Recommendations to Draft Liquid Waste Management (LWM) Rules by NFSSM Alliance and ClimateRise Alliance

Executive Summary

The Draft Liquid Waste Management (LWM) Rules 2024 present a landmark opportunity to transform India's sanitation and environmental governance. The NFSSM and ClimateRISE Alliances applaud this initiative to institutionalise sustainable liquid waste management. Our key recommendations build on field expertise to strengthen implementation through clearer terminology, robust compliance, sustainable financing and climate adaptation - creating an enabling framework that delivers on India's climate goals, public health standards and inclusive sanitation vision.

- Recommend incorporating ‘biosolids management’ by standardising terminologies, and establishing standards to ensure safe disposal, reuse, to minimise environmental and public health risks.

- Recommend optimising treated wastewater reuse and streamlining Extended User Responsibility (EUR) through targeted exemptions, mandatory non-potable reuse, volume-linked recovery, GPS-tracked sludge transport, tiered compliance, and tailored provisions for unconnected users and small industries.

- Recommend strengthening operations and climate resilience through decoupling desludging and transport costs, implementing third-party real-time monitoring, encouraging climate-resilient technologies and streamlining financial incentives for efficiency, and sustainability.

The LWM Rules' impact hinges on clear standards, adaptable implementation, and robust monitoring to drive outcomes for public health, environmental sustainability, and climate resilience.

The detailed recommendations to the Draft Rules are placed at **Annexure I**.

Recommendations to Draft Liquid Waste Management (LWM) Rules
by NFSSM Alliance and ClimateRise Alliance
Annexure I

Sl. No.	Chapter	Rule No.	Suggestions/Comment
1	I	1.3c (pg – 36)	Suggest redefining "**Blackwater**" as water originating from pour flush toilets and urinals. It primarily consists of flush water, faecal matter, urine, and anal cleansing material, and contains abundant organic matter and suspended solids.
2	I	1.3d (pg – 36)	Suggest introducing a **tiered categorization** for the definition of bulk user of water, based on water consumption levels (small, medium, large bulk user) ○ **Large Bulk User:** Users consuming >10,000 liters/day (e.g., industries, large housing complexes). Treatment Requirement: Centralized or onsite treatment with high- capacity systems. ○ **Medium Bulk User:** Users consuming between 5,000 and 10,000 liters/day (e.g., mid-size apartment complexes, institutions). Treatment Requirement: Decentralized systems like modular STPs or small-scale FSTPs. ○ **Small Bulk User:** Users consuming <5,000 liters/day (e.g., small residential complexes, schools). Treatment Requirement: SSTS such as bio-digesters, greywater recycling units, or soil bio filters. It should include provisions for mandatory SSTS in new developments with smaller water usage to ease pressure on centralized infrastructure.
3	I	1.3d (pg – 36)	Recommend including '**public toilets**' and '**community toilets**' in the 'bulk user' category by default, regardless of water quantity use, considering their continuous wastewater generation and significant treated wastewater reuse capacity. Additionally, suggest keeping the **definition** of bulk user of water **consistent** across Chapters I and II.
4	I	1.3f) (pg – 36)	To further add to the definition of **Desludging**: "The process of removing accumulated sludge from the bottom of septic tanks, pits, wastewater treatment facilities, or other types of sedimentation systems and this must be done through Mechanized Desludging only. The desludging process could be demand based or schedule based."
5	I	1.3.f.i) (pg – 36)	Suggest adding the definitions of: ○ Demand-based Desludging: An approach where the desludging of septic tanks is carried out based on actual need when the septic tank is full rather than on a predetermined schedule. ○ Scheduled-Based Desludging: A maintenance approach where septic tanks are desludged at regular, predetermined intervals, regardless of the actual sludge accumulation (2-3 years as per CPHEEO manual).
6	I	1.3h) (pg – 36)	Suggest incorporating to the definition of "Disposal System", it is the unit connected directly to bathrooms or kitchen for safe disposal of used water at household level such as soak pits, soak aways, in line with other publications such as IS Code 2470 – Part B.
7	I	1.3i) (pg – 36)	Effluent refers to liquid waste discharged from industrial facility.
8	I	1.3 k) (pg – 36)	Suggest redefining "Faecal sludge" as the raw or partially digested mixture of excreta and water, usually accumulated in containment such as single pits, septic tanks or other on-site sanitation systems (OSS).
9	I	1.3r) (pg – 37)	Suggest checking for consistencies on the definition of On- site Liquid Waste System with other rules such as Water Act, and Environment Protection Act.
10	I	1.3 v) (pg – 37)	Septic tanks are liquid waste treatment units that separate solid waste matter from liquid waste matter and promote the breakdown of contaminants in wastewater by anaerobic process.

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11	I	1.3w) (pg – 37)	Suggest redefining sludge as “sewage sludge”: Sewage sludge can differ significantly based on the sewage treatment technology used. WSP and UASB produce anaerobically digested well stabilized sewage sludge which needs relatively less treatment for safe reuse/disposal; whereas the ASP and its various forms produces sewage sludge which needs further stabilization and hence higher degree of treatment.
12	I	1.3z) (pg – 37)	Suggest redefining user fee as “user tax” in line with the provisions of state governments levying tax, to recover the costs incurred in liquid waste
13	I	1.3aa) (pg – 37)	It is recommended to include the definition of Used Water Management, and redefine "wastewater" as Used Water Management, in line with the SBM 2.0 and AMRUT missions.
14	I	1.4c) (pg – 38)	Suggest including the term “**Biosolids**” instead of “sludge/faecal sludge”, as treated sewage sludge, faecal sludge or septage leads to biosolids.
15	II	2.1.1a) (pg – 38)	Following clause may also be added in the duties of wastewater generators: “Wastewater generators also have the option to dispose of wastewater within their premises or other designated areas, in accordance with the guidelines provided by CPCB, MOEF, or DDWS”, in line with existing mandates for townships to treat their own wastewater.
16	II	2.1.1.a) (pg – 38)	Suggest defining wastewater drainage systems by local bodies to ensure that discharging of wastewater is in designated systems and not into stormwater drains or nallahs. Additionally, making it mandatory under the rule to implement septic tank connected to a safe disposal unit, in all new constructions as per IS Code 2470 Part A and B.
17	II	2.1.1.a) (pg – 38)	Recommend clarifying the definition of drainage either of the following to avoid blackwater discharged into stormwater drains: • “drainage” as "sewerage" for blackwater networks, OR • “wastewater” as "greywater and septic tank overflow" for storm drain contexts.
18	II	2.1.1.c) (pg – 38)	"Recommend removing the repeated phrase “after approval of the State / Union Territory Government” across clauses to enhance streamline language.
19	II	Addition of Rule 2.2)	Suggest addition of a rule for National, State or Local governments as per available programs and funding opportunities, devise incentives for adopting water-saving measures (e.g., tax rebates for treated water reuse)
20	II	2.2.1.c) (pg – 38)	Suggest limiting the scope of exemption of EUR certificate: Only include the bulk user who are not able to set up a decentralized treatment facility system to obtain exemption EUR certificate along with users who are not able to meet the prescribed minimum reuse of treated wastewater.
21	II	2.2.1.d) (pg – 38)	Recommend modifying the phrase "provided they are obligated under the others rule and regulation" to say, "…other rules and regulations", which can be further clarified as "…other rules and regulations formulated by local, state, or central governments under competent authority"
22	II	2.2.1.d) (pg – 38)	Suggest including, "Where the facility is not linked to any wastewater treatment facility, bulk generators may purchase EUR certificates from the local government."
23	II	2.2.1.g) (pg – 38)	Suggest defining a drainage system upfront or using consistent terminology such as “sewage network”, as used in Chapter II, 2(h) in addition to “shall have to establish and maintain the wastewater transportation system to the point it gets connected to public drainage system or onsite decentralised wastewater treatment plant, as applicable.”

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24	II	2.2.1.j) (pg – 39)	Suggest exploring higher targets for minimum reuse of treated wastewater (YoY) and how will these recycling targets will be audited or verified annually to attain reuse for both new and old bulk users (Table 1 and Table 2) *[open to further discussion with the Alliance].* • Recommending expanding the scope of the mandate for reuse should be for all the properties, in case of new properties, established after 2027 and in case of old nonresidential properties it should be incremental targets for year 2027 and 2030. • The graded targets can be stringent for metro/million plus cities as public health emergencies owing to contamination is more severe in high-density areas.
25	II	2.2.1.l) (pg – 39)	Recommend referencing to standards for treated wastewater quality, organic manure quality, and its end-use applications as issued by competent authorities, from time to time.
26	II	2.2.1.m) (pg – 39)	Suggest precise definitions and code of practice for the terms of treatment facilities, end- products and by-products of treatment facility covers all the products associated with used water management at the treatment stage, as there is difference between treated sludge, organic manure and soil conditioner.
27	II	2.2.1.n) (pg – 39)	Suggest modifying suitably to include EUR obligations where the facility is not linked to any wastewater treatment facility. *[As indicated above in suggestion 2.2.1.d]*
28	II	2.3) (pg – 40)	Suggest that every operator of the treatment facility have a certified wastewater treatment facility operator. The certification should be obtained from an authorized organization, and it should also be made liable for refresher training and recertification if needed. The rule may also indicate where the ULBs are partnering with SHGs to manage and operate faecal sludge treatment facilities and/or Collection and conveyance infrastructure, ULBs will be responsible for registration of the assets.
29	II	2.3.1.d) (pg – 40)	Suggest including qualitative parameters for end use application along with quantitative data in the centralized portal.
30	II	2.3.1.g) (pg – 40)	Recommend referencing to guidelines which provide the parameters with maximum and minimum values. Additionally, recommend the following for improved sludge management: • Allowing bulk users to register with and deliver sludge directly to regional/nearest compost plants/STPs, bypassing ineffective small-scale sludge handling technologies. • Deploy specialized units where infrastructure gaps exist in underserved areas (Eg: Rajasthan). • Review the requirement of sludge testing protocols to account for high costs and India's limited lab capacity.
31	II	2.3.1.f) (pg – 40)	Suggest adding reference to the standards which the local government or plant operator must adhere to, and the minimum parameters which they need to report monthly. The monthly reporting by the local government to also reflects the daily quality of the treated used water to ensure functionality of the plant.
32	II	2.3.1.f) (pg – 40)	Recommend the competent authority to establish a third-party water quality monitoring system to eliminate redundant testing while ensuring consistent water quality data collection. • wastewater treatment facilities (eliminating conflict of interest) • bulk users discharging to distant stormwater drains (reducing burden of distant sampling)

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33	II	2.3.1.h) (pg – 40)	Suggest adding the parameters for annual reporting, the coverage of sewer network, STPs and FSTPs in the city, and coverage of sewer connections of the households.
34	II	2.3.2 (pg- 40-41)	**Table 3)** Suggest defining how the minimum recovery targets are determined and explain their correlation to sludge content to ensure consistency, are they the following: • Amount of wastewater collected over generated or • Treated wastewater over collected • Reused over treated wastewater *[Open to discussion with the Alliance]*
35	II	2.3.2) (pg - 40-41)	Recommend ensuring consistency in the use of the term “minimum reuse target” across chapters. Additionally, clarify the phrase “percent of sludge content in wastewater” as it directly influences targets for centralized treatment facilities. For **Table 3,** recommend expanding wastewater recovery to include treated used water, methane capture, renewable energy recovery, and GHG emissions reduction. Targets can be set separately for water, sludge, energy, and emissions, supported by a baseline assessment. These may be progressive efforts, with methane recovery encouraged but not mandatory.
36	II	2.3.3) (pg – 41)	Recommend limiting the scope of the exemption clause if the bulk user is also operator of the decentralized treatment facility is same, as this would exempt most bulk users (residential and non-residential). Recommend the following: • Limit full reporting exemptions for bulk users (evidence shows compliance declines) • For bulk users, introduce mandatory metering or third-party verification • Maintain registration and reporting to allow potential treated wastewater sharing with other users
37	II	2.4) (pg – 41)	Emphasizing encouragement for local governments to adopt climate sensitive approaches, to help reduce overall Operations and Maintenance costs. Local governments to be further encouraged to adopt treatment technologies that can help mitigate GHG emissions
38	II	2.4.1.b) (pg – 41)	Recommend revising Schedule I timelines as per practitioner feedback for feasible compliance. Recommend local/state governments to annually publish updated wastewater management plans, including: • Drainage structures and wastewater flows, • Infrastructure inventories (STPs/FSTPs, sewer systems, storm water drains, water bodies etc.), • Wastewater generators & bulk generator data • Water balance plan including treated wastewater reuse plan. *[Reference existing practitioner-led rural/urban plans for framework]*
39	II	2.4.1.f) (pg – 41)	Recommend publishing geo-tagged STP locations on ULB and central government portals.
40	II	2.4.1.h) (pg – 41)	Recommend extending monitoring requirements to include a general rule for: • All discharge receiving waterbodies • Water bodies within a specified distance of a treatment facility and • For flowing water bodies, monitoring at both upstream and downstream locations for accurate reporting.

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41	II	2.4.1.i) (pg – 41)	Suggest adding, “Industries and power plants”, in line with state Governments having reuse policy, where it is mandated that industries and power plants around STPs reuse the treated wastewater. Suggest adding activities where treated wastewater can be used for the process again, or for various utilities such as “dust mitigation, road washing, construction activities, watering road meridians”.
42	II	Addition of rule 2.4.1 k)	Suggest adding a rule on “Monitored Transport of Treated Wastewater”: All sludge transport vehicles, whether operated directly or by an agency authorized by the local body, must be equipped with GPS to enable tracking through a centralized monitoring system to prevent illegal disposal of untreated wastewater in unauthorized areas and guarantees the safe conveyance of sludge to wastewater treatment facilities approved by the local body.
43	II	2.4.2) (pg – 42)	Suggest adding that each local body for implementing provisions of these rules shall levy user fee or sanitation tax. In addition, suggest having a target on user fees given to the ULBs and corresponding state governments to update the byelaws and regulations and implement the user fees.
44	II	Addition of Rule 2.4.4)	Suggest including local bodies be responsible for environmentally sound management of wastewater including conveyance. The conveyance segment needs to be included.
45	II	2.5.1) (pg – 42)	Suggest expanding the scope of Extended User Responsibility certificates: • Recommend strengthening the provision of EUR certificates such that the cost of non-compliance is higher than the treatment cost. • Include the collection and conveyance of wastewater in areas with lack of accessibility of treatment facilities, and urban areas with better infrastructure may find it easier to meet obligations compared to rural or peri-urban regions with limited wastewater treatment facilities. • Suggest adding a need assessment for Extended User Responsibility Certificates to check feasibility of EURCs for some bulk users which are connected to sewerage systems and paying for water and sewerage charges (as part of the property taxes).
46	II	2.5.11) (pg – 42)	Recommend expanding the scope of “environmental compensation:” to be defined and have unified approach for calculating environmental compensations for non-compliances, as may be devised by competent authority from time to time.
47	II	Addition of rule 2.5.12)	Suggest adding rule on Renewal of Extended User Responsibility Certificates, it be renewed annually through the centralized portal by the wastewater treatment facility after expiry of the validity for a year, for meeting obligations of bulk users
48	II	Addition of rule 2.5.13)	Suggest introducing a tiered approach to the EUR certificates: • It shall be linked to the amount of used water treated at the facility and the degree of treatment it has undergone. • The EUR certificate needs to factor in the amount of used water treatment up to the prescribed standards at the treatment facility. The EUR certificate should give higher weightage to recovery of resources such as biogas, nutrients through biosolids as compared to treated used water.
49	III	3.1) (pg – 42)	Recommend modifying the subtitle to "Duties of user of On-site sanitation system such as single leach pit (lined/unlined), twin pit, septic tank with or without soak pit, holding tank, composting toilet, biogas linked toilet"
50	III	3.1.1.a) (pg – 42)	Recommend updating the rule to "Shall desludge or otherwise maintain on-site sanitation systems as per directions issued by local body taking into account guidelines issued by MoHUA or DDWS in this regard.”

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51	III	3.1.1.a) & 3.4.1.e) (pg – 42 & 44)	Suggest rephrasing *cleaned regularly* to cleaned regularly on scheduled basis (can be *every 3-5 years* - as per CPHEEO manual and FSSM Policy 2017)
52	III	3.1.1.c) (pg – 43)	Suggest adding “Ensuring faecal sludge and septage is not indiscriminately disposed”
53	III	3.1.1.d), 3.2.1.d) & 3.3.1.j) (pg – 43 & 44)	Suggest a combination of tax and fees: The tax is recommended for the treatment facility and collection infrastructure and user fees for collection and conveyance, as prescribed by the local body in line with guidelines of MoHUA and DDWS.
54	III	3.1.1.d) (pg – 43)	Suggest considering “Prescription of a fees by the local bodies in areas with private desludging operators offering a market-based service will affect business viability of service provider”
55	III	3.1.1.e) (pg – 43)	Suggest adding a method to monitor this as it will be at a household (HH) level. Suggest the reporting be done by desludging operators and the ULB be made responsible to track and report the desludging services
56	III	3.1.1.f), 3.1.1.g), 3.1.1.h) & 3.1.1.i) (pg – 43)	Recommend updating the terminology from "septic tank" or “septic system” to "on-site sanitation system", to reflect ground realities.
57	III	3.1.1.f) (pg – 43)	Suggest adding a point on mechanized cleaning “Ensure that the Septic Tanks are cleaned mechanically by registered operators with adequate safety measures in compliance with the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013 (Central Act 25 of 2013), and rules there under."
58	III	3.1.1.g) (pg – 43)	Suggest including a point on retrofit of septic tanks: "shall adhere to guidelines regarding septic tank design, installation, and maintenance standards. This includes ensuring that septic systems are properly constructed in all new construction and located or retrofitted to avoid contamination of water sources"
59	III	3.2.1 (pg – 43)	Under the duties of operator of desludging services, suggest adding “Ensure no leakage/spillage of Faecal Sludge and Septage during transportation from the collection point to the treatment facility.”
60	III	3.2.1.a) (pg – 43)	Suggest clearly mentioning the entity responsible for registration of desludging operators and its license renewal
61	III	3.2.1.d) (pg – 43)	Recommend revising the clause to cover "desludging and transportation", excluding treatment costs. Bundling treatment costs raises service fees and reducing affordability. Treatment of faecal sludge requires separate public financing to maintain service accessibility.
62	III	3.2.1.e & 3.2.1. f) (pg – 43)	Recommend that reporting requirements be tailored as per city size and operator capacity. Where feasible, desludging operators (especially in larger cities with private players and digital access) may report directly, while in smaller towns and areas with limited capacity, ULBs may be made responsible for tracking and reporting desludging services.

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63	III	3.3.1.b) 3.3.1.c) & 3.3.1.d) (pg – 43)	Recommend updating the Central Pollution Control Board (CPCB) guidelines for faecal sludge collection, transport and treatment, and Fertilizer Control Order (FCO) standards to include comprehensive human faecal matter management protocols, drawing on existing practitioner expertise and field-tested solutions.
64	III	3.3.1.d) (pg – 43)	Suggest addition of reuse of the treated faecal sludge in consultation with the local government
65	III	3.3.1.f) (pg – 44)	Recommend publishing geo-tagged FSTP locations may on websites of ULB, and the central portal.
66	III	Addition of rule 3.3.2)	Recommend addition of a rule directing that the competent authorities to establish comprehensive treatment technology guidelines for FSTPs, along with laboratory protocols and monitoring mechanisms to ensure their sustenance.
67	III	Addition of rule 3.3.3)	Suggest addition of rule on biosolids management, standards (process based and product based) and recommend reuse application of biosolids in terms of circularity, by competent authorities on a timely basis.
68	III	Addition of rule 3.3.4)	Suggest adding a rule for streamlining of desludging services
69	III	3.4) (pg – 44)	Suggest addition of ensuring faecal sludge and septage is not indiscriminately disposed and the responsibility of reporting be on desludging operators while the ULB be made responsible to track and report the desludging services, as opposed to the operators.
70	III	3.4.1. h, j & k) (pg – 44 & 45)	Suggest adding the use of GPS and IT tools. Also suggest reconsideration to make this clause mandatory for Class I cities with more than 10 lakh population and later make it stringent for other classes through amendment in 2030. *Schedule I:* The tools are not listed in Schedule 1
71	III	3.4.1.j) & 3.4.1. k) (pg – 45)	Recommend leveraging the UPYOG platform (under National Urban Digital Mission) designed for FSM monitoring enabling unified tracking across urban-local bodies and pollution control boards.
72	IV	4.1) (pg – 45)	Recommend including how small industries with less than 5000LPD or pollution load above 10kg per day in terms of BOD or other pollutants will they be regulated, since these duties and guidelines will not apply to them
73	IV	4.1) (pg – 45)	Recommend including the need for disaster-resilient infrastructure to handle wastewater during floods or natural calamities. Suggest listing non-potable purposes in various sectors and adopting circular approach for water conservation.
74	IV	4.1.1.d) (pg – 45)	Suggest clearly outlined timelines for developing infrastructure like ETPs, especially in newly urbanized or underserved areas
75	IV	4.1.1.k) (pg – 46)	Suggest introducing monitoring protocols, including the mandate of third-party audits by certified agencies to ensure compliance with rules on effluent management practices (including tracking the quality and quantity of sludge generated, treated, and disposed of.)
76	IV	4.2.1.k) (pg – 47)	Recommend establishing a third-party water quality monitoring system for wastewater treatment facility that would: • prevent duplicate testing of shared water resources through centralized data collection, • remove self-monitoring requirements for treatment plants, eliminating conflicts of interest, and • relieve small industries from burdensome sampling of distant water bodies.

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77	IV	4.2.2) (pg – 48)	Recommend expanding the scope of the exemption clause if industries are also operator of the on-site treatment facility. Recommend including the following: • Limit full reporting exemptions for industries (evidence shows compliance declines) • Introduce mandatory metering or third-party verification • Maintain registration and reporting to allow potential treated wastewater sharing with other users.
78	IV	4.3.5) (pg – 48)	Recommend replacing “bulk users” with “industries”
79	V	5) (pg – 48)	Suggest adding clear timelines and milestones for achieving sludge management.
80	V	5.1) (pg – 48)	Suggest sludge handling units in STPs along with proper recording and monitoring in STPs and streamlining operations and maintenance.
81	V	5.2) (pg – 48)	Suggest categorisation as per consistent characteristics of sludge based on both process and the end-product, including pathogen reduction and safe reuse/disposal. The categorisation menu can consider regional and local characteristics.
82	V	5.5) (pg – 48)	Given that biosolids require further processing that cannot be done at a used water treatment facility, suggestion to defer to the Department of Agriculture and Farmers’ Welfare and Department of Fertilizers on this matter. Those departments’ standards for biosolids and rules for treatment can be cited here.
83	V	5.5) (pg – 48)	Recommend including adding human excreta to the list of approved manure sources in the Fertilizer Control Order (FCO) to eliminate current ambiguities regarding its agricultural use, with standardized safety and quality parameters established by the Department of Agriculture and Farmers' Welfare.
84	V	5.6) (pg – 49)	Recommend including thermal treatment process (pyrolysis or combustion) as an alternative to landfills, as it destroys pathogens and converts sludge into reusable ash for construction materials, demonstrated in Andhra Pradesh, Maharashtra, and Rajasthan.
85	V	Addition of a rule 5.19)	Suggest addition of a rule to include a provision for periodic training or awareness campaigns for bulk producers.
86	VI	6.1.3) (pg – 49)	Suggest adding details regarding the audit of the obligated entities involved in collection, conveyance, treatment of wastewater and/or sludge/faecal sludge. The segment “conveyance” should be included.
87	VI	6.2.2) (pg – 50)	Recommend including the segment of “conveyance” in addition to collection, treatment of wastewater and/or sludge/faecal sludge.

88	VI	6.6) (pg – 50)	Establish a comprehensive monitoring framework for sludge/faecal sludge management that includes:
			• Routine data collection and treatment process monitoring.
			• Defining and tracking of Key Performance Indicators (KPIs) in compliance with CPCB/SPCB permissible limits, to evaluate performance against quantitative goals, these KPIs should include:
			  ○ Mandatory, based on public health and safety criteria such as pathogen levels, heavy metal content etc.
			  ○ Optional, based on operational and environmental performance, such as process efficiency, treated water reuse, and carbon footprint reduction.
			• Regular analysis and reporting against these KPIs, ensuring transparency, regulatory compliance, and opportunities for continuous improvement.
			Recommend ensuring the levels are within permissible limits set by Central Pollution Control Board (CPCB) or State Pollution Control Boards (SPCBs)

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89	VII	7.1) (pg – 51)	Suggest integration of policies to acknowledge the treated water reuse as a response to growing water scarcity.
90	VII	7.1) (pg – 51)	Recommend expanding committee membership to include NGO practitioners as independent voices, distinct from academic and industry associations.
91	VII	7.2.1.a) (pg – 52)	Suggest removing "periodically" since the clause already specifies a stricter and appropriate standard "at least once a year" at the end of the clause.
92	VII	7.2.1.q) (pg – 53)	Suggest this text be modified to include that all standard templates be contextualized by planners and implementers taking into consideration climatic and temperature which treatment processes are affected by.
93	VII	Addition of rule 7.2.2)	Recommend addition of rule towards building institutional arrangements regarding roles and responsibilities for every state.
94	VII	7.3.1.k) (pg – 53)	Recommend rectifying the spelling to "Rural" instead of "Rral".
95	VII	7.4) (pg – 54)	For the Department of Agriculture and Farmer Welfare – suggest adding the focus on building systems to encourage self-reporting and third party audits for smaller generators supported financial incentives, technical advisory and sharing of best practice models[1] For the Role of Department of Agriculture and Farmer Welfare, suggest expanding the scope of role to include supporting the procurement of treated wastewater from near situated ULBs for reuse in agriculture [1] Expected Outcomes: • Scalability: Easier adoption of SSTS in diverse urban settings, easing pressure on centralized systems. • Cost Efficiency: Reduced costs for small users through modular, decentralized solutions. • Sustainability: Enhanced wastewater treatment and reuse at the community level, supporting circular economy goals.
96	VII	7.6.1.l) (pg – 55)	Suggest building provision for exploring appropriate public–private partnership (PPP) models and sustainable business models with time bound creation of treatment facilities, conveyance systems, distribution of treated used water, sustainable Operation and Maintenance (O&M), reuse of sludge as useful products.
97	VII	7.7.1) (pg – 55)	For the role of ULBs and PRIs/GPs, suggest adding the additional focus areas of ○ Periodic desludging of community and public toilets ○ Mandatory training of local bodies, Treatment facility operators and Desludging operators ○ Planning and introduction of explicit penalty structures for illegal dumping, improper desludging, and non- compliance. ○ Planning and implementing of clustering models for ULBs for better utilization of treatment facilities
98	VII	7.7.1.a.i) (pg – 55)	Recommend revising the clause to include comprehensive wastewater surveys documenting: • wastewater generation and disposal practices (type, size, etc) • disposal infrastructure (household units, drains, open discharge points with flow volumes), and • sewer connectivity All the above data to be spatially mapped to replace thumb rule estimates with verified data on actual water supply, consumption and disposal systems.
99	VII	7.7.2) (pg – 56)	Role of District Level Panchayati Raj Institution – suggest to increase the scope to add, "Gram Panchayats and PRIs to be empowered to penalize wastewater generators in rural areas if they do not dispose of wastewater in compliance with the guidelines provided by Central Pollution Control Board (CPCB), Ministry of Environment and Forest(MOEF), or Department of Drinking Water and Sanitation (DDWS)."

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100	VII	7.10.1) (pg – 56)	Role of Central Pollution Control Board – suggest adding the word 'conveyance' to sub point one to cover the function of the sanitation value chain
101	VII	7.10.2) (pg – 56)	To improve ease of publication, suggest that this clause be modified to entail that guidance on technologies will be in alignment to guidelines and standards issued by MoHUA-CPHEEO
102	VII	7.10.5) (pg – 57)	Suggest replacing "Chairman" with "Chairperson" from a gender inclusive lens
103	VII	7.10.6) (pg – 57)	Recommend modifying the word 'waste water' to 'wastewater and sludge/faecal sludge', since it is critical for technologies related to sludge treatment to also be reviewed.
104	VII	7.10.7) (pg – 57)	Recommend leveraging the National Urban Digital Mission platform UPYOG be extended for all the IT purposes specified in these rules as it is a platform built for such a purpose.
105	VII	7.10.8) (pg – 57)	Suggest replacing the term 'Faecal Sludge' with 'FSTP' (same can be applied to 7.10.10 and 7.10.19)
106	VII	7.10.16) (pg – 57)	Suggest replacing 'soak pits/septic tanks' to 'on-site sanitation systems such as single leach pits, septic tanks'
107	VII	7.10.21) (pg – 57)	Recommend modifying the phrases 'desludging services' to 'scheduled desludging services' and modifying 'at a three year interval' to 'at appropriate interval'
108	VII	7.10.23) (pg – 58)	Suggest that the preparation of the technology compendium be done in partnership with MoHUA-CPHEEO to leverage department's existing host of models and best practices
109	VII	7.10.24) (pg – 58)	Recommend establishing linkages with all current Government of India missions related to water and sanitation, including but not limited to SBM, AMRUT and NMCG, Jal Jeevan Mission etc. to ensure comprehensive coverage and synergy.
110	VII	7.10.26) (pg – 58)	Recommend focus on additional guidelines for technical audit, energy audit and emission audits *[open to further discussion with the NFSSM Alliance]*
111	VII	7.11.20) (pg – 59)	Under guidelines for implementation of provisions, suggest expanding scope to include energy and wastewater audits at FSTPs annually. Additionally, recommend replacing 'water' with 'wastewater'.
112	VII	Addition of rule 7.11.26)	Suggested addition of rule on roles and responsibilities of State Pollution Control Board – can look at including a focus on GHG emissions monitoring: ○ For the sanctions mentioned under sub-point 11 potential to look at setting up of Methane capture units under the role of SPCB at FSTPs/STPs to control Nitrous Oxide emissions ○ Additionally, the scope of functioning can be expanded to look at issuing Consent to Establish (CTE) and Consent to Operate (CTO) to the Wastewater treatment facilities/ FSTPs, ensuring that all effluent management activities align with the specific conditions laid down in these consents

General Recommendations
1. Policy Alignment and Governance • Recommend aligning the LWM Rules with existing **central and state-level policies** on water, environment, and sanitation. • Encourage assigning **clear institutional roles and responsibilities** across CPCB, SPCBs, ULBs, and rural bodies, including bulk user thresholds for smaller settlements. • Introduce a **periodic review and stakeholder feedback mechanism** to ensure adaptive governance and integration of emerging technologies. **2. Standards, Regulation, and Monitoring** • Recommend notifying **reuse standards** as directed by the **National Green Tribunal (NGT) (April 2022).** • Harmonize wastewater and sludge/faecal sludge treatment standards through a **CPCB-led inter-ministerial process**. • Define **monitoring and compliance protocols**, especially for decentralized and rural systems, with **simplified CTO/CTE norms**. • Encourage water quality checks beyond monthly reporting to enable **real-time, cost-effective monitoring** and reporting frameworks. **3. Capacity Building and Financing** • Build a cadre of **licensed state-level O&M personnel** to address technical gaps and enable decentralized monitoring. • Encourage **community participation, behavioural change, and awareness**, especially in underserved geographies. • Provide **financial support mechanisms**—gap funding, innovative models, and incentives—for treatment and reuse. • Promote **cost-effective aggregation of users** to shared STPs, especially in areas where conventional STPs are unviable. • Support long-term sustainability through **reuse-based markets** (e.g., Bengaluru's wastewater fee model). **4. Reuse Targets and Applications** • Develop a **clear roadmap to achieve reuse targets**, going beyond flushing and landscaping to include agriculture, lake rejuvenation, and groundwater recharge. • Recommend **phased, context-sensitive reuse targets** based on treatment capacity and alignment with national missions. **5. Technology and Innovation** • Recommend establish a **centralized system** for certification and performance evaluation of emerging technologies to filter ineffective solutions. • Promote **contextualized technology selection** that factors in lifecycle costs, city size, and infrastructure diversity. • Leverage **open-source platforms** (e.g., UPYOG, DIGIT) for real-time tracking and monitoring. **6. Climate Resilience and Sustainability** • Promote **climate-resilient infrastructure** to withstand floods, heatwaves, and storms. • Encourage **climate mitigation measures** (e.g., renewable energy, methane capture, treated water reuse) aligned with India's NDCs. • Promote **scheduled desludging** as a climate-smart sanitation service and a means to improve water quality.