yes, It will be explored during preparation Of DPR.

Question: How the recycle and reuse of water will be done? How much quantity of treated water may be reused?

Treated waste water can be used for irrigation and industrial uses. Approximately 45 MLD of treated waste water can be reuse.

Question: Have you analyzed best practices and innovative solutions in sewerage sector? Is any of the practice be replicated in the city?

Yes, new technologies such as constructed wetlands will be employed in sewerage sector.

Question: Have you identified the areas for decentralized waste treatment system? Explore the approaches for septage management i.e. Public Private Partnership (PPP) model or replacing septic tanks by bio-digesters, bioremediation etc.

Yes, we are trying to establish decentralized fecal Sludge Treatment Plant for initially for 4-5 wards.

The alternative activities to meet these activities be defined as per Table 2.7

Table2.7 Alternative Activities To Meet Objectives

SL No.	Objective	Activities	Financing Source
1	Construction of new latrines 2200HH	Construction of Toilets	SBM
2	IEC to promote and connect 21200HH from new(trans Yamuna zone-2) sewer line	Construction	AMRUT/ State Govt.
3	for treatment of existing latrines suction machine is required for 50290HH to transport waste to STP	New machinery	AMRUT/ State Govt.
4	Up gradation and renovation of 3 STP in Masani, Trans Yamuna zone & Vrindavan with E&M Works	Upgradation and capacity building of existing STP	NAMAMI GANGE
5	construction of 5 new STP in Nagar Nigam Mathura-Vrindavan with E&M Works	New STP	AMRUT/ State Govt.
6	we proposed new sewer line 1091.0 km to cover Masani, Koyla Alipur, Masoom Nagar Zone & new added area 51 villages	New sewer line	AMRUT/ State Govt.
7	Construction of Rising Main of 21.5 Km. in Koyla Alipur, Masoom Nagar Zone & new added area 51 villages	New Rising Main	AMRUT/ State Govt.

SL No.	Objective	Activities	Financing Source
8	Construction of 13 nos. New Pumping Stations with E&M Works	New Pumping Stations	AMRUT/ State Govt.
9	Provision for Land cost, shifting of services, power connection, NHAI/Railway Charges	Additional work	AMRUT/ State Govt.

4. Citizen Engagement

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 reply following questions in not more than 200 words.

Question: Has all stakeholders involved in the consultation?

Nagar Nigam Mathura-Vrindavan passes the proposals which are put up by ward members, citizens and parastatal agency.

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

Yes, in Nagar Nigam Mathura-Vrindavan Ward/Zone Level Consultations has Held Under The Chairmanship of Ward Members in Head Office of Nagar Nigam Mathura-Vrindavan.

Question: Has alternative proposed above are crowd sourced?

Yes, Suggestions and views of the crowd are taken into consideration.

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

Most of the people are agreed to construction of individual & community latrines, and periodically cleaning by suction machine.

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

Yes,

Question: What methodology adopted for prioritizing the alternatives?

Priorities are made as per suggesting made by common public, U.P. Jal Nigam and Nagar Nigam Mathura-Vrindavan.

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 4. SBM 5. ULB

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

Yes, IEC & construction of individual and community latrines converge with SBM.

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, universal coverage approach indicated in AMRUT guidelines followed for prioritization of activities.

6. Conditionalities

Describe 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. Please reply following questions in not more than 100 words.

Yes, transportation of waste by sewer suction machine & treatment by STP there will be need of land and NOC from concerning deptt.

7. Resilience

Required approvals will be sought from competent authority and organizations. The resilience factor would be built in to ensure environmentally sustainable sewerage scheme. Please reply following questions in not more than 100 words.

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 200 words

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

Sewer & sanitation scheme financed by GOI, GOUP & ULB project will be financed as per amrut guidelines.

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

As per the guidelines of the AMRUT, the structured plan of the project will be developed. in which 50% from GOI, 30% GOUP and remaining 20% ULB.

Question: Does it include financial convergence with various ongoing projects.

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

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 Sewerage Projects for Mission Period
(As per Table 2.1of AMRUT guidelines)

(Amount in Rs. Cr)

S.No.	Project Name	Priority number	Year in which to be implemented	Year in which to be completed	Estimated Cost (in Cr.)
1	**Construction of new latrines 2200HH @10000/HH**	1	2016	2017	2.20 SBM
2	**IEC to promote and connect 21200HH from new(trans Yamuna zone-2) sewer line @50 / HH**	2	2017	2018	55.23 AMRUT PROGRAMME
3	**We proposed new sewer line 1091.0 km to cover masani koyla alipur and masoom nagar zone As per estimate**	3	2017	2020	1472.85
4	**For treatment of existing latrines suction machine is required for 50290HH to transport waste to STP** $\frac{50290 \times 2m^3 \times 70\%}{300Day \times 5m^3 \times 5\ HH} = 9.38$	4	2016	2017	1.00

S.No.	Project Name	Priority number	Year in which to be implemented	Year in which to be completed	Estimated Cost (in Cr.)
5	Up gradation and renovation of 4 STP in masani, Trans Yamuna zone & Vrindavan with E&M Works	5	2017	2020	601.83 NAMAMI GANGE PROGRAMME
6	construction of 5 new STP in Nagar Nigam Mathura-Vrindavan with E&M Works @1.4CR/MLD	6	2017	2020	109.20
7	Construction of Rising Main of 21.5 Km. in Masoom Nagar, Koyla Alipur Zone and new added area 51 villages	7	2017	2020	21.50
8	Construction of 13 nos. New Pumping Stations with E&M Works	8	2017	2020	108.00
9	Provision for Land cost, shifting of services, power connection, NHAI/Railway Charges	9	2017	2020	20.00
	TOTAL				2391.81

TABLE-8.2: DETAILS OF PRIORITIZED PROJECTS PREPARED UNDER AMRUT DURING CURRENT FY (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 2015	Existing (As-Is) 2017	After (To-be)	
1	Construction of new latrines 2200HH @10000/HH	Construction of Toilets	COVERAGE	97	100	2.2 SBM
2	IEC to promote and connect 21200HH from new(trans Yamuna zone-2) sewer line @50 / HH	Survey	COVERAGE	13.64	100	55.23 AMRUT PROGRAMME

Sr. No.	Project Name	Physical Components	Change in Service Levels			Estimated Cost
			Indicator 2015	Existing (As-Is) 2017	After (To-be)	
3	We proposed new sewer line 180.0 km to cover masani zone As per estimate	New sewer line	PIPELINE COVERAGE	13.64	27.60	350.00
4	For treatment of existing latrines suction machine is required for 50290HH to transport waste to STP $\frac{50290 \times 2m^3 \times 70\%}{300Day \times 5m^3 \times 5\ HH} = 9.38$	New machinery	TRANSPORTATION	13	100	1.00
5	Up gradation and renovation of 4 STP in masani, Trans Yamuna zone &Vrindavan with E&M Works	Upgradation and capacity building of existing STP	TREATMENT	80	100	601.83 NAMAMI GANGE PROGRAMME
6	Provision for Land cost, shifting of services, power connection, NHAI/Railway Charges	Additional Work				10.00
	TOTAL					1020.26

TABLE-8.3: ANNUAL FUND SHARING PATTERN FOR SEWERAGE PROJECTS

(As per Table 2.3.1 of AMRUT guidelines) (Amount in Rs. Cr)

S.No.	Name of Project	Total Project Cost(cr)	Share				
			GoI (cr)	State (cr)	ULB (cr)	Others (cr)	Total (cr)
1.	Construction of new latrines 2200HH @10000/HH	2.20	1.10	0.66	0.44	-	2.2
2.	IEC to promote and connect 21200HH from new(trans Yamuna zone-2) sewer line @50 / HH	55.23	27.615	16.569	11.046	-	55.23
3.	We proposed new sewer line 1091.0 km to cover masani koyla alipur and masoom nagar zone As per estimate	1472.85	736.425	441.855	294.57	-	1472.85

S.No.	Name of Project	Total Project Cost(cr)	Share				
			GoI (cr)	State (cr)	ULB (cr)	Others (cr)	Total (cr)
4.	For treatment of existing latrines suction machine is required for 50290HH to transport waste to STP $\frac{50290 \text{ X } 2m^3 \text{ X } 70\%}{300Day \text{ X } 5m^3 \text{ X } 5 \text{ HH}} = 9.38$	1.00	0.50	0.30	0.20	-	1.00
5.	Up gradation and renovation of 4 STP in masani, Trans Yamuna zone & Vrindavan with E&M Works	601.83	601.83	-	-	-	601.83
6.	construction of 5 new STP in Nagar Nigam Mathura-Vrindavan with E&M Works @1.4CR/MLD	109.20	54.60	32.76	21.84	-	109.20
7.	Construction of Rising Main of 21.5 Km. in Masoom Nagar, Koyla Alipur Zone and new added area 51 villages	21.50	10.75	6.45	4.30	-	21.50
8.	Construction of 13 nos. New Pumping Stations with E&M Works	108.00	54.00	32.40	21.60	-	108.00
9.	Provision for Land cost, shifting of services, power connection, NHAI/Railway Charges	20.00	10.00	6.00	4.00	-	20.00
	TOTAL	2391.81	1496.82	536.994	357.996	-	2391.81

TABLE-8.4: ANNUAL FUND SHARING BREAK-UP FOR SEWERAGE 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			
	Construction of new latrines 2200HH @10000/HH	50%	-	30%	30%	-	20%	-	-	-	100%

Sr. No.	Project	GOI	State			ULB			Convergence	others	To
			14th FC	Others	Total	14th FC	Others	Total			
2	IEC to promote and connect 21200HH from new(trans Yamuna zone-2) sewer line @50 / HH	50%	-	30%	30%	-	20%	-	-	-	100
3	We proposed new sewer line 1091.0 km to cover masani koyla alipur and masoom nagar zone As per estimate	50%	-	30%	30%	-	20%	-	-	-	100%
4	For treatment of existing latrines suction machine is required for 50290HH to transport waste to STP $\frac{50290 \times 2m^3 \times 70\%}{300Day \times 5m^3 \times 5\ HH} = 9.38$	50%	-	30%	30%	-	20%	-	-	-	100%
	Up gradation and renovation of 4 STP in masani, Trans Yamuna zone & Vrindavan with E&M Works	100%	-	-	-	-	-	-	-	-	100%
	construction of 5 new STP in Nagar Nigam Mathura-Vrindavan with E&M Works @1.4CR/MLD	50%	-	30%	30%	-	20%	-	-	-	100%

Sr. No.	Project	GOI	State			ULB			Convergence	others	To
			14th FC	Others	Total	14th FC	Others	Total			
7	Construction of Rising Main of 21.5 Km. in Masoom Nagar, Koyla Alipur Zone and new added area 51 villages	50%	-	30%	30%	-	20%	-	-	-	100
8	Construction of 13 nos. New Pumping Stations with E&M Works	50%	-	30%	30%	-	20%	-	-	-	100%
9	Provision for Land cost, shifting of services, power connection, NHAI/Railway Charges	50%	-	30%	30%	-	20%	-	-	-	100%

TABLE-8.5: YEAR WISE PLAN FOR SERVICE LEVELS IMPROVEMENTS

(As per Table 2.5of AMRUT guidelines)

Proposed Projects	Project Cost	Indicator	Baseline	Annual Target(Increment from baseline value)					
				FY 2016		FY 2017	FY 2018	FY 2019	FY 2020
				H1	H2				
onstruction of new latrines 200HH @10000/HH	2.20	100%	96.77%	0.3%	0.3%	1%	1.63%	-	-
C to promote and connect 200HH from new(trans muna zone-2) sewer line 50 / HH	55.23	100%	13.64%	0%	0%	25.77 %	-	-	-

Proposed Projects	Project Cost	Indicator	Baseline	Annual Target(Increment from baseline value)					
				FY 2016		FY 2017	FY 2018	FY 2019	FY 202
				H1	H2				
We proposed new sewer line 1091.0 km to cover masani koyla alipur and masoom nagar zone as per estimate	1472.85	100%	16.39%	0%	0%	1%	27.53 %	27.53 %	27.53%
For treatment of existing latrines suction machine is required for 50290HH to transport waste to STP $\frac{50290 \times 2m^3 \times 70\%}{300Day \times 5m^3 \times 5\ HH} = 9.38$	1.0	100%	20.00%	0%	0%	40%	20%	20%	0%
Up gradation and renovation of 4 STP in masani, Trans Yamuna zone & Vrindavan with E&M Works	601.83	100%	47.53%	0%	0%	5.06%	5.06%	5.06%	0%
construction of 5 new STP in Nagar Nigam Mathura-Vrindavan with E&M Works @1.4CR/MLD	109.20	100%	47.53%	0%	0%	0%	12.42 %	12.42 %	12.43%
Construction of Rising Main of 21.5 Km. in Masoom Nagar, Koyla Alipur Zone and new added area 51 villages	21.50	100%	19.56%	0%	0%	6.52%	24.64 %	24.64 %	24.64%
Construction of 13 nos. New Pumping Stations with E&M Works	108.00	100%	10.34%	0%	0%	22.41 %	22.41 %	22.41 %	22.42%
Provision for Land cost, shifting of services, power connection, NHAI/Railway charges	20.00	100%	-	-	-	-	-	-	-
otal	**2391.81**								

Project Manager
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