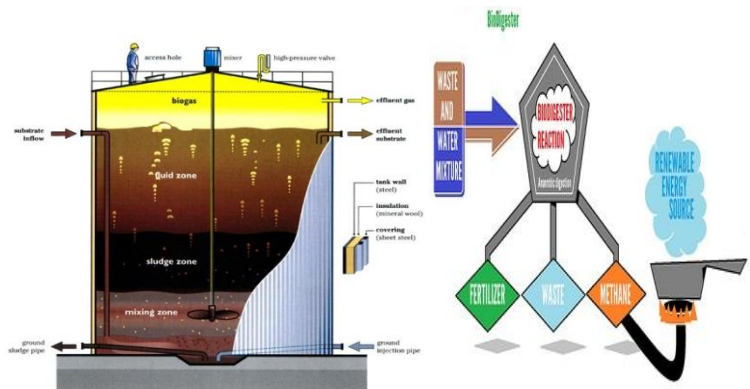
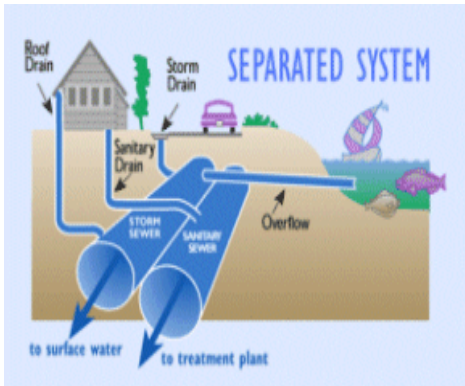




सत्यमेव जयते

Government of Rajasthan

STATE SEWERAGE & WASTE WATER POLICY- 2016



Department of Local Self Government



राजस्थान सरकार
स्वायत्त शासन विभाग
जयपुर
दिनांक: 9863
दिनांक: 10/8/16

राजस्थान सरकार
मंत्रिमण्डल की आज्ञा

111/2016

दिनांक 02 अगस्त, 2016 को आयोजित मंत्रिमण्डल की बैठक में स्थानीय निकाय विभाग द्वारा प्रस्तुत ज्ञापन क्रमांक प. 8(ग)(17)नियम/स्था.निकाय विभाग/15/5629 दिनांक 01 जून, 2016 पर विचार-विमर्श कर ज्ञापन में अंकित राज्य के सभी नगरीय निकायों में सीवरेज व्यवस्था स्थापित कर उसके प्रभावी सदुपयोग, सुनियोजित संचालन-संधारण कर सीवरेज का शोधन करने, शोधन उपरांत के प्राप्त जल, खाद, गैस आदि को अन्य उपयोग में लेने व सुचारु निस्तारित कर जन साधारण को सुंदर स्वच्छ व पर्यावरण अनुकूल वातावरण देने के उद्देश्य से "स्टेट सीवरेज एवं वेस्ट वाटर नीति-2016 के प्रारूप का सैद्धान्तिक अनुमोदन किया गया। अनुमोदित पॉलिसी के सुचारु क्रियान्वयन और उसके क्रियान्वयन में आने वाली कठिनाईयों के निराकरण के लिए विभाग के स्तर पर एक कमेटी गठित करने का प्रावधान पॉलिसी में समाविष्ट किये जाने का निर्णय लिया गया।




(ओ.पी.मीना)
मुख्य सचिव

प्रमुख शासन सचिव,
स्वायत्त शासन विभाग

डी.111/मं.मं./2016
जयपुर, दिनांक: 09 अगस्त, 2016



सत्यमेव जयते

VASUNDHARA RAJE

CHIEF MINISTER RAJASTHAN



Message

The State Sewerage and Waste Water Policy, 2016 aims at facilitating sustainable sanitation services to citizens of urban centers in Rajasthan. The Policy has guidelines for collection and treatment of waste water and its reuse following treatment. These guidelines are aimed at enabling local bodies to significantly improve the level of sanitation and hygiene, thereby bringing about a sea change in the urban environment.

The Policy also encourages the private sector to participate in the execution of Sewerage Projects and various incentives have been provided. Emphasis has been given on timely commissioning of projects in a transparent manner and we look forward to the increased use of latest technology.

The basic objective of this Policy is a greener urban environment, rejuvenated water bodies and a positive impact on public health. For successful implementation, whole hearted participation by all stakeholders is important.

(Vasundhara Raje)



RAJPAL SINGH SHEKHAWAT
Minister, UDH and LSG Rajasthan

Message

It is a matter of great pride that the Department of Local Self Government is introducing 'State Sewerage and Waste Water Policy -2016'.

This policy, the first of its kind, is an outcome of diligent efforts made by various government departments, semi government departments, NGOs, experts from Engineering Colleges, besides RIICO, RUIDP, Ministry of Urban Development, Government of India, State Finance, Agriculture and Industries Departments.

The State Government is committed to improving public health, clean and greener environment and conservation of precious water resources by providing efficient sewerage system and ensuring efficient safe & healthy re-use of treated waste water. This will result in saving fresh water being used for agricultural & industrial purposes which will contribute towards improving drinking water problems.

I am confident that the implementation of State Sewerage and Waste Water Policy -2016 will elevate environmental hygiene and public health at large and I wish it all success.
With best wishes,

(Rajpal Singh Shekhawat)



सत्यमेव जयते



Dr. MANJIT SINGH
Principal Secretary LSG
Government of Rajasthan

Message

It gives me immense pleasure that the Department of Local Self Government is introducing 'State Sewerage and Waste Water Policy -2016'.

Various experts from different relevant fields have contributed to show this policy the light of the day.

Different government departments, NGOs, Engineering Colleges, RIICO, RUIDP, Ministry of Urban Development, Government of India, State Finance, Agriculture and Industries Departments, all have worked in tandem to make it reach its proper shape.

Implementation of State Sewerage and Waste Water Policy-2016 will ensure freedom from pollution of all types, particularly waste water. The bye products of waste water treatment will make available more water, gas, manure, etc.

The policy provides for participation of private parties as well. This will ensure not only a sense of competition but also better transparency, quality and timely completion of projects and help making local bodies economically stronger.

I wish all success to implementation of State Sewerage and Waste Water Policy -2016.

With best wishes,

Dr. Manjit Singh

PREFACE

The National Urban Sanitation Policy 2008, envisions, “**All Indian cities and towns become totally sanitized, healthy and livable and ensure and sustain good public health and environmental outcomes for all their citizens, with a special focus on hygienic and affordable sanitation facilities for the urban poor and women**”. The State Sewerage and Waste Water Policy is prepared to convert this vision into reality. The policy envisages improved health of urban population, through sustainable sanitation services, protection of environment and conservation of precious resources.

Rajasthan state faces acute scarcity of water throughout the year. This policy has framed guidelines for treatment of waste water and its optimum reuse so that every drop of water is utilized in an efficient safe manner besides laying the guidelines for resource development and management, waste water collection and treatment, onsite and offsite sanitation and various reuse options. It also outlines roles of municipal local bodies and enumerates various sources of funding for sewage projects, pricing, financing and investment. As the technology in the field of waste water management is evolving continuously, the policy also includes guidelines for management of sewage projects through Public Private Partnership including hybrid annuity based PPP model. This policy also enumerates the standards, regulations and quality assurance by legislation and institutional arrangements and emphasises on public awareness, human resource development and research and development by establishing “State Water and Waste Water Training Center” at state level.

The policy earmarks priority issues of Government of Rajasthan along with the service level benchmarks and implementation plans for critical indicators like coverage of toilets and sewage network services, collection efficiency, extent of reuse and recycling of sewage and efficiency of redressal of customer complaints. It also provides information and suggestions on sewage system, treatment, sludge disposal, septage collection and treatment, operation and maintenance, choices of reuse of treated waste water for industrial purpose.

This policy will guide the local bodies, administration, NGOs and public for better sanitation services leading to the achievement of Vision of “**Swachh Bharat Abhiyan**”.

ACKNOWLEDGEMENT

The Department of Local Self Government (LSG), Rajasthan has prepared the 'State sewerage and Waste Water Policy-2016' to accomplish the objectives of 'The National Urban Sanitation Policy 2008' and 'Atal Mission for Rejuvenation and Urban Transformation Scheme'. The policy has been prepared in consultation with and contribution from various government departments, semi government departments, NGOs, experts from Engineering Colleges, etc.

LSG extends its heartfelt thanks to all the departments including RIICO, RUIDP, Ministry of Urban Development, Government of India, State Finance, Agriculture and Industries Departments, experts from Engineering Colleges for giving valuable inputs and suggestions in the preparation of the very first policy of its kind in the state of Rajasthan.

Further, LSG places on record special thanks to Sh. B.L. Jatawat, Executive Director, Sh. Karni Singh Rathore, IAS (Retd.), Sh. S.K. Goyal, Project Director (Urban Infra), Sh. K.K. Sharma, Chief Engineer (DLB), Dr. Hemant Kumar Sharma, Superintending Engineer, Prof. S.K. Singh and Prof. S. K. Ojha of Deptt of Civil Engineering, M.B.M. Engg College for their special drive and efforts rendered to ensure the preparation of this policy in this shape.

The department also acknowledges direct or indirect contribution made by one and all associated with the preparation of this landmark policy. Last but not the least, department acknowledges the efforts and contribution of Sh. N L Sahani, Executive Engineer, Sh. Dinesh Goel, Executive Engineer, Sh. Mahesh Gupta, Executive Engineer, Smt. Meena Ghiya, Junior Engineer, Shri Sunil Parik and Shri Manender Mahour for their valuable technical input based on their vast experience in bringing out the policy in this form.

Department of Local Self Government

CONTENTS

1.	BACKGROUND.....	1
1.1	Goal and Vision of the Policy:.....	2
2.	NEED FOR STATE SEWERAGE AND WASTE WATER POLICY.....	3
3.	OBJECTIVES	4
4.	LEGISLATION AND GUIDANCE DOCUMENTS.....	5
5.	THE POLICY.....	6
5.1.	On Resource Development	6
5.2.	On Resource Management	7
5.3.	On Wastewater Collection and Treatment	7
5.4.	On Reuse of Treated Effluent and Sludge	11
5.5.	On Pricing, Financing and Investment	13
5.6.	Source of Funds for Sewerage Project.....	14
5.7.	(A). Sewerage Project Through Public Private Partnership (PPP)	16
5.7	(B). Sewerage Project through Hybrid Annuity based PPP Model	17
5.8.	On Standards, Regulations and Quality Assurance	18
5.9.	On Legislation and Institutional Arrangements	19
5.10.	On Public Awareness.....	19
5.11.	On the Human Resources Development & On Research and Development:	20
5.12.	On Selected Priority Issues.....	21
5.13.	On Service Level Benchmarks & Implementation Plan	21
ANNEXURE 1.....		23
Vital Information& Suggestions on Sewerage System.....		23
ANNEXURE-2		35
Status of Sewerage (with in Municipal area) in Rajasthan		35

ABBREVIATIONS

BIS	Bureau of Indian Standards
BOD	Biochemical Oxygen Demand
BOO	Build Own Operate
BOT	Build Operate and Transfer
CER	Certified Emission Reduction
CGWA	Central Ground Water Authority
COD	Chemical Oxygen Demand
CPHEEO	Central Public Health and Environmental Engineering Organization
CPCB	Central Pollution Control Board
CSP	City Sanitation Plan
DBFOT	Design-Build-Finance-Operate-Transfer
DLB	Directorate of Local Bodies
DPR	Detailed Project Report
EOI	Expression of Interest
GIS	Geographical Information System
GPR	Ground Penetrating Radar
GoI	Government of India
GoR	Government of Rajasthan
HUDCO	Housing & Urban Development Corporation Limited
IIT	Indian Institute of Technology
lpcd	Liters per capita per day
LSG	Local Self Government Department, GoR
mm	Millimeter
MOU	Ministry of Urban
MOUD	Ministry of Urban Development, GoI
NCR	National Capital Region
NGO	Non Government Organization
NMSA	National Mission for Sustainable Agriculture
NIT	National Institute of Technology
O&M	Operation & Maintenance
PPP	Public Private Partnership
RBMC	Revenue Based Management Contract
REC	Renewable Energy Certificate
RSPCB	Rajasthan State Pollution Control Board
RTPP	Rajasthan Transparency in Public Procurement

RUIFDCO	Rajasthan Urban Infrastructure Finance and Development Corporation
SMS	Sending Message Services
SLNA	State Level Nodal Agency
SS	Suspended Solids
SPS	Sewage Pumping Station
SPV	Special Purpose Vehicle
STP	Sewage Treatment Plant
UDH	Urban Development & Housing Department
UIT	Urban Improvement Trust
VAT	Value Added Tax
WHO	World Health Organization

1. BACKGROUND

Sanitation is defined as safe management of human excreta, including its safe confinement treatment, disposal and associated hygiene-related practices. While this policy pertains to management of human excreta and associated public health and environmental impacts, it recognizes that the integral solutions need to take account of other elements of environmental sanitation, i.e. solid waste management, generation of industrial and other specialized/ hazardous waste, drainage, and also management of drinking water supply. The State of Rajasthan has issued guidelines for State urban sanitation policy with a view that all cities & towns of Rajasthan become totally sanitized, healthy and liveable so that all urban dwellers have access to and use safe and hygienic sanitation facilities. In order to achieve this goal, 100% human excreta and liquid wastes from all sanitation facilities, including toilets must be disposed off safely. Disposal of waste water generated from cities or from industrial areas is a big challenge not only for Rajasthan state but also at national level. Treated wastewater generated from existing wastewater treatment plants can be considered as an important component of water resources of Rajasthan. Due to the terrain and the concentration of the urban population, the majority of treated wastewater is discharged into various rivers nalahs or on open land and only a part of it is used for irrigation.

The observations of Hon'ble Chief Minister during the site visit at Ochiai Reclamation Centre, Tokyo shall be put into practice to achieve the goal of health and hygiene for citizens:

1. A Separate System: Sewerage system to carry domestic sewage while drainage system for storm water.
2. Water reclamation centers to reclaim water after treatment of domestic sewage.
3. Where water Reclamation centers is situated in the midst of residential area, these can be built under ground to avoid the problem of odour and parks can be maintained on the roof of treatment facility.
4. One of the schemes of treatment may be Grit chamber, Primary sedimentation tank, Reaction Tank, Secondary sedimentation tank, Chlorination Tank followed by sand filtration.
5. Reverse osmosis filtration may be used for tertiary treatment.
6. Sludge may be dewatered, thickened and incinerated. Ashes remains may be used for landfill.
7. 100% households should be covered by sewerage.
8. Sewerage and water supply activity should be coordinated.
9. Water tariff should be such as to discourage the people from wasteful use of water.

Policy is framed to resolve the following key issues& considering Hon'ble Chief Minister's site visit observations:

1. Provision of adequate wastewater collection and treatment facilities for all the cities and towns in Rajasthan.
2. Protection of the environment and public health in the areas affected by the proposed systems, especially, surface water and ground water.
3. Consideration of treated effluents as a source for reuse (irrigation/ industrial).
4. Improvement of the socioeconomic conditions in the areas to be served by the proposed systems.

1.1 Goal and Vision of the Policy:

The National Urban Sanitation Policy 2008, envisions, **“All Indian cities and towns become totally sanitized, healthy and livable and ensure and sustain good public health and environmental outcomes for all their citizens, with a special focus on hygienic and affordable sanitation facilities for the urban poor and women”**. The State Sewerage and Waste Water Policy is to ensure improved health status of urban population, specially the poor and under privileged, through the provision of sustainable sanitation services and protection of environment. The policy specifically endorses the following core principles:

- (i) To protect public health.
- (ii) To protect the environment and the State's water resources.
- (iii) To promote proper functioning of network based sewerage systems and ensure connections of household so as to prevent dry weather flow in drains & streets.
- (iv) Treatment of sewage and sludge is required prior to discharge into the environment.
- (v) Promote recycling & re-use of treated sewage for non-potable applications.
- (vi) To make Sewerage project economical and environmentally sustainable.
- (vii) Inclusive and participatory decision making.
- (viii) Transparent decision making processes to achieve socio-environmental as well as economic & financial objectives.
- (ix) Capacity building for enhanced institutional ability to govern the sector effectively.
- (x) Ensuring, protecting and optimizing investments.
- (xi) Public Private Partnership (PPP) in the most appropriate manner.

- (xii) Public outreach for environmental and health related outcomes.
- (xiii) Establishment of an efficient, effective, affordable and accountable system for managing urban sewerage and septage management.
- (xiv) Effective monitoring and evaluation of the initiatives intended to improve sewerage and septage management services.
- (xv) Coverage of all citizens in the urban areas for service provisioning.
- (xvi) Adequate sewerage and Septage facility provided to all urban customers
- (xvii) Equity across geographical as well as demographic fabric of the customer base.
- (xviii) Ensuring the system's financial sustainability in a progressive manner through improved efficiency, tariff rationalization and corporatized operations there by decreasing dependence on unsustainable resources.
- (xix) Improved service levels in a well defined and phased manner by ensuring interventions in the spheres of infrastructure, institution, autonomy and management, monitoring mechanism and regulatory framework.

2. NEED FOR STATE SEWERAGE AND WASTE WATER POLICY

Safe water supply and hygienic sanitation facilities are the two basic essential amenities the community needs on top priority for healthy living. While provision of safe drinking water takes precedence in the order of provision of basic amenities to community, the importance of hygienic sanitation facilities through low cost on – site sanitation, conventional sewerage and sewerage treatment can no longer be allowed to lag behind, as about 80% of water used by the community comes out of houses in the form of waste water which unless properly collected, conveyed, treated and safely disposed off may eventually pollute our precious water resources and cause environmental degradation. The provision of safe drinking water alone is not enough to break the chain of disease causing pathogens. Safe disposal of the waste is even more important. This can be at an individual property level or at group housing level like apartment, complexes or at community level.

In most cities and towns of Rajasthan, only a minority of households are connected to a sewage system and only a small fraction of the sewerage from these households is treated effectively at primary or secondary sewage treatment plants. The rest of the urban population has either:

- (i) Some form of on-site sanitation like septic tank/soakage well for disposal of human excreta or,
- (ii) Kitchen & bathroom waste disposing into road drains or directly on roads, thereby creating unhygienic conditions or,
- (iii) No sanitation facilities i.e. excrete in the open spaces around their homes.

About one fifth of urban India is dependent on on-site sanitation, or has no access to sanitation services. Therefore, it is imperative that urban authorities formulate effective policies and action plans for the planning and management of onsite sanitation services.

Two forms of Urban Sanitation Policy are relevant – the macro and the micro. The impact of the Urban Sanitation Service Infrastructure is well beyond the boundaries of individual municipalities. It has an impact on economy of a region, environment & social development. The need to manage the macro economy of the area and to protect the environment and manage the socio economic development, the State Government should set a macro policy, broad objectives and principles of which should be:

- (i) A frame work within which the municipalities are guided to work, and
- (ii) A benchmark against which municipalities are aware that they must measure up for approval of their projects for financing.

In accordance with the Constitution of India and its 12th amendment, prime responsibility for installing and operating a sanitation service lies with the individual Municipal Bodies. Each Municipal Government should determine its own policy for a sanitation service at the micro level within the frame work of the guidelines established in the macro policy formulated by the State Government.

The operative sewerage disposal systems constructed in various cities and towns of Rajasthan are generally in a fair condition and in a continuous state of operation, however there are problems due to the insufficient institutional back up, insufficient funds for operation and maintenance, lack of sense of public ownership resulting in lack of involvement of beneficiaries in the upkeep of the system, and lack of well qualified and trained personnel. It may also be better to go moderate if needed, to ensure success of projects delivering full benefits.

3. OBJECTIVES

To overcome the shortage of water, for different purposes, use of potable water should mostly be for drinking purposes and re-use of water up to a certain quality after proper treatment of water for non-drinking purpose and last but not the least scientific disposal of the remaining waste is the object behind formulating this policy.

- (i) To ensure 100 percent sanitized cities.
- (ii) To improve water supply service focusing on customer satisfaction, coverage, frequency and reliability.
- (iii) Supply of potable water incurs large amount of money but is used in non-drinking purposes.

- (iv) Pure water is available in scarce quantity whether from ponds, tube wells etc and the shortage becomes acute during summer. Therefore, reuse of treated sewerage can provide incremental supply for non – potable applications and thus reduce need for augmenting supplies. In other words, water reuse promotes environmental sustainability by reducing burden on already stressed basin and aquifers and preventing their depletion.
- (v) Sewerage is disposed off unscientifically which heads to health hazards and pollutes ground water as well. Therefore water reuse results in lower volume of sewage discharge leading to reduction in environmental costs and health hazards.
- (vi) Water reuse ensures resource conservation& preservation of sensitive eco-system and reducing pollutant loading.

All cities and towns of Rajasthan become totally sanitized, healthy and liveable and to ensure, sustain good public health and environmental outcomes for all their citizens with a special focus on hygienic and affordable sewerage facilities for the urban poor and women. All urban dwellers will have access to and use safe and hygienic sewerage facilities and arrangements so that no one defecates in the open.

4. LEGISLATION AND GUIDANCE DOCUMENTS

The Government Sewerage and Waste Water Policy should be read in accordance with the most current versions of the following, legislations and documents:

- (i) Latest Manual on Sewerage and Sewage Treatment Systems, 2013.
- (ii) Environmental (Protection) Act, 1986.
- (iii) The Environment (Protection) rules, 1986.
- (iv) The water (Prevention and control of pollution) Act, 1974.
- (v) The water (Prevention and control of pollution) cess Act, 1974.
- (vi) The water (Prevention and control of pollution) Amended rules, 2011.
- (vii) The water (Prevention and control of pollution)Cess rules, 1978.
- (viii) The water (Prevention and control of pollution)Rules, 1975.
- (ix) National Urban Sanitation Policy 2008.
- (x) National Water Policy 2012.
- (xi) Rajasthan Municipalities Act, 2009
- (xii) Quality standards suggested by Central Pollution Control Board and Rajasthan State Pollution Control Board.
- (xiii) Standards set by Bureau of Indian Standards (BIS).

- (xiv) Effluent Quality guidelines for health protection measures in aquaculture use of waste water.
- (xv) Quality guidelines for health protection in using human wastes for aquaculture.
- (xvi) Service Level Benchmarks Fixed By Ministry of Urban Development.

5. THE POLICY

5.1. On Resource Development

Wastewater is a perennial water source and shall form an integral part of renewable water resources and the State water budget. Each local body will consider it as a resource and make the plan for reuse as per the site conditions with the help of experts.

Collection and treatment of wastewater is a necessity to circumvent hazards to the public health and the environment. It becomes imperative when contamination of freshwater resources with wastewater is imminent. All local bodies will make city sanitation plan (CSP) for a period of 30 years considering future development and city development in line with city Master Plan to avoid any conflicts in developing the city in the future. The cities which do not have CSP may prepare a short term plan of 5 years from the base year for immediate implementation as per guidelines provided in Manual on Sewage Treatment System, published in 2013 by the Ministry of Urban Development, Government of India to address the issues of utmost importance and then ULBs may prepare CSP for 30years. The CSP should also be in line with the guidelines of Swachh Bharat Mission. Collection and treatment of wastewater is mandatory to protect public health against water borne diseases, and where epidemics may become a threat otherwise.

Existing levels of wastewater services shall be maintained and upgraded where necessary to enhance public health and the environment and separate plan is to be prepared by local body as per their requirement.

Treatment of wastewater shall be targeted towards producing an effluent fit for reuse in irrigation in accordance with WHO guidelines as a minimum requirement. Reuse of treated wastewater for other purposes shall be subject to appropriate specifications.

Coordination shall be maintained with the official bodies in charge of urban development to account for the treatment and disposal of their liquid wastes. Central treatment plants shall be built to serve semi-urban areas, and collection of wastewater can be made initially through trucking until collection systems are justified.

Specifications and minimum standards as stipulated by CPHEEO shall be applicable for the use of septic tanks in urban areas. Particular attention shall be paid to the protection of underlying aquifers.

5.2. On Resource Management

It is highly imperative that Urban Local Body shall develop and manage wastewater systems as well as the treatment and reuse of the effluent.

A basic management approach shall be adopted where possible. The use of treated wastewater in irrigation and industrial application shall be given the highest priority and shall be pursued with care.

Effluent quality standards shall be defined based on the best attainable treatment technologies, and calibrated to support or improve ambient receiving conditions, and to meet public health standards for end users. Key factors will include the location of the discharge, its proximity to wells, the type of receiving water, and the nature and extent of end users. Wastewater intended for irrigated agriculture will be regulated based on the soil characteristics of the irrigated land, the type of crops grown, the irrigation schedule and methods, and whether other waters are mixed with the treated wastewater.

Industries shall be encouraged to recycle part of its wastewater and to treat the remainder to meet standards set for ultimate wastewater reuse or to meet the regulations set for its disposal through the collection systems and/or into the receiving environment.

Wastewater from industries with significant pollution should be treated separately to standards allowing its reuse for purposes other than irrigation or to allow its safe disposal.

Consideration shall be given to isolating treated wastewater from surface and ground waters used for drinking purposes, and to the blending of treated effluent with relatively fresher water for suitable reuse.

Urban Local Bodies can engage Experts from Government Engineering Colleges of Rajasthan/ IITs/ NITs.

5.3. On Wastewater Collection and Treatment**(A) City Plan**

A proper and updated city plan is an essential pre-requisite for proper planning and design of all utilities and more so for the Sewerage Systems. The State shall endeavor to have proper digital city maps showing the levels prepared through modern available technology. The digital city maps should clearly show the city features over ground and underground including all utilities. Tools like Geographical Information System (GIS), Ground Penetrating Radar (GPR), Total station etc. may be used for preparation of city map. The city maps should be updated every 10 years. An effective and comprehensive GIS based data base and Management Information System correctly mapping the assets, user base and status of operations shall be established.

(B) Design Period

Every city has to prepare a City Sanitation Plan (CSP) for next 30 years along with 5 year short term plan as per the guidelines of CPHEEO manual on sewerage published in 2013 .The City Sanitation Plan (CSP) for the city should take into account the likely changes in the city in next 30 years and plan for them and will be according to city Master plan. The Detailed Project Report (DPR) for sewerage should be in accordance to City Sanitation Plan . The design of the sewers and planning of space should be for the 30 year projection requirements. However, the units which can be developed in modules (e.g. Sewage Treatment Facility, sewerage Pumping machinery, on-site treatment facilities, etc.) can be designed for appropriate shorter period as stipulated in CPHEEO manual. Earmarking of land for Sewage Pumping Station (SPS) and Sewage Treatment Plant (STP) should be done for all Urban Local Bodies (ULBs) and appropriate land allotment shall be done by Development Authority/Urban Improvement Trust/State Govt. on priority.

(C) Priority of Sanctioning Sewerage Projects:

Priority for the work of laying sewerage network & connectivity (mandatory) and construction of STPs would be taken in a phased manner to provide full 100% coverage of town.

The priority for sanction of sewerage project will be:

- (i) Cities with water supply service level equal to or more than 135 lpcd. Full coverage is to be provided in these cities.
- (ii) District Head Quarter not covered by Sewerage System.
- (iii) NCR Town/Heritage/Tourism/Water body town not connected by Sewerage System.
- (iv) Other cities not connected with Sewerage System having population more than 50,000.
- (v) Not fully connected on the basis of coverage.

(D) On-Site Sanitation

This is being adopted by almost 80% of urban India consisting of some form of toilet that passes waste to leach pits, pits with mechanical removal options and septic tanks. The second on site disposal option being exercised is defecation in open space. This causes passing of the chemical and pathogenic infections to the ground waters, to the drains and water bodies, outside resulting in severe risk to human health. Therefore followings points has to be considered in this matter:

1. Sanitary on site options can be adopted after suitable investigation and care. There is a very strong case for adopting a suitable on-site option for the areas that cannot meet the requirements of 5.3.

2. The options of the onsite system will depend on the substrata, space availability and social acceptability. These also are dependent upon the water absorption capacity of the soil. Rocky areas and high water table areas are not suitable for this at all as they do not provide any protection against the pathogens. It is generally suggested that the risk factor for pollution is related to the traverse time between polluting point and the water table. A traverse time of 50 days is considered low risk, 25-50 days is to be considered as medium risk area and less than 25 days is considered as high risk areas with the point of view of pollution of the ground water. Finer soils with high clay content have low permeability and thus greater risk reduction in lesser depths whereas coarse sands and rocky fissures provide high permeability and lower reduction. Generally a minimum distance of 2 to 3 m is required for risk reduction.
3. The on-site option for solids removal combined with carriage of the sewage through conduits to the general sewerage system can also be considered as a good option in critical areas. Such options could be a combination of small bore/shallow sewers for sewage collected after settling of solids in a tank (e.g. septic tank effluent) and in site disposal systems.
4. All in site options must be adopted after full involvement of the local users who know all the feasible options and must have a say in the choice. Assistance of NGOs and dedicated organizations for this option should be encouraged.
5. Criteria for design of tanks: These guidelines are for reference and general guidance. The modifications can be done as per site conditions after the approvals from the experts.

No.	Distances between the bottom of pit and the maximum ground water level (mm)	Effective size of the formations soil in mm	Minimum horizontal distance of separations (mm)	Modification needed
1	≥ 2000	≤ 0.2 (fine sand, clay and silt)	3000	None
2	≥ 200	> 0.2 mm (coarse sand)	3000	Provide, 500 mm thick sand (0.2 mm effective size all around and seal the bottom)
3	< 2000 mm	≤ 0.2 mm (fine sand, clay and silt)	10000	None
4	< 2000 mm	> 0.2 mm (coarse sand)		Provide, 500 mm thick sand (0.2 mm effective size all around and seal the bottom)

6. On Site technologies represent viable and affordable options if collection, transport, treatment and safe end use or disposal is managed properly.

7. Bio digester, Pydroid technology based on site solution accompanied by root zone treatment can be suitably used for onsite sanitation. Reed Bed filters, horizontal or vertical, can be deployed before final disposal / Re-use.
8. The ULB through its suction machines shall facilitate the clearance of sludge on payment basis. Municipality can also authorize any private person/Agency for clearance of sludge through mechanical means.

(E) Off – Site Sanitation

The ideal mode for sanitation is an off-site system which collects all the waste from within the city and transfers it to a treatment facility outside the city which treats it to acceptable levels of effluent and sludge which is then disposed /reused. The essential pre-requisite to a sustained functioning of the offsite facilities are:

- i. Adequate sewerage flow (approximately 100lpcd minimum) which is possible only in town/areas with a minimum supply of 135lpcd and 100% connectivity.
- ii. Availability of Land for Sewage Treatment Plant and Pumping Stations will be ensured while preparing the master plan of sewerage for town. Town planning department shall mandatorily earmark land for Sewerage Treatment Plant and other facilities. The Department, Authorities/UITs/State Govt. shall allot a land to ULBs for sewerage projects.
- iii. Where possible, gravity flow shall command the collection and conveyance lines.
- iv. Treatment plants shall be located away from any potential population growth. Location selection shall be coordinated and approved with the concerned governmental agencies. Due consideration shall be given to interact with landowners and adjacent communities.
- v. It is mandatory to construct decentralized Sewage Treatment Plants (STPs) for the treatment of waste water in high rise buildings, so that sewerage system in that area may function properly and the treated waste water may be utilized in the nearby area. It will also reduce the investment requirement of sewerage system.
- vi. The use of advanced wastewater treatment technologies shall be endorsed and encouraged. However, appropriate wastewater treatment technologies shall be selected with due consideration to operation and maintenance costs and energy savings, in addition to their efficiency in attaining and sustaining quality standards.
- vii. Innovative approaches to wastewater treatment, particularly for the small municipal systems have to be considered. Design criteria, performance specifications and guidelines for such systems shall be adopted and generalized.

- viii. Design and performance specifications of wastewater treatment plants shall be as per guidelines given in the manual on sewerage treatment systems published by CPHEEO. Sufficient room in tendering for the construction of new plants shall be provided for competition to take place in both technologies and costs.

5.4. On Reuse of Treated Effluent and Sludge

1. Treated wastewater effluent is considered a water resource and is added to the water stock for reuse.
2. Priority shall be given to agricultural reuse of treated effluent for unrestricted irrigation. Blending of treated wastewater with fresh water shall be made to improve quality where possible. Crops to be irrigated by the treated effluent or blend thereof with freshwater resources shall be selected to suit the irrigation water, soil type and chemistry, and the economics of the reuse operations.
3. Crop nutrient requirements shall be determined taking into consideration the prevailing effluent quality. Overuse of nutrients shall be avoided.
4. Accumulation of heavy metals and salinity shall be monitored, managed and mitigated. Leaching of soils shall be advocated by the irrigation authorities.
5. Farmers shall be encouraged to determine the rate of water application needed for different crops, taking into consideration the value of nutrients in the treated water and other parameters.
6. Farmers shall be encouraged to use modern and efficient irrigation technologies. Protection of on-farm workers and of crops against pollution with wastewater shall be ensured.
7. Treated effluent quality should be monitored and users alerted to any emergency causing deterioration of the quality so that they will not use such water unless corrective measures are taken.
8. Studies should be conducted and projects designed and implemented to store the excess treated wastewater in surface reservoirs but artificial recharge is not permitted . Due attention shall be given to the quality of treated and groundwater and the characteristics of the strata.
9. Plans and studies for power generation from sludge, if proven technically, economically and financially feasible, shall be made with due attention to environment impacts.
10. Sludge produced from the treatment process would be processed so it may be used as fertilizer and soil conditioner. Care shall be taken to conform to the regulations of public health and environment protection norms.

11. **Industry:** Industrial reuse of reclaimed wastewater represents major reuse next only to irrigation in both developed and developing countries. Reclaimed wastewater is ideal for many industrial purposes,. Where effluent is to be used in the industrial processes, it should be the responsibility of the industry to treat it to the quality standards required. Pilot scale feasibility studies carried out in Australia have concluded that it is possible to economically treat the domestic wastewater to achieve adequate quality for reuse as cooling water. Based on the conclusions of the feasibility study, a full-scale treatment plant employing cross-flow membrane microfiltration system may be installed. The membrane filtration system can remove all suspended solids, fecal coliforms, and giardia cysts. It could also significantly reduce human enteric viruses such as *reovirus* and *enterovirus*. The water reclamation plant at Eraring Power Station demonstrates the potential for reuse of wastewater in power generation and other industrial manufacturing facilities.

Industrial uses for reclaimed water include:

- (i) Evaporative cooling water:-
 - (a) Once-through cooling system.
 - (b) Re-circulating cooling system.
 - (c) Cooling water quality requirements.
- (ii) Boiler –Feed water- The use of reclaimed water differs little from use of conventional public supplies for boiler-feed water, as both require extensive additional treatment quality requirement for boiler feed make up water are dependent upon pressure at which boiler is operated.

(iii) Industrial process water-

Suitability of reclaimed water for use in industrial process depends upon particular use like-

- (a) Pulp and paper.
- (b) Chemical industry.
- (c) Textile industry.
- (d) Petroleum and coal.

12. Whenever possible, other end uses of treated effluents; such as recycling, cooling, power generation, etc. shall be considered.

13. **Re-use Options:** The following options for re-use of effluent have been identified: In general, public health concern is the major issue in any type of reuse of wastewater, be it for irrigation or non-irrigation utilization, especially long term impact of reuse practices. It is difficult to delineate acceptable health risks and is a matter that is still hotly debated. Potential reuse of wastewater depends on the hydraulic and biochemical characteristics of wastewater, which determine the methods and degree of treatment required. While agricultural irrigation reuses, in general, require lower quality levels of treatment, domestic reuse options (direct or indirect potable and non-potable) reuses need the highest treatment level. Level of treatment for other

reuse options lie between these two extremes. The reuse options may be (artificial recharge of aquifers is not permitted):

- i. Irrigation
 - (a) Agriculture and forestry
 - (b) Landscaping
- ii. Fish – farming
- iii. Industry
- iv. Non-potable Domestic Reuse.

The detailed project report should clearly define the best reuse option particular to town and strategy to obtain it. Action plan with clarity should be the part of Detailed Project Report (DPR), while preparing sewerage projects. Before deciding the reuse of treated waste water, authorities must full fill the water quality norms and its legal implications.

14. Governing local body can sell the treated waste water and digested sludge to generate the revenue.

5.5. On Pricing, Financing and Investment

1. In view of increasing marginal cost of wastewater collection and treatment, wastewater charges, connection fees, sewerage taxes and treatment fees shall be set to cover at least the operation and maintenance costs. It is also highly desirable that part of the capital cost of the services shall be recovered. The ultimate aim is for a full cost recovery.
2. Appropriate criteria in order to apply the "polluter pays" principle shall be established.
3. Different charges for different areas may be applied. This shall be assessed for each geographical area as a function of end users and effluent quality and will be subject to economic and social considerations.
4. Because of the limited financial resources available to Government of Rajasthan, setting investment priorities in wastewater will be compatible with government investment plans.
5. Criteria for prioritizing investments in the wastewater sector shall take into account the current and future needs of the state, needs to expand wastewater systems in urban areas and to provide wastewater systems to smaller towns and villages.
6. Priorities of wastewater projects shall not be disconnected from water supply projects and urbanization in general. Decisions will be made concerning them to attain optimum solutions to the need for services, availability of finance and availability of trained manpower.

7. Treated effluent shall be priced and sold to end users at a price covering at least the operation and maintenance costs of delivery.
8. It is the intention of the Government, through private sector participation, to transfer management of infrastructure and services from the public to the private sector, in order to improve performance and upgrade the level of service.
9. The role of the private sector will expand with management contracts, concessions and other forms of private sector participation in wastewater management.
10. The concepts of BOO/BOT shall be entertained, and the impact of such concepts on the consumers shall be continually addressed and negative impacts mitigated.
11. The private sector role in reuse of treated effluent shall be encouraged and expanded.
12. As per urban reforms (under various schemes by MOUD) 100% cost of O&M of sewerage system shall be recovered from consumer. The costs will depend on the system/technology adopted for collection of sewerage and treatment and the administration costs. It is important that the full cost of the service is assessed for each urban area instead of adopting a typical cost assessment. The full cost shall cover the following:
 - (i) Institutional aspect of the sanitation service e.g. the management information systems, accountancy and finance management, billing and collection, customer services, etc. and oversight activities.
 - (ii) Operating, maintaining (on a planned maintenance basis), repairing replacing and extending sanitation service physical infrastructure.
 - (iii) Keeping updated infrastructure and customer data on a GIS base.
 - (iv) Managers, staff, vehicles, equipment and consumables associated with the above.
 - (v) Consumable like chemicals etc.
 - (vi) Power charges.
 - (vii) Spare Parts.
 - (viii) Any other O&M contract amount

5.6. Source of Funds for Sewerage Project

- (A) In general, implementation of reuse facility requires substantial capital expenses. In addition to capital cost associated with reclaimed water facility, there are also additional operation, maintenance, and replacement and administrative costs. Hence responsible agencies may consider following sources of 'Funds for Construction of Sewerage Project':

- (i) 15 paisa Urban CESS presently for Street Light through power bills to include Sewerage projects.
 - (ii) Own Source of funds of ULB.
 - (iii) Funds Provided by GOI under centrally sponsored schemes.
 - (iv) Loan taken by State Government from multinational international organizations.
 - (v) Loan from NCR/HUDCO.
 - (vi) Grant from Central/State Government.
 - (vii) Funds deployed by PPP operators.
- (B) The urban local bodies are proposed to have following sources for funds for O&M:
- (i) User charges: -At present, there shall be no increase in sewerage taxes and these shall remain same as today i.e. 33% of Water bill. Sewer charges may be also be fixed in line with the Ministry's Advisory on tariff structure for urban water supply & sewerage services published in July 2013.
 - (ii) Sale of Certified Emission Reduction (CER).
 - (iii) Sewerage Connection fees.
 - (iv) Revenue from sale of treated waste water.
 - (v) Revenue from sale of fertilizer.
 - (vi) Revenue from sale of bio-gas.
 - (vii) Revenue from Sale of electricity generated.

The government shall include the provision of the recovery of full capital cost of laying of sewerage system and prorate cost of STP for new colonies in town policy. It shall be mandatory for the ULBs to adhere to minimum 20% reuse and recycling of treated waste water. The treated waste water may be sold at a rate as decided by adopting transparent procedure as per Rajasthan Transparency in Public Procurement (RTPP) Act for market rate or as decided by State Government. The base tariff for treated waste water shall be 50% of drinking water supply tariff in case of industrial/commercial reuse and Rs. 3.00 per thousand litres increasing at the rate of 10% per annum, in case of agriculture/horticulture/fishery/landscape reuse. Untreated Waste Water may be sold to buyer for appropriate treatment by installing Sewage Treatment Plant by him as per Central Pollution Control Board (CPCB) requirement so as to reuse treated waste water, at the rate 50% of treated waste water tariff mentioned as above. Urban Local Bodies can issue letter of

intent (LoI) accordingly. No untreated waste water without appropriate treatment shall be disposed/Reuse/utilized for any purpose.

5.7. (A). Sewerage Project Through Public Private Partnership (PPP)

1. Requirement of funds to meet the establishment of infrastructure for reuse of sewage after necessary treatment cannot solely be met by budgetary resource from Government and urban local bodies. To attract private investment, to leverage its efficiency, to provide quality treatment facility and services at an optimal cost, an enabling policy and institutional mechanism would be developed.
2. Viability Gap funding:-GOI provide 20% viability gap support for PPP projects to the extent of 20% of project cost. State would also provide additional viability gap funding up to 20% of the project cost.
3. PPP/Revenue Sharing operator may proposes to build a waste-water recycling and reuse plan along with associated sewerage network on Design-Build-Finance-Operate-Transfer (DBFOT) basis or any other methodology of PPP/ Revenue Sharing option. The PPP partnership can be sought through Swiss Challenge Method of Procurement as per approved guidelines of GoR. The concession period may be high up to 30 yrs. The Rajasthan Transparency in Public Procurement (RTPPP) Act should be followed.
4. *The Swiss challenge system involves an unsolicited proposal for a government project, which allows third parties to challenge the original proposal through open bidding, and then lets the original proponent counter-match the most advantageous / most competitive offer. Under the Swiss Challenge Method, the project proponent that had first submitted the proposal for the development of the project, based on which the project was conceived and developed, is given the first right of refusal to match the most advantageous/most competitive bid received in the competitive bid process for the said project.*
5. Revenue sources for PPP/ Revenue Sharing operator:-
 - (i) Sale of reclaimed water.
 - (ii) Sale of CER.
 - (iii) Sale of Electricity/Biogas/REC (Renewable Energy Certificate).
 - (iv) Sale of Fertilizer.
6. A provision of 20% of treated waste water may be made for re use by retail consumers with further bifurcation as follows:
 - (i) 10% to small farmers as per rate decided by GoR.

- (ii) 10% by auction for big entities for individual and landscaping purpose.
7. Criterion for Selection of PPP/ Revenue Sharing operators: One or combination of following criteria may be adopted for PPP operator selection through competitive bidding, The Rajasthan Transparency in Public Procurement (RTPP) Act should be followed:
- (i) Lowest bid in terms of user fee from consumers.
 - (ii) Royalty paid to ULB per KL of treated waste water.
 - (iii) Highest upfront fees.
 - (iv) Lowest present value of subsidy.
 - (v) Lowest capital cost and O&M cost for projects.
 - (vi) Highest equity premium.
 - (vii) Quantum of state's support solicited in present value.
8. Incentives and Concessions proposed to PPP/Revenue sharing operator for setting up of STP for Reuse/Recycling of treated waste water:
- (i) Land to PPP operator will be given on lease as per rules.
 - (ii) Reimbursement of 50% of amount of VAT paid on purchase of plant and machinery or equipment for a period up to 7 years, on investment of Rs. One Crore or more.
 - (iii) Exemption from payment of 50% of electricity duty for 7 years.
 - (iv) 50% exemption from payment of entry tax, on capital goods brought in to local areas before the date of commencement of commercial production, on investment of Rs. One Crore or more.
 - (v) Exemption from excise duty on pipes and treatment equipment for making waste water fit for agriculture and industrial use as per GoI. Notification no. 3/2004-CE dt. 08.01.2004 as amended from time to times, exemption to all items of machinery and their components/ parts and pipes required for setting up of water supply plants.
 - (vi) The sewerage projects financed by external organization will be exempted for excise and custom duty as per GoI notification excise 108/95 CE dt. 28.08.1995 as amended from time to time. Custom: 84/97 customs 11.11.97 as amended from time to time.

5.7 (B). Sewerage Project through Hybrid Annuity based PPP Model

The, existing as well as new projects of Sewage Treatment Plants can be taken on Hybrid Annuity Based PPP Model (HAM). The HAM is a mix of engineering, procurement and construction (EPC) and build-operate-transfer (BOT) formats, with the government and the

private companies sharing the total project cost in the ratio of 40:60 respectively. This model will reduce financial burden on the concessionaire during project implementation phase. The model will include the following :

1. Concession period as well as payment period shall be 15 years.
2. 40% of total payment shall be made after completion of the Sewage Treatment Plant. The remaining 60%, which shall include operation and maintenance costs and the assured profits, shall come in the form of fixed annuities.
3. The concessionaire shall be selected through competitive process based on Rajasthan Transparency in Public Procurement (RTPP) Act.
4. PPP operator shall be eligible for incentives and concessions as mentioned in 5.7. (A).8.

5.8. On Standards, Regulations and Quality Assurance

1. Particular attention shall be focused on adopting and enforcing effluent and sludge standards for municipal and industrial wastewater treatment plants and for discharges from industries, laboratories, hospitals, slaughterhouses and other businesses.
2. Extensive and comprehensive monitoring programs shall be developed. Influent to and effluent from the plants and throughout watercourses shall be measured and monitored against all appropriate parameters to ensure that public health objectives and treatment efficiency goals are attained.
3. All crops irrigated with treated or mixed waters shall be analyzed and monitored periodically.
4. Observation wells shall be installed near the treatment plants to monitor groundwater quality where necessary, and to mitigate adverse impacts where and when needed.
5. Data collected from the monitoring process shall be entered and stored, processed and analyzed through computer software, and results published periodically.
6. Roof and storm water connections to public sewers shall be prohibited. Collection of storm water shall be done separately and will be the subject of water harvesting.
7. Effluent and sludge standards for the disposal of hazardous liquid wastes shall be defined to ensure the safe disposal of such wastes.
8. RSPCB/ CPCB regulations for disposal norms shall be mandatory.
9. Industrial waste water is not allowed to be disposed off in the sewer line. ULB can issue notification for penalties to be imposed on the such industrial units.
10. Laboratories shall be maintained and properly equipped to provide services and reliable data needed to ensure enforcement of and adherence to standards and regulations.

5.9. On Legislation and Institutional Arrangements

1. Legislation and institutional arrangements for the development and management of wastewater shall be periodically reviewed. Gaps shall be filled, and updating of the institutional arrangements with parallel legislation shall be made periodically to cope with varying circumstances and for this government shall notify an agency giving full power to take necessary action in this matter.
2. The role of the Government shall be fine-tuned and its involvement reduced to be regulatory and supervisory. Involvement of the stakeholders in wastewater management and support shall be introduced and expanded.

5.10. On Public Awareness

- a. The public shall be educated through various means about the risks associated with the exposure to untreated wastewater and the value of treated effluents for the different end uses.
- b. Programs for public and farmer's awareness shall be designed and conducted to promote the reuse of treated wastewater, methods of irrigation and handling of product. Such programs shall concentrate on methods of protection of farmers health, animal and bird health and the environment.
- c. Public awareness campaigns shall also be waged to educate the public on the importance of domestic hygiene, wastewater collection, treatment and disposal.
- d. It is observed that the system is dependent on the appreciation of the beneficiaries to the advantages and importance of the system to them and thereby working together towards making it successful. The co-operation is vital for following areas:
 - i. Protecting the system from getting choked due to entry of extraneous material in the sewer system. A vigilant public will help prevent this.
 - ii. The sewerage system yield full benefits or disease protection when there is 100% connectivity.
 - iii. It is important that the beneficiaries appreciate the benefits and pay for their upkeep. The systems require proper upkeep and the cost associated with maintenance and upkeep should at least be recovered from the beneficiaries. The principle of the polluter pays will be adopted only by an enlightened and participating public.
- e. A conscious campaign has to precede the planning and implementation of the sewerage systems. ULB, Non Government Organizations and local neighbourhood committees could give the process a thrust.

- f. A public participation process will not only aid in identifying potential consumers but also serve as a public education program. Potential users will be mainly concerned with the quality of reclaimed water, reliability of its delivery and the constraints in using reclaimed water. Also, connection costs or additional sewerage treatment cost might affect their ability to use the product. Consultations with various stake holders will aid in structuring of tariff and discounts for adopting reuse technologies, awareness on dual piping system, water conservation and safety issues.
- g. In chapter XII of Rajasthan Municipality Act 2009, there are mandatory provisions of taking sewer connections and penalty provisions against defaulters under section 202, 203, 204, 208, 214, 222 and 259. Municipal authorities must use these provisions and ensure 100% sewer connections.
- h. Municipal Bodies should decide and pass resolution regarding sewer connection charges. The provision should be widely publicized.
- i. Series of 'Sewer connection camps' may be organized. The time and venue should be publicized widely to inform residents. The days, time and venue should suit the convenience of public.
- j. Ensure that all Government offices and schools are connected.

5.11. On the Human Resources Development & On Research and Development:

1. Capabilities of human resources in the management of wastewater shall be enhanced through training and continuous education. Work environment shall be improved and incentives provided.
2. Establishment of State Water & Waste water Training Center at state level. It will help in training of human resources in this sector.
3. Human resources performance will be continually appraised in order to upgrade capabilities, sustain excellence, provide job security and incentives to qualified individuals with excellent performance.
4. Applied research on relevant wastewater management topics shall be adopted and promoted. Topics such as the transfer of wastewater treatment technologies, low cost wastewater treatment technologies, reduction of energy consumption and others will receive adequate support.
5. Cooperation with specialized centers in the country and abroad shall be encouraged, and raising of funds for this purpose shall be supported.

6. Transfer of appropriate technology suited for local conditions will be a primary target for the development activities and for adaptive research.

5.12. On Selected Priority Issues

1. To the extent that design capacities of wastewater treatment plants permit, priority of collection and house connections shall be accorded to expansion of urban areas served by treatment facilities. Users willing to contribute to the cost of the services in addition to fees and charges set by laws and regulations shall also be given priority.
2. Where design capacities of treatment facilities and of conveyance systems are approached or exceeded, priority shall be given to the expansion of such capacities.
3. Priority shall be accorded to situations and locations where waste-water disposal practices threaten the environmental integrity of freshwater resources, and where performance of cesspools and percolation pits pollute underground water aquifers.

5.13. On Service Level Benchmarks & Implementation Plan

1. It is intended to achieve the following bench marks in the cities as per priority as above:

S.No.	Proposed Indicator	Benchmark
1	Coverage of toilets	100%
2	Coverage of sewage network services	100%
3	Collection efficiency of sewage network	100%
4	Adequacy of sewage treatment capacity	100%
5	Quality of sewage treatment	100%
6	Extent of reuse and recycling of sewage	20%
7	Efficiency of redressal of customer complaints	80%
8	Extent of cost recovery in sewage treatment	100%
9	Efficiency in collection of sewage charges	90%

2. **Action Plan:** It is envisaged to achieve service level benchmarks described above as per time frames mentioned below, subject to availability of funds :

City	Time Frame Starting Year 2016-17
District Head Quarter	5 years
National Capital Region , NCR Towns	
Heritage town	
Cities having coverage less 100%.	
Water Supply level more than 135 lpcd	
Cities with population above above 1 lac	
Cities with population above 0.5 lac less than 1 lac	10 years

City	Time Frame Starting Year 2016-17
Cities with population below 0.5 lac	15 years
Reuse	
100% Reuse of existing STP	3 years
New STP	120 days after commissioning
Property Connection	
(i) Where system is already commissioned 100% connection.	Within six months.
(ii) New Networks 100% connections	Within 90 days of commissioning

3. The sewerage projects shall be executed by Urban Local Body or any agency authorized by them. RUIFDCO (Rajasthan Urban Infrastructure Finance and Development Corporation)/ its successor company will act as SLNA (State Level Nodal Agency).
4. For the smooth implementation of State Sewerage and Waste water Policy and to resolve any issues arising in its implementation, a Committee shall be constituted at Department Level.

ANNEXURE 1

Vital Information & Suggestions on Sewerage System

1. **Urban sanitation scenario:** A report by MoUD-GoI was formulated based on Swachh Bharat Rankings. Under this survey, 476 class -1 cities in 31 States and Union Territories, each with a population of above one lakh, were surveyed during 2014-15 under the National Urban Sanitation Policy, for assessing total sanitation practices covering a set of parameters including the extent of open defecation, solid waste management, septage management, waste water treatment, drinking water quality, surface water quality of water bodies and mortality due to water borne diseases etc.

In case of Rajasthan, Jaipur was able to make it to the rank of 370, followed by Ajmer at 401 and Udaipur at 417. No city from the state was able to secure position in the top 300 rankings under the survey. The following table presents a summary of the findings of the survey.

Key indicators for urban sanitation status for the state of Rajasthan as compared to national level

	Indicators					Sanitation Ranking (National Urban Sanitation Policy) No. of cities			
	Piped Sewer system (%)	Sewage Treatment (%)	Household having Toilet Facility within Premises (%)	Community Toilets (%)	Open defecation (%)	Total	Red	Black	Blue
India	32.70	30.00	81.40	6.00	12.60	423	229	190	4
Rajasthan	30	18.00	70.00	2.00	28.00	19	16	3	0

2. The physical Infrastructure required to be planned can be broadly classified as:
- (i) **A Sewerage System:** Including the onsite disposals system, network of pipes that collect sewage from domestic, institutional, commercial and industrial premises, the collector and interceptor sewers and pumping stations that convey the sewage to treatment plant. Storm water and industrial waste water shall not be allowed in the Sewerage system. Heavy penalty is to be imposed on the industries discharging industrial waste water in the sewerage system. Industries should make separate arrangement for treatment of Industrial waste water.
 - (ii) **Treatment Plant:** Where the quality of the sewerage is improved for its safe disposal or reuse. The sludge generated by the sewage treatment process is also normally processed at the plant for safe disposal and reuse. Treatment plants must have

disinfection unit. The treated waste water shall not be allowed to discharge/ reuse without disinfection to eliminate the pathogens present in the treated waste water. In each STP (proposed and existing) about 100 m- 200 m distance shall be declared as exclusion zone and in this zone thick plantation is to be done and priority is to be given to indigenous plants.

- (iii) **Effluent Disposal Facilities:** For conveying the treated liquid effluents to the point at which they are either safely disposed of into the ground or to a body of water – a water course or lake or to a point where they are directly reused in agriculture, fish farming, forestry, industry or planned reuse site. The disposal in the water body shall be taken up only when other options are not feasible /appropriate.
 - (iv) **Sludge Disposal:** By means of which liquid, semi-solid or dried sludge are transported to the point where they are either safely disposed to sanitary landfill or recycled, principally for use in agriculture. It shall be ensured that there shall be no crude dumping of STP sludge as it may create unhygienic and un-aesthetic conditions. Adequate processing of sludge must be carried out before disposal.
3. The proposed systems should satisfy the following:
- (i) Satisfy its purpose based upon appropriate technology.
 - (ii) Will respond to environment and social concerns.
 - (iii) Will generate a satisfactory rate of return.
 - (iv) Be both sustainable and affordable.
4. The sewerage system is designed for a sufficient design period (generally 30 years) consisting of one or more outfall sewers, trunk sewers and laterals generally operating by gravity, but with force mains and pumping stations where required. The systems are to be designed on separate system to accept the domestic waste including sludge but excluding any rain water and industrial waste as acceptable. The house collection system should be designed to achieve this. Households sludge connectivity should be ensured for smooth functioning of the STP. Awareness program should be planned for households sewer connection.
5. Both the alternatives (i) centralized system and (ii) decentralized system should be evaluated before deciding type of system. Where funds are restricted or for smaller towns based on possible re-use of treated waste- water, decentralized approach may be adopted.
6. The system is beneficial when all the premises are connected to the system and there is no waste water flowing in the drains. The service lines to connect the house connections to the sewer system should be laid along with the laying of the sewers up to the boundary of the premise and plugged so that it can be extended by the premise owner within his premise.
7. The surface drains should not be connected to the sewer systems as they also carry rain water, solid wastes and silt which tend to choke the sewers.

8. The program of construction of the sewerage systems especially in the existing inhabited colonies should be made very carefully. Any systems that are laid but not commissioned are prone to be filled up by dirt and solid waste. This is likely to make the commissioning very difficult at a later date.
9. It is desirable to start from the downstream end of the out fall and commission it. The trunk mains should be taken up after this and commissioned as the work progresses. The laterals that get connected to the commissioned sections of outfall/trunk sewers only should be laid.
10. The construction program for the STP and sewer network should be planned and executed in such a fashion so that both of these get commissioned at the same time.
11. It is generally not possible to take up work for the whole city at once and the work may have to be prioritized. A method of prioritizing can be:
 - (i) Population of area.
 - (ii) Areas where lack of sewer system is creating unhygienic living conditions or unacceptable odor levels, e.g. areas with a high population density and no drainage system or found with low permeability adversely affecting septic tank soak ways.
 - (iii) Areas with high groundwater level requiring the use of cess-pools and where frequent emptying of the tanks is either impractical or extremely costly.
 - (iv) Area where the quality of the ground water is adversely affected by septic tank effluent and ground water is a source of drinking water or discharges in a polluted state to a water course.
 - (v) City Centre, Commercial Centre etc.
12. In general pumping stations should be avoided on the sewerage systems to the extent possible because of the additional costs involved in construction and operation. They have to be installed if the design so requires. A properly designed and constructed pumping system can give trouble free service. The pumping stations can be suitably automated for better operation.
13. During construction, full care needs to be taken for diverting traffic and for fencing and safety of the excavation sites. The provisions for properly supporting the trenches should be taken. Special care should be taken for ensuring proper backfill and immediate repair of the roads after the work is completed.
14. The most common form of installing sewer is open excavation of trenches or open cut. This method has limitations on account of depth that can be handled, time taken and the disruption of the services of the concerned street for the work period. Usually this method is not feasible beyond 5-6 m depths. Alternative techniques of trench less technologies involving tunneling and micro tunneling are used for laying sewers where open cut is not feasible on any of the above counts. This procedure though prevalent in developed countries, is not common in

India, but should be considered as an alternative where the situations warrant. The techniques of thrusting pipes in ground can also be used in specific cases.

15. Laying sewer and water pipelines & road restoration
 - (i) In case water supply line or sewerage is to be carried out in the same street, the work of water supply line or sewerage should be done first and the road work be done after they are completed to avoid damage to the road once constructed.
 - (ii) If both the work of sewerage and water supply pipelines is to be carried out in a street, it should be ensured that both the works are carried out at the same time to ensure that the road is not disturbed two times.
 - (iii) The issue of relative placement of the water line and sewer line in relation to possibilities of pollution should also be paid attention. For that horizontal and vertical separation should be followed with the provision in Manual.
 - (iv) Where the laying is being completed under a road, backfilling and compaction should be done as per specifications. If excavated area has a road pavement, it should be finished at top with a road pavement of the same standard and specifications as the existing pavement. It is desirable to use mechanical compaction devices for ensuring proper compaction and to avoid sinking of the repaired pavement.
16. Sewer network has not been utilized/remain under-utilized in the cities where sewerage facility is available. A large number of households are not connected to sewerage network resulting in prevalence of problems of sanitation, health and hygiene. Hence steps has to be taken at local level for utilization of network.
17. For more effective and quicker utilization of sewerage network created/under creation, greater participation of residents of the city is required. Following steps may be taken to connect every house hold with sewerage network:
 - (i) Information, Education and communication (IEC) activities to be carried out to interact with citizens to convince them to take sewer connection. IEC activities may be taken up using newspapers, cinema slides, Nukkad Natak, Radio, SMS, Facebook, Twitter, Audio-Video clips, Films on local cable network etc.
 - (ii) NGOs working in this field and volunteers may be engaged to motivate people to take sewer connections. Children and Schools may provide excellent motivation tool. Competition at school/community level may be held to provide enthusiasm to carry out this activity.
 - (iii) The plumbers of the city may be enlisted. Workshop of Plumbers must be carried out to train them to carry out sewer connections, without doing any damage to sewer network and connecting waste water of Bathroom, Kitchen and Toilet in proper fashion to avoid any problem of choking.

- (iv) A tentative estimate for joining the system of house to sewer line after categorization of houses in different categories such as A, B, C.... based on requirements should be prepared by Municipal Body and must be provided to residents so that there may not be overcharging incidences by the plumbers.
- (v) In order to have proper functioning of sewerage, residents should be educated so that solid waste must not find access to sewerage system. The kitchen and bathroom should be provided with mesh.

18. Septage Collection and Treatment

Septage generation rates vary widely from place to place depending on septic tank use practices, number of users, water used for flushing, efficient functioning of tank and contamination control. It can be considered that the volume of sludge evacuated from a septic tank corresponds more or less to the volume of the septic tank, plus some cleansing and rinsing water. Septage is highly concentrated and therefore needs more care in handling and management.

- (i) Guidelines for selecting septage management initiatives:

Effective technologies shall be selected based on local needs. It is suggested to pilot a few septage management service initiatives with appropriate tools of process monitoring to further refine and develop an effective model for septage management at state level. Effective management system shall be established to monitor the collection, transport, treatment and disposal of septage. The following table presents the guidelines for selecting septage management initiatives.

Guidelines for selecting treatment and disposal options and financing norms for septage

Town Category	Conditions	Recommended technologies	Capital cost	O&M cost	Facility ownership	Financing Norms
Un-sewered Class-III, IV and V towns and Rural communities	Remote land parcels available with suitable site and soil conditions	Land application of septage	Low	Low	Municipality or private	Fees to users
	Land available but not remote	Land application after stabilization	Low to medium	Low to medium	Municipality or private	Fees to users
	Inadequate land area available with suitable site and soil condition, WWTP available within 30km with adequate capacity	Disposal at WWTP	Low to medium	Low to medium	Municipality	Fees to users
Partially sewerer medium size (Class-II towns)	Land area available with suitable site and soil condition but close to settlements	Land applicable after stabilization	Low to medium	Low to medium	Municipality or private	Fees to users
	Inadequate land area, but available	Disposal at WWTP	medium	medium	Municipality or private	Fees to

Town Category	Conditions	Recommended technologies	Capital cost	O&M cost	Facility ownership	Financing Norms
	WWTP capacity					users
	Inadequate land area, no WWTP capacity available	Disposal at independent treatment facility or CSTF*	High	High	Municipality or private	Fees to users
Class-I and metro-cities	Available WWTP capacity		medium	medium	Municipality or private	Fees to users
	No WWTP capacity		High	High	Municipality or private	Fees to users
*Common septage treatment facility						
Source: Compiled by centre for science and environment						

19. Operation & Maintenance

- (a) Operation and maintenance should be carried out in accordance with the provisions of CPHEEO manual for O&M as amended time to time. It is important to plan for the proper operation and maintenance of the assets created for sewerage disposal. Operation and maintenance should be carried out in accordance with the provision of CPHEEO manual for O&M period of minimum 10 years. Dedicated fund should be provided/planned for proper operation and maintenance of sewerage system and STP.
- (b) The important inputs for proper upkeep of the systems are a proper institutional arrangement for overseeing the work, appropriate technical back up, adequate funds, and active cooperation of an enlightened beneficiary public. A monitoring committee/vigilance committee should be constituted to monitor the waste water and storm surface water. A toll free number for helpline proposes should be created for public grievances.
- (c) Most often, there will be lack of technical know-how and experience for operating the systems which are fairly sensitive and require professional attention. The O&M component of the contract can be for 10 years. The responsibilities should be clearly defined in the contract.
- (d) Procurement of suitable equipment for ensuring proper maintenance like jetting machines, vacuum tankers, high powersuction machines, sewer rods, bucket cleaning machines, etc.
- (e) Possibilities may be explored for Operation and maintenance on basis of cluster approach of urban bodies for using the facilities jointly and saving on investment.
- (f) Funds for O&M: The cost involved in running the plant, transportation of the raw sewage etc makes the system in loss. The present practice is that the sewage collected

at STP is released in natural drains or rivers which make them highly polluted affecting the human health downstream of the point of sewage in river. This makes it necessary to treat the water to extent it can be utilized for irrigation, Industrial or other purpose. Treatment to tertiary level also involved additional cost. Local body will plan to generate funds for O &M.

The tariff for domestic, industrial and irrigation water may be increased so that the reclaimed water becomes competitive or cheaper than the normal water. Local body may provide information on quarterly basis regarding quantum of treated wastewater available including long term availability especially in areas which have been declared notified/over-exploited by Central Ground Water Authority (CGWA) ,so that interested parties/Departments can make an application for reservation of treated waste water.

20. The Municipal Bodies should take into confidence all the stake holders and frame a suitable micro level policy for the sewerage disposal system within the guidelines stipulated in the State Policy and taking into account the local ground level realities. They should take advice from professionals for understanding the options. Such a Policy can include at municipal level:
- (i) Physical Targets for Sanitation Coverage with a view of assigning time schedule and setting priority for covering various parts of the city.
 - (ii) The standard of the service level that may be targeted and should be achieved by regular efforts.
 - (iii) Effluent disposal standards can be fixed earmarking sites for sewage treatment facilities. Identification of effluent disposal options and sites.
 - (iv) If more than one municipality can be gainfully combined for the system, identifying the options and working for such an agreement.
 - (v) Identifying and laying down the targeted recycle/reuse option of the effluent and sludge.
 - (vi) Recognition of the principle of "the polluter pays" i.e. recovery of the financial liabilities being undertaken for the system.
 - (vii) User to involve in participation for creation of fund for capital work.
21. Proposals for commercial or industrial development may be permitted, subject to:
- (i) The overall objectives of the policy not being compromised, and
 - (ii) The statutory authority being satisfied after considering the advice of consultative authorities that intended wastewater disposal arrangements are acceptable.

22. Design framework for service level improvement

Each ULB shall prepare Service Level Improvement Plans (SLIPs), to cover all households with sewerage (including Septage). These plans shall be prepared for next 30 years with short term, medium term and long term plans.

The detailed project Reports (DPR) for sewerage and Septage management shall be prepared as per best engineering practices, socio-economic consideration and guidelines widely acceptable. However, the units which can be developed in modules (e.g. Sewage Treatment Plants, Pumping Stations, On-sites Treatment Facilities, Septage Management etc.) may be designed for appropriate shorter period as stipulated in CPHEEO manual.

23. References For Design Of Sewerage System

The sewerage system and its appurtenances will be designed and implemented as per the guidelines laid out in the "Manual on Sewerage and Sewerage Treatment" latest edition published by the Central Public Health and Environmental Engineering Organization (CPHEEO), Ministry of Urban Development, Government of India following the latest developments in the industry and good engineering practices and National Sanitation Policy by GoI.

The details regarding the various Treatment Plant Process are available in the "Manual on Sewerage and Sewage Treatment (latest edition)" published by CPHEEO under direction of the Ministry of Urban Development, GoI and Guidelines of Principal Secretary, UDH&LSG, GoR.

PPP MODELS FOR CONSIDERATION:**(A) Re-Use for Irrigation/ Agriculture****Choice of Sewage Treatment Technology**

Following effluent standards may be adopted:

BOD	<	10 mg/l
COD	<	100 mg/l
TSS	<	10 mg/l
Total Nitrogen	<	20 mg/l
Total Phosphorus	<	5mg/l

Other parameters to be decided by the local authorities as per site condition with the consultation of experts.

(i) Choice of Irrigation System: Automatic Micro Irrigation (saves water more than 50%, increase in yield by more than 50% and saving in labor by 100%)

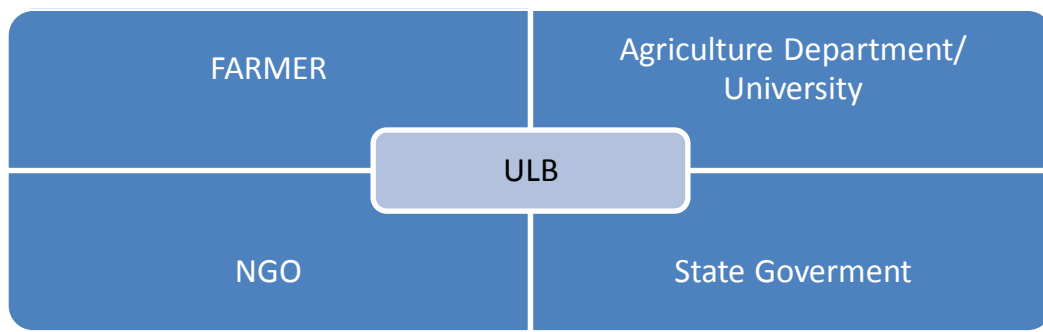
Micro-controller based Drip Irrigation system: Drip irrigation is a method that saves water and fertilizer by allowing water to drip slowly to the roots of plants. Automatic micro controller based drip irrigation system ensures that the irrigation take place only when there is requirement of water. The components of micro controller based drip irrigation system include Flow Meter, Control Valve,

Chemical Injection Unit, Drip lines with Emitters, Moisture and Temperature Sensors and Micro controller Unit etc.

(ii) Modality to carry out

The stake holders for a successful micro-irrigation by treated waste water are:

- (1) Urban Local Body: owner of treated waste water providing treated waste water to consumer and collecting revenue for it.
- (2) Farmers: User of treated waste water and paying.
- (3) Agriculture University/Dept.: Knowledge hub for choice of crop, application of fertilizer and other considerations and techniques to achieve high production for the benefit of farmer.
- (4) GoI/GoR: providing subsidy for drip irrigation systems in various schemes including National Mission for Sustainable Agriculture (NMSA)
- (5) NGO: For IEC and co-ordinating among all stakeholders.



(iii) For New Projects

Urban Local Body within the scope of STP shall construct an overhead treated waste water tank with required capacity, with minimum 22m staging to create a head sufficient enough for water transmission for micro-irrigation purpose. The treated waste water is to be pumped from underground treated waste water sump (one hour capacity)/as required, by installation of required capacity pump sets with inbuilt starters in main panel. The work up to outlet of treated waste water overhead reservoir shall be the part of STP work. **For Existing/ under construction STPs** the above work can be taken up through Turn- key Contractor/ **Revenue Based Management Contract (RBMC)** operator.

The proposed micro-irrigation project shall have two parts:-

- (1) ULB part: mains, sub-mains, flow meters, valves and other equipments to provide treated waste water up to the inlet of field of farmer.
- (2) Farmer's part: field in which he shall install microcontroller based drip irrigation system to get maximum yield in minimum water.

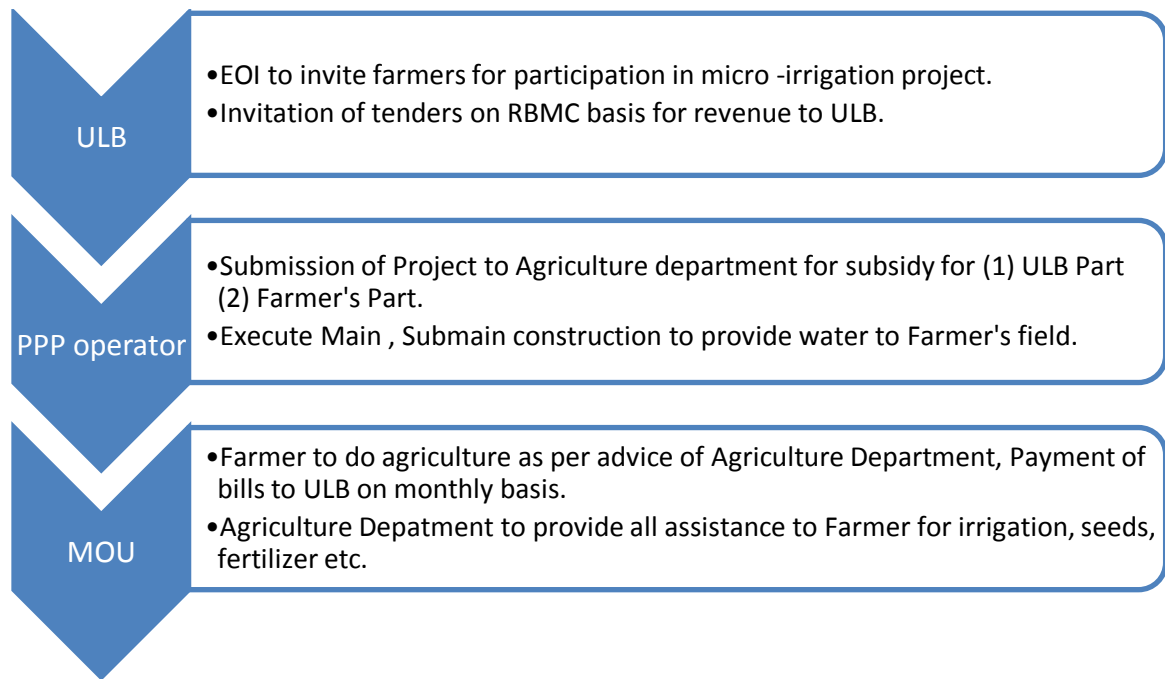
Urban local body will invite tenders on 'Revenue Based Management Contract' basis for development of microcontroller based drip irrigation system. The scope of RBMC operator includes:

- (1) Design and submission of complete project to Agriculture department, as per its guidelines, in the name of ULB to claim subsidy for ULB and assist farmers to claim subsidy, for installation of micro-irrigation project.
- (2) After approval of the project from GoR, RBMC operator shall deposit required amount to ULB to be deposited to GoR to claim the subsidy in the name of ULB for main, sub-main part of micro-irrigation project.
- (3) For subsidy to individual farmer RBMC operator shall assist farmer to complete formalities so that he may deposit the difference amount to GoR to claim subsidy for his field.
- (4) Bear all the capital cost as well as recurring cost as required for the successful functioning of micro-irrigation system on ULB part.
- (5) Installation of main-sub-main of required size to provide treated waste water at the inlet point of each field.
- (6) Install and maintain flow meter at each outlet i.e., inlet point of field.
- (7) Collect revenue as per bill bimonthly.

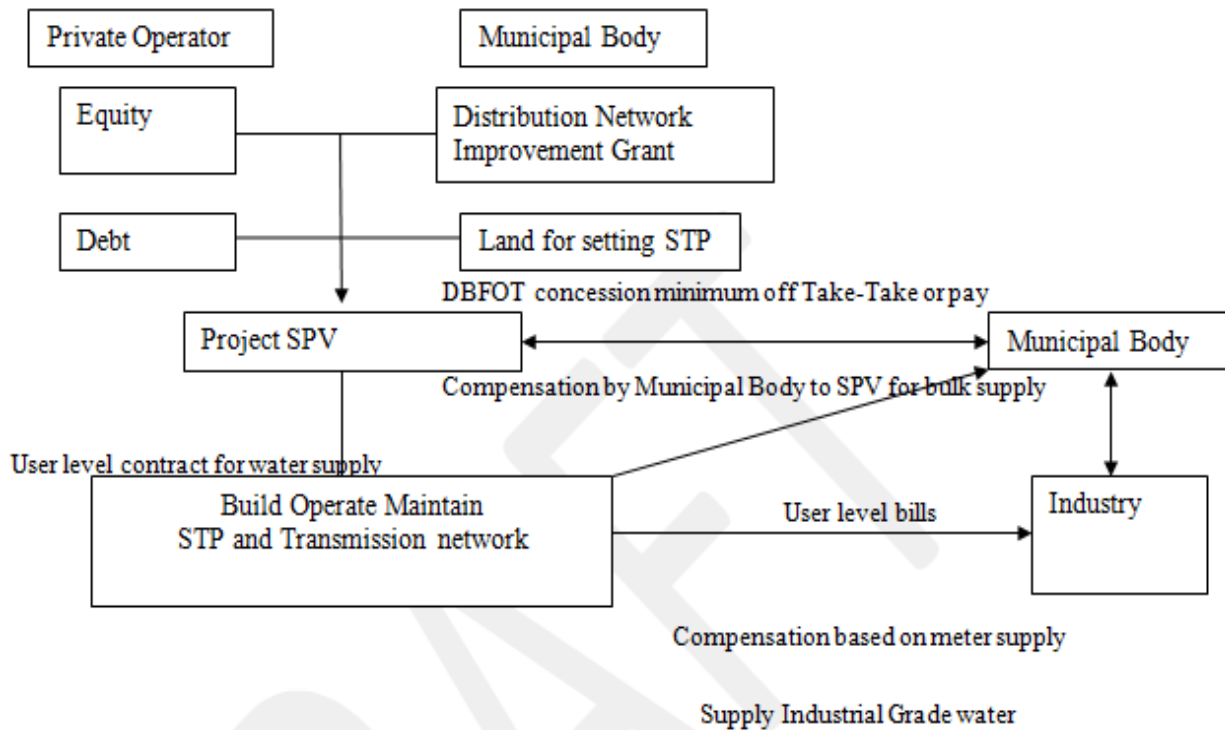
The subsidy claimed by ULB for mains and sub-mains including equipment's shall be transferred to RBMC operator as per progress of the work. The concessionaire shall be the bidder who shall provide maximum revenue to ULB in lieu of treated waste water per kl but not less than Rs. 3.00 per KL. The concession period may be 10 years to coincide with O&M period of STP.

Before inviting tenders on RBMC basis, ULB shall invite EOI from farmers for their participation in micro-irrigation. This will help in identifying farmers and their field area necessary for assessment by RBMC operator. An NGO may be appointed by ULB for encouraging farmers to participate in micro-irrigation project. The interested farmer will be assisted in preparation of individual project by RBMC operator to claim subsidy from GoR for installation of Microcontroller based drip irrigation system in their fields. Farmer has to sign a MOU with ULB, RBMC operator and Agriculture University to do agriculture as per the advice of Agriculture department / University so as to achieve maximum yield from his field.

Agriculture University/ Department shall provide training to farmers including continuous expertise and guidance for requirement of watering, fertilizer, soil condition, type of crop, seeds etc., so that farmer may get maximum benefit out of micro-irrigation project.



(B) Reuse for Industrial Purpose



All assets of the Project SPV to be transferred to Municipal Body at the end of the Concession Period.

DBFOT : Design Build Finance Operate Transfer

ANNEXURE-2

Status of Sewerage (with in Municipal area) in Rajasthan

Name of ULBs with population >1 lac being provided/provided partial sewerage coverage

S. No.	Name of ULBs	Population		Name of the Schemes/program ongoing/Sanctioned *Proposed	% Coverage				Population Benefitted (year 2011)				Population benefitted (year 2016)
		As per Census 2011	Present 2016		Existing	After completion of ongoing /sanctioned projects JnnURM/UIDSSMT/RUIDP Ph1,2,3/State Fund/Own Resource	In proposed project*	Total	Existing	After completion of ongoing /sanctioned projects JnnURM/UIDSSMT/RUIDP Ph1,2,3/State Fund/Own Resource	In proposed project*	Total	
1	MAKRANA	116295	127808	State Fund, RUIDPPh IV*	0%	70%	30%	100%	0	81407	34889	116295	127808
2	BANSWARA	101017	111018	State Fund &RUIDPPh IV*	0%	29%	71%	100%	0	29295	71722	101017	111018
3	HANUMANGAR H	150958	165903	UIDSSMTPh I, RUIDPPh III, AMRUT*	0%	85%	15%	100%	0	128314	22644	150958	165903
4	JAIPUR	3046163	3347733	JDA, JMC, RHB, RIICO, JnNURM, RUIDPPh I, Smart city*, AMRUT*	80%	2%	18%	100%	2436930	60923	548309	3046163	3347733
5	JODHPUR	1001694	1100862	JoDA, JoMC, RUIDPPh I, UIDSSMTPh I, AMRUT*	60%	20%	20%	100%	601016	200339	200339	1001694	1100862
6	KOTA	1033756	1136098	RUIDPPh I, UIDSSMTPh I, NRCB, RUIDPPh III, Smart city*, AMRUT*	10%	48%	42%	100%	103376	496203	434178	1033756	1136098
7	BIKANER	644406	708202	RUIDPPh I, UIDSSMTPh I, RUIDP III, AMRUT*	30%	20%	50%	100%	193322	128881	322203	644406	708202

S. No.	Name of ULBs	Population		Name of the Schemes/program ongoing/Sanctioned *Proposed	% Coverage				Population Benefitted (year 2011)				Population benefitted (year 2016)
		As per Census 2011	Present 2016		Existing	After completion of ongoing /sanctioned projects JnnURM/UIDSSMT/RUIDP Ph1,2,3/State Fund/Own Resource	In proposed project*	Total	Existing	After completion of ongoing /sanctioned projects JnnURM/UIDSSMT/RUIDP Ph1,2,3/State Fund/Own Resource	In proposed project*	Total	
8	AJMER	542321	596011	RUIDPPh I, JnNURM, Smart city*, AMRUT*, NRCB*	40%	30%	30%	100%	216928	162696	162696	542321	596011
9	UDAIPUR	451100	495759	UIT, NLCP, Smart city*, AMRUT*	10%	10%	18%	38%	45110	46463	81198	172771	189876
10	ALWAR	315379	346602	RUIDPPh II, AMRUT*, NCRPB*	15%	40%	40%	95%	47307	126152	126152	299610	329271
11	BHARATPUR	252342	277324	RUIDPPh II, AMRUT*, NCRPB*	0%	18%	24%	42%	0	45422	60562	105984	116476
12	DHOLPUR	125989	138462	RUIDPPh II, AMRUT*	0%	90%	10%	100%	0	113390	12599	125989	138462
13	S.MADHOPUR	121106	133095	RUIDPPh II & III, AMRUT*	29%	0%	71%	100%	35121	0	85985	121106	133095
14	CHURU	119856	131722	RUIDPPh II, AMRUT*	0%	51%	48%	99%	0	61127	57531	118657	130405
15	CHITTORGARH	116406	127930	RUIDPPh II, AMRUT*	0%	21%	41%	62%	0	24445	47726	72172	79317
16	NAGAU	102872	113056	RUIDPPh II, AMRUT*	0%	19%	72%	91%	0	19546	74068	93614	102881
17	BUNDI	103286	113511	RUIDPPh II, AMRUT*	0%	5%	78%	83%	0	5164	80563	85727	94214
18	BHILWARA	359483	395072	RUIDPPh III, AMRUT*	0%	80%	20%	100%	0	287586	71897	359483	395072

S. No.	Name of ULBs	Population		Name of the Schemes/program ongoing/Sanctioned *Proposed	% Coverage				Population Benefitted (year 2011)				Population benefitted (year 2016)
		As per Census 2011	Present 2016		Existing	After completion of ongoing /sanctioned projects JnnURM/UIDSSMT/RUIDP Ph1,2,3/State Fund/Own Resource	In proposed project*	Total	Existing	After completion of ongoing /sanctioned projects JnnURM/UIDSSMT/RUIDP Ph1,2,3/State Fund/Own Resource	In proposed project*	Total	
19	KISHANGARH	154886	170220	UIDSSMTPh I, AMRUT*	0%	14%	86%	100%	0	21684	133202	154886	170220
20	SHRIGANGANAGAR	224532	246761	State Fund, RUIDP III, AMRUT*	0%	80%	20%	100%	0	179626	44906	224532	246761
21	PALI	230075	252852	UIDSSMTPh I, RUIDP III, AMRUT*	0%	80%	20%	100%	0	184060	46015	230075	252852
22	TONK	165294	181658	RUIDP III, AMRUT*	0%	80%	20%	100%	0	132235	33059	165294	181658
23	JHUNJHUNU	118473	130202	UIDSSMTPh I, RUIDP III, AMRUT*	0%	80%	20%	100%	0	94778	23695	118473	130202
24	BHIWADI	104921	115308	AMRUT*, NCRPB*	23%	0%	77%	100%	24132	0	80789	104921	115308
25	BEAWAR	145504	159909	AMRUT*	0%	0%	55%	55%	0	0	80624	80624	88606
26	GANGAPURCITY	119090	130880	AMRUT*	0%	0%	64%	64%	0	0	75860	75860	83371
27	HINDONCITY	105452	115892	AMRUT*	0%	0%	67%	67%	0	0	70653	70653	77647
28	BARAN	117992	129673	AMRUT*	0%	0%	43%	43%	0	0	50737	50737	55759
29	SIKAR	237532	261048	AMRUT*	0%	0%	43%	43%	0	0	102923	102923	113112
30	SUJANGARH	101523	111574	AMRUT*	0%	0%	77%	77%	0	0	78173	78173	85912

ULBs with population 50,000 to 1 lac being provided/provided partial sewerage coverage

S. No.	Name of ULBs	Population		Name of the Schemes/program ongoing/Sanctioned *Proposed	% Coverage				Population Benefitted				Population benefitted (year 2016)
		As per Censuses 2011	Present		Existing	After completion of ongoing /sanctioned projects UIDSSMT/RUIDPPh 2/State Fund/Own Resource	In proposed project*	Total	Existing	After completion of ongoing /sanctioned projects UIDSSMT/RUIDPPh 2/State Fund/Own Resource	In proposed project* RUIDPPh IV/ NCRPB	Total	
1	LAXMANGARH	47706	52429	UIDSSMT (T), RUIDPPh IV*	0%	100%	0%	100%	0	47706	0	47706	52429
2	DIDWANA	53328	58607	State Fund, RUIDPPh IV*	0%	61%	39%	100%	0	32530	20798	53328	58607
3	JALORE	53325	58604	UIDSSMTPh I, RUIDPPh IV*	54%	0%	46%	100%	28796	0	24530	53325	58604
4	NIMBEHEDA	61949	68082	UIDSSMT (T), RUIDPPh IV*	0%	100%	0%	100%	0	61949	0	61949	68082
5	NOKHA	61969	68104	ULB, RUIDPPh IV*	85%	0%	15%	100%	52674	0	9295	61969	68104
6	NAWALGARH	67798	74510	UIDSSMT (T), RUIDPPh IV* (Heritage)	0%	76%	24%	100%	0	51526	16272	67798	74510
7	JAISALMER	71124	78165	RUIDPPh II, RUIDPPh IV*	0%	56%	44%	100%	0	39829	31295	71124	78165
8	JHALAWAR	66919	73544	RUIDPPh II, RUIDPPh IV*, AMRUT*	0%	40%	60%	100%	0	26768	40151	66919	73544
9	RAJSAMAND	67798	74510	RUIDPPh II, RUIDPPh IV*	0%	25%	75%	100%	0	16950	50849	67798	74510
10	SURATGARH	74496	81871	UIDSSMT (T), RUIDPPh IV*	0%	49%	51%	100%	0	36503	37993	74496	81871
11	BALOTRA	65471	71953	State Fund, RUIDPPh IV*	0%	60%	40%	100%	0	39283	26188	65471	71953
12	KARAULI	70536	77519	RUIDPPh II, RUIDPPh IV*	0%	57%	43%	100%	0	40206	30330	70536	77519

S. No	Name of ULBs	Population		Name of the Schemes/program ongoing/Sanctioned *Proposed	% Coverage				Population Benefitted				Population benefitted (year 2016)
		As per Censuses 2011	Present		Existing	After completion of ongoing /sanctioned projects UIDSSMT/RUIDPPh 2/State Fund/Own Resource	In proposed project*	Total	Existing	After completion of ongoing /sanctioned projects UIDSSMT/RUIDPPh 2/State Fund/Own Resource	In proposed project* RUIDPPh IV/ NCRPB	Total	
13	FATEHPUR	92595	101762	State Fund, RUIDPPh IV*	0%	58%	42%	100%	0	53705	38890	92595	101762
14	SARDARSHAHAR	95911	105406	UIDSSMTPh I, RUIDPPh IV*	0%	56%	44%	100%	0	53710	42201	95911	105406
15	BARMER	92595	101762	RUIDPPh II, RUIDPPh IV*	0%	28%	72%	100%	0	25927	66668	92595	101762
16	SRI DUNGARGARH	52149	57312	RUIDPPh IV*	0%	0%	100%	100%	0	0	52149	52149	57312
17	ABU ROAD	64417	70794	RUIDPPh IV*	0%	0%	100%	100%	0	0	64417	64417	70794
18	RAJGARH (CHURU)	59193	65053	RUIDPPh IV*	0%	0%	100%	100%	0	0	59193	59193	65053
19	KUCHAMAN	61949	68082	RUIDPPh IV*	0%	0%	100%	100%	0	0	61949	61949	68082
20	BADI	62699	68906	RUIDPPh IV*	0%	0%	100%	100%	0	0	62699	62699	68906
21	CHOMU	62721	68930	RUIDPPh IV*	0%	0%	100%	100%	0	0	62721	62721	68930
22	LADNU	52363	57547	RUIDPPh IV*	0%	0%	100%	100%	0	0	52363	52363	57547
23	RATANGARH	63948	70279	RUIDPPh IV*	0%	0%	100%	100%	0	0	63948	63948	70279
24	DAUSA	82960	91173	RUIDPPh IV*	0%	0%	100%	100%	0	0	82960	82960	91173

Name of ULBs with population <50,000 being provided/provided partial sewerage coverage

S. No.	Name of ULBs	Population		Name of the Schemes/program ongoing/Sanctioned *Proposed	% Coverage				Population Benefitted				Population benefitted (year 2016)
		As per Census 2011	Present		Existing	After completion of ongoing /sanctioned projects	In proposed project*	Total	Existing	After completion of ongoing /sanctioned projects	In proposed project*	Total	
1	MOUNT ABU	22943	25214	UIDSSMTPh I, RUIDP III	0%	80%	0%	80%	0	18354	0	18354	20171
2	JHALRAPATAN	38040	41806	UIDSSMTPh I, RUIDPPh IV*	0%	10%	90%	100%	0	3804	34236	38040	41806
3	SUMERPUR	37506	41219	UIDSSMTPh I	30%	0%	0%	30%	11252	0	0	11252	12366
4	NATHDWARA	42079	46245	State Fund	0%	50%	0%	50%	0	21040	0	21040	23122
5	CHIRAWA	44999	49454	UIDSSMT (T)	0%	61%	0%	61%	0	27449	0	27449	30167
6	JAITARAN	22621	24860	UIDSSMT (T)	0%	100%	0%	100%	0	22621	0	22621	24860
7	BHADRA	42016	46176	UIDSSMT (T)	0%	82%	0%	82%	0	34453	0	34453	37864
8	BADI SADRI	15713	17269	UIDSSMT (T)	0%	100%	0%	100%	0	15713	0	15713	17269
9	FATEHNAGAR	22812	25070	UIDSSMT (T)	0%	37%	0%	37%	0	8440	0	8440	9276
10	KUSHALGARH	10666	11722	UIDSSMT (T)	0%	100%	0%	100%	0	10666	0	10666	11722
11	RAMGARHSHEKHAWATI	22943	25214	UIDSSMT (T)	0%	100%	0%	100%	0	22943	0	22943	25214
12	SIROHI	40662	44688	RUIDPPh IV*	0%	0%	100%	100%	0	0	40662	40662	44688
13	PRATAPGARH	37093	40765	RUIDPPh IV*	0%	0%	100%	100%	0	0	37093	37093	40765
14	JOBNER	11354	12478	RUIDPPh IV* (Heritage)	0%	0%	100%	100%	0	0	11354	11354	12478
15	KHETRI	33024	36293	RUIDPPh IV* (Heritage)	0%	0%	100%	100%	0	0	33024	33024	36293
16	KAMAN	37288	40980	RUIDPPh IV* (Heritage), NCRPB*	0%	0%	100%	100%	0	0	37288	37288	40980

S. No.	Name of ULBs	Population		Name of the Schemes/program ongoing/Sanctioned *Proposed	% Coverage				Population Benefitted				Population benefitted (year 2016)
		As per Census 2011	Present		Existing	After completion of ongoing /sanctioned projects	In proposed project*	Total	Existing	After completion of ongoing /sanctioned projects	In proposed project*	Total	
17	MANDAWA	21666	23811	RUIDPPh IV* (Heritage)	0%	0%	100%	100%	0	0	21666	21666	23811
18	PILIBANGA	18209	20012	RUIDPPh IV* (Heritage)	0%	0%	100%	100%	0	0	18209	18209	20012
19	SAMBHAR	22327	24537	RUIDPPh IV* (Heritage)	0%	0%	100%	100%	0	0	22327	22327	24537
20	BANDIKUI	39229	43113	RUIDPPh IV* (Heritage)	0%	0%	100%	100%	0	0	39229	39229	43113
21	DEEG	44664	49086	RUIDPPh IV* (Heritage), NCRPB*	0%	0%	100%	100%	0	0	44664	44664	49086
22	DUNGARPUR	43953	48304	RUIDPPh IV* (Heritage)	0%	0%	100%	100%	0	0	43953	43953	48304
23	BEHRORE	29531.00	32455	NCRPB*	0%	0%	100%	100%	0	0	29531	29531	32455
24	KHAIRTHAL	38298.00	42090	NCRPB*	0%	0%	100%	100%	0	0	38298	38298	42090
25	KHERLI	17634.00	19380	NCRPB*	0%	0%	100%	100%	0	0	17634	17634	19380
26	TIJARA	24747.00	27197	NCRPB*	0%	0%	100%	100%	0	0	24747	24747	27197
27	BAYANA	38502.00	42314	NCRPB*	0%	0%	100%	100%	0	0	38502	38502	42314
28	BHUSAWAR	19946.00	21921	NCRPB*	0%	0%	100%	100%	0	0	19946	19946	21921
29	KUMHER	23540.00	25870	NCRPB*	0%	0%	100%	100%	0	0	23540	23540	25870
30	NADBAI	26411.00	29026	NCRPB*	0%	0%	100%	100%	0	0	26411	26411	29026

S. No.	Name of ULBs	Population		Name of the Schemes/program ongoing/Sanctioned *Proposed	% Coverage				Population Benefitted				Population benefitted (year 2016)
		As per Census 2011	Present		Existing	After completion of ongoing /sanctioned projects	In proposed project*	Total	Existing	After completion of ongoing /sanctioned projects	In proposed project*	Total	
31	NAGAR	25572.00	28104	NCRPB*	0%	0%	100%	100%	0	0	25572	25572	28104
32	WARE	19385.00	21304	NCRPB*	0%	0%	100%	100%	0	0	19385	19385	21304
33	RAJGARH (ALWAR)	26631.00	29267	NCRPB*	0%	0%	100%	100%	0	0	26631	26631	29267
34	KISHANGARH BAS	12429	13659	NCRPB*	0%	0%	100%	100%	0	0	12429	12429	13659
35	RAWATBHATA	37699	41431	From own resource/assistance from any financial institution viz HUDCO	0%	0%	0%	0%	0	0	0	0	0
36	KOTPUTLI	49202	54073		0%	0%	0%	0%	0	0	0	0	0
37	BHAWANIMANDI	42283	46469		0%	0%	0%	0%	0	0	0	0	0
38	PHALODI	49766	54693		0%	0%	0%	0%	0	0	0	0	0
39	SOJATCITY	43023	47282		0%	0%	0%	0%	0	0	0	0	0
40	KEKRI	41890	46037		0%	0%	0%	0%	0	0	0	0	0
41	BHINMAL	47932	52677		0%	0%	0%	0%	0	0	0	0	0
42	BILADA	39590	43509		0%	0%	0%	0%	0	0	0	0	0
43	PIPADCITY	36810	40454		0%	0%	0%	0%	0	0	0	0	0
44	NIWAI	37765	41504		0%	0%	0%	0%	0	0	0	0	0
45	VIJAINAGAR	32124	35304		0%	0%	0%	0%	0	0	0	0	0
46	MALPURA	29295	32195		0%	0%	0%	0%	0	0	0	0	0
47	GULABPURA	27215	29909		0%	0%	0%	0%	0	0	0	0	0
48	TODARAISINGH	23559	25891		0%	0%	0%	0%	0	0	0	0	0
49	MANDALGARH	13844	15215		0%	0%	0%	0%	0	0	0	0	0
50	DEOLI	22065	24249		0%	0%	0%	0%	0	0	0	0	0

S. No.	Name of ULBs	Population		Name of the Schemes/program ongoing/Sanctioned *Proposed	% Coverage				Population Benefitted				Population benefitted (year 2016)
		As per Census 2011	Present		Existing	After completion of ongoing /sanctioned projects	In proposed project*	Total	Existing	After completion of ongoing /sanctioned projects	In proposed project*	Total	
51	KUCHERA	23468	25791	From own resource/assistance from any financial institution viz HUDCO	0%	0%	0%	0%	0	0	0	0	0
52	JAHAJPUR	20586	22624		0%	0%	0%	0%	0	0	0	0	0
53	GANGAPUR	18777	20636		0%	0%	0%	0%	0	0	0	0	0
54	SARWAD	20372	22389		0%	0%	0%	0%	0	0	0	0	0
55	MUNDAWA	11960	13144		0%	0%	0%	0%	0	0	0	0	0
56	PUSHKAR	21626	23767		0%	0%	0%	0%	0	0	0	0	0
57	AASIND	16611	18255		0%	0%	0%	0%	0	0	0	0	0
58	PARBATSAR	15172	16674		0%	0%	0%	0%	0	0	0	0	0
59	UNIARA	12551	13794		0%	0%	0%	0%	0	0	0	0	0
60	SHAHPURA (Jaipur)	33895	37251		0%	0%	0%	0%	0	0	0	0	0
61	CHAKSU	33432	36742		0%	0%	0%	0%	0	0	0	0	0
62	SHAHPURA (Bhilwara)	30320	33322		0%	0%	0%	0%	0	0	0	0	0
63	SRIMADHOPUR	31366	34471		0%	0%	0%	0%	0	0	0	0	0
64	PHULERA	23284	25589		0%	0%	0%	0%	0	0	0	0	0
65	BAGRU	31229	34321		0%	0%	0%	0%	0	0	0	0	0
66	KISHANGARHRENWAL	29201	32092		0%	0%	0%	0%	0	0	0	0	0

S. No.	Name of ULBs	Population		Name of the Schemes/program ongoing/Sanctioned *Proposed	% Coverage				Population Benefitted				Population benefitted (year 2016)
		As per Census 2011	Present		Existing	After completion of ongoing /sanctioned projects	In proposed project*	Total	Existing	After completion of ongoing /sanctioned projects	In proposed project*	Total	
67	PILANI	29741	32685	From own resource/assistance from any financial institution viz HUDCO	0%	0%	0%	0%	0	0	0	0	0
68	VIDHYAVIHAR	15644	17193		0%	0%	0%	0%	0	0	0	0	0
69	KHANDELA	22756	25009		0%	0%	0%	0%	0	0	0	0	0
70	NEEM KA THANA	36231	39818		0%	0%	0%	0%	0	0	0	0	0
71	REENGUS	26139	28727		0%	0%	0%	0%	0	0	0	0	0
72	LOSAL	28504	31326		0%	0%	0%	0%	0	0	0	0	0
73	UDAIPURWATI	29236	32130		0%	0%	0%	0%	0	0	0	0	0
74	BISSAU	23227	25526		0%	0%	0%	0%	0	0	0	0	0
75	LALSOT	34363	37765		0%	0%	0%	0%	0	0	0	0	0
76	BAGGAD	14238	15648		0%	0%	0%	0%	0	0	0	0	0
77	MUKUNDGARH	18469	20297		0%	0%	0%	0%	0	0	0	0	0
78	RAJAKHEDA	33666	36999		0%	0%	0%	0%	0	0	0	0	0

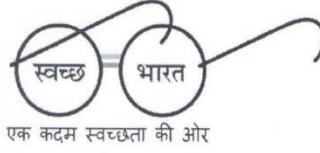
S. No.	Name of ULBs	Population		Name of the Schemes/program ongoing/Sanctioned *Proposed	% Coverage				Population Benefitted				Population benefitted (year 2016)
		As per Census 2011	Present		Existing	After completion of ongoing /sanctioned projects	In proposed project*	Total	Existing	After completion of ongoing /sanctioned projects	In proposed project*	Total	
79	TODABHEEM	22977	25252	From own resource/assistance from any financial institution viz HUDCO	0%	0%	0%	0%	0	0	0	0	0
80	RAISIGNAGAR	28330	31135		0%	0%	0%	0%	0	0	0	0	0
81	ANUPGARH	30877	33934		0%	0%	0%	0%	0	0	0	0	0
82	SADULSAHAR	24980	27453		0%	0%	0%	0%	0	0	0	0	0
83	SRIKARANPUR	21297	23405		0%	0%	0%	0%	0	0	0	0	0
84	GAJSINGHPURA	9995	10985		0%	0%	0%	0%	0	0	0	0	0
85	PADAMPUR	18420	20244		0%	0%	0%	0%	0	0	0	0	0
86	KESRISIGHPUR	14010	15397		0%	0%	0%	0%	0	0	0	0	0
87	SRIVIJAINAGAR	18425	20249		0%	0%	0%	0%	0	0	0	0	0
88	DESHNOK	18470	20299		0%	0%	0%	0%	0	0	0	0	0
89	CHHAPAR	19744	21699		0%	0%	0%	0%	0	0	0	0	0
90	BIDASAR	35683	39216		0%	0%	0%	0%	0	0	0	0	0

S. No.	Name of ULBs	Population		Name of the Schemes/program ongoing/Sanctioned *Proposed	% Coverage				Population Benefitted				Population benefitted (year 2016)
		As per Census 2011	Present		Existing	After completion of ongoing /sanctioned projects	In proposed project*	Total	Existing	After completion of ongoing /sanctioned projects	In proposed project*	Total	
91	RAJLDESAR	27419	30133	From own resource/assistance from any financial institution viz HUDCO	0%	0%	0%	0%	0	0	0	0	0
92	TARANAGAR	32640	35871		0%	0%	0%	0%	0	0	0	0	0
93	RAWATSAR	35102	38577		0%	0%	0%	0%	0	0	0	0	0
94	ANTA	32377	35582		0%	0%	0%	0%	0	0	0	0	0
95	LAKHERI	29572	32500		0%	0%	0%	0%	0	0	0	0	0
96	KESHAVRAIPATAN	24627	27065		0%	0%	0%	0%	0	0	0	0	0
97	SANGOD	21846	24009		0%	0%	0%	0%	0	0	0	0	0
98	KAITHOON	24260	26662		0%	0%	0%	0%	0	0	0	0	0
99	NAINWA	19485	21414		0%	0%	0%	0%	0	0	0	0	0
100	KAPREN	20748	22802		0%	0%	0%	0%	0	0	0	0	0
101	INDARGARH	7444	8181		0%	0%	0%	0%	0	0	0	0	0
102	PIDAWA	12807	14075		0%	0%	0%	0%	0	0	0	0	0

S. No.	Name of ULBs	Population		Name of the Schemes/program ongoing/Sanctioned *Proposed	% Coverage				Population Benefitted				Population benefitted (year 2016)
		As per Census 2011	Present		Existing	After completion of ongoing /sanctioned projects	In proposed project*	Total	Existing	After completion of ongoing /sanctioned projects	In proposed project*	Total	
103	AKLERA	26240	28838	From own resource/assistance from any financial institution viz HUDCO	0%	0%	0%	0%	0	0	0	0	0
104	CHHABRA	32285	35481		0%	0%	0%	0%	0	0	0	0	0
105	MANGROL	25073	27555		0%	0%	0%	0%	0	0	0	0	0
106	POKARAN	23554	25886		0%	0%	0%	0%	0	0	0	0	0
107	BALI	19880	21848		0%	0%	0%	0%	0	0	0	0	0
108	TAKHATGARH	16729	18385		0%	0%	0%	0%	0	0	0	0	0
109	RANI	13880	15254		0%	0%	0%	0%	0	0	0	0	0
110	SANCHOR	32875	36130		0%	0%	0%	0%	0	0	0	0	0
111	SADRI	27390	30102		0%	0%	0%	0%	0	0	0	0	0
112	FALNA	24839	27298		0%	0%	0%	0%	0	0	0	0	0
113	PINDWARA	24487	26911		0%	0%	0%	0%	0	0	0	0	0
114	AAMET	17335	19051		0%	0%	0%	0%	0	0	0	0	0
115	SALUMBAR	16425	18051		0%	0%	0%	0%	0	0	0	0	0

S. No.	Name of ULBs	Population		Name of the Schemes/program ongoing/Sanctioned *Proposed	% Coverage				Population Benefitted				Population benefitted (year 2016)
		As per Census 2011	Present		Existing	After completion of ongoing /sanctioned projects	In proposed project*	Total	Existing	After completion of ongoing /sanctioned projects	In proposed project*	Total	
116	BHINDAR	17878	19648	From own resource/assistance from any financial institution viz HUDCO	0%	0%	0%	0%	0	0	0	0	0
117	KANOR	13239	14550		0%	0%	0%	0%	0	0	0	0	0
118	DEOGARH	17604	19347		0%	0%	0%	0%	0	0	0	0	0
119	SANGWARA	29439	32353		0%	0%	0%	0%	0	0	0	0	0
120	SURAJGARH	21666	23811		0%	0%	0%	0%	0	0	0	0	0
121	NOHAR	49835	54769		0%	0%	0%	0%	0	0	0	0	0
122	RATANNAGAR	12841	14112		0%	0%	0%	0%	0	0	0	0	0
123	CHOTI SADRI	18360	20178		0%	0%	0%	0%	0	0	0	0	0
124	NAWA	22088	24275		0%	0%	0%	0%	0	0	0	0	0
125	VIRAT NAGAR	20568	22604		0%	0%	0%	0%	0	0	0	0	0
126	SHIVGANJ	27198	29891		0%	0%	0%	0%	0	0	0	0	0
127	MERTA CITY	46070	50631		0%	0%	0%	0%	0	0	0	0	0

S. No.	Name of ULBs	Population		Name of the Schemes/program ongoing/Sanctioned *Proposed	% Coverage				Population Benefitted				Population benefitted (year 2016)
		As per Census 2011	Present		Existing	After completion of ongoing /sanctioned projects	In proposed project*	Total	Existing	After completion of ongoing /sanctioned projects	In proposed project*	Total	
128	RAMGANJMANDI	41328	45419	From own resource/assistance from any financial institution viz HUDCO	0%	0%	0%	0%	0	0	0	0	0
129	SANGARIA	36619	40244		0%	0%	0%	0%	0	0	0	0	0
130	KAPASAN	20869	22935		0%	0%	0%	0%	0	0	0	0	0
131	DEGANA	20035.00	22018		0%	0%	0%	0%	0	0	0	0	0
132	BEGUN	20705	22755		0%	0%	0%	0%	0	0	0	0	0
133	ITAWA	26741	29388		0%	0%	0%	0%	0	0	0	0	0
134	ROOPWAS	15735	17293		0%	0%	0%	0%	0	0	0	0	0
135	MAHWA (DAUSA)	24846	27306		0%	0%	0%	0%	0	0	0	0	0
		3590750	3946234							11252	185484	686331	883067
	Total	15726372	17283283						3795963	3341811	5000084	12137859	13339507



स्वच्छता शपथ

महात्मा गांधी ने जिस भारत का सपना देखा था उसमें सिर्फ राजनैतिक आजादी ही नहीं थी, बल्कि एक स्वच्छ एवं विकसित देश की कल्पना भी थी।

महात्मा गांधी ने गुलामी की जंजीरों को तोड़कर माँ भारती को आज़ाद कराया।

अब हमारा कर्तव्य है कि गंदगी को दूर करके भारत माता की सेवा करें।

मैं शपथ लेता हूँ कि मैं स्वयं स्वच्छता के प्रति सजग रहूँगा और उसके लिए समय दूँगा।

हर वर्ष 100 घंटे यानी हर सप्ताह 2 घंटे श्रमदान करके स्वच्छता के इस संकल्प को चरितार्थ करूँगा।

मैं न गंदगी करूँगा न किसी और को करने दूँगा।

सबसे पहले मैं स्वयं से, मेरे परिवार से, मेरे मुहल्ले से, मेरे गांव से एवं मेरे कार्यस्थल से शुरुआत करूँगा।

मैं यह मानता हूँ कि दुनिया के जो भी देश स्वच्छ दिखते हैं उसका कारण यह है कि वहां के नागरिक गंदगी नहीं करते और न ही होने देते हैं।

इस विचार के साथ मैं गांव-गांव और गली-गली स्वच्छ भारत मिशन का प्रचार करूँगा।

मैं आज जो शपथ ले रहा हूँ वह अन्य 100 व्यक्तियों से भी करवाऊँगा।

वे भी मेरी तरह स्वच्छता के लिए 100 घंटे दें, इसके लिए प्रयास करूँगा।

मुझे मालूम है कि स्वच्छता की तरफ बढ़ाया गया मेरा एक कदम पूरे भारत देश को स्वच्छ बनाने में मदद करेगा।