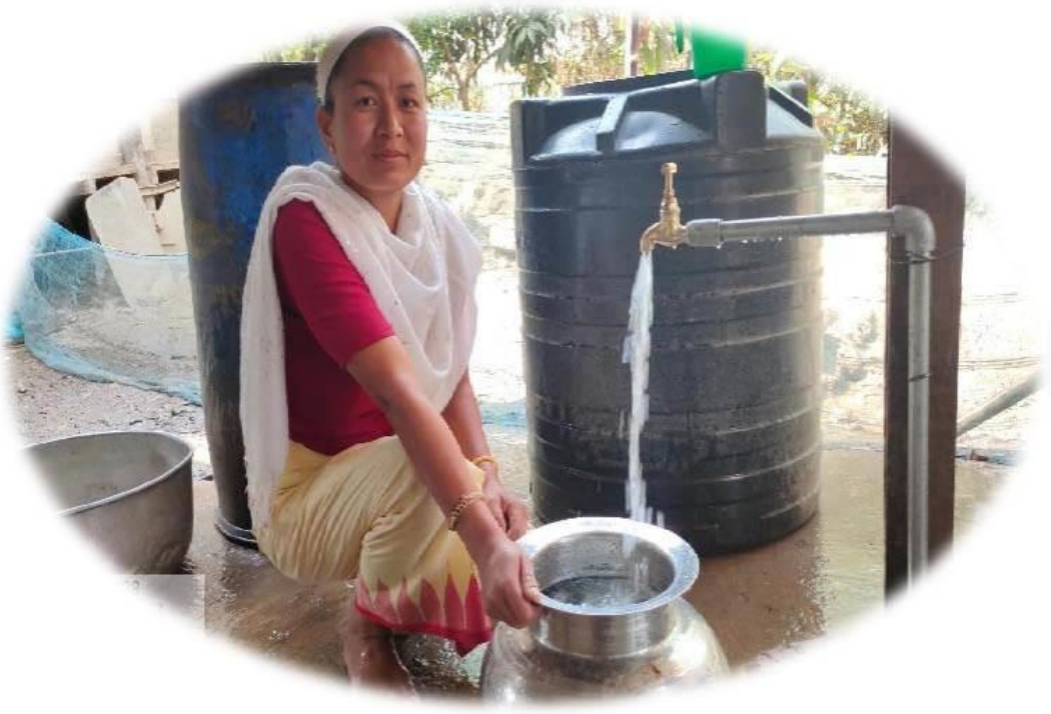
GOVERNMENT OF MANIPUR
PUBLIC HEALTH ENGINEERING DEPARTMENT



POLICY ON
OPERATION & MAINTENANCE OF
RURAL WATER SUPPLY SCHEME

STATE: MANIPUR

OM – F15.L D (RWS)

CONTENTS

Abbreviations

BIS	Bureau of Indian Standard
BCC	Behavioural Change Communication
CPHEEO	Central Public Health and Environmental Engineering Organisation
FHTC	Functional Household Tap Connection
FTK	Field Test Kit
GP	Gram Panchayat
HH	Household
HP	Horse Power
IEC	Information Education Communication
IMIS	Integrated Management Information System
IPC	Inter Personal Communication
JJM	Jal Jeevan Mission
MLD	Million Litre per Day
MSPDCL	Manipur State Power Distribution Company Limited
MVS	Multi Village System
O&M	Operation and Maintenance
PHED	Public Health Engineering Department
PRA	Participatory Rural Appraisal
PWSS	Piped Water Supply Scheme
SDG	Sustainable Development Goal
SHG	Self Help Group
SVS	Single Village System
VA	Village Authority
VWSC	Village Water and Sanitation Committee
SHG	Self Help Group
PACS	Primary Agricultural Credit Societies
MSDE	Ministry of Skill Development and Entrepreneurship
NJMP	Nal Jal Mitra Programme
WMPSC	Water Management & Plumbing Skill Council
NCVET	National Council for Vocational Education and Training
SSDM	State Skill Development Council
DSC	District Skill Committee
NSQF	National Skill Qualification Framework

Policy on
Operation & Maintenance of Rural Water Supply Scheme
Public Health Engineering Department
Govt. of Manipur

1. Introduction:

Water is one of the most essential requirements of life. Assured availability of potable water is vital for human development. With the growing population and expanding economic activities, there is an increase in demand of water in various sectors, viz agriculture, industry, domestic, recreation, infrastructure development, etc. whereas the source of water is finite. Thus, finite availability and competing demands make drinking water management a complex issue. Jal Jeevan Mission is decentralised, demand-driven, community managed and implementation of the programme will instil 'sense of ownership' among the local community, create an environment of trust and bring in transparency leading to better implementation and long term O&M of water supply systems. It will also ensure equity in accessing supply for every household and regular supply, thus creating willingness to pay for services.

The United Nation declared Sustainable Development Goals (SDGs), with Goal 6 as clean water and sanitation. It targets to achieve universal and equitable access to safe and affordable drinking water for all.

2. Need for an O&M Policy:

The success of the Jal Jeevan Mission hinges on the effective operation and maintenance (O&M) of water supply systems. O&M is the cornerstone that ensures the functionality, efficiency, and longevity of these systems. Proper O&M minimizes the risk of system failures, ensures the consistent quality of water, and optimizes the use of financial and human resources. It also plays a pivotal role in achieving the mission's objectives of equity, sustainability, and service delivery.

3. Objective:

The objective of an efficient operation and maintenance of a water supply system is to provide safe drinking water in adequate quantity of prescribed quality on regular and long-term basis at affordable service delivery charges leading to improvement in living standards of rural communities.

"Operation refers to timely and daily operation of the components of a Water Supply system such as headwork, treatment plant, machinery and equipment, conveying mains, service reservoirs and distribution system etc. effectively by various technical personnel, as a routine function."

"Maintenance is defined as the act of keeping the structures, plants, machinery and equipment and other facilities in an optimum working order. Maintenance includes preventive /routine maintenance and also breakdown maintenance. However, replacements, correction of

defects etc. are considered as actions excluded from preventive maintenance.

The primary objectives of the State/UT O&M policies are to:

i) Establish a uniform set of guidelines for the O&M of rural water supply systems across the states/UTs.
ii) Ensure the long-term functionality and sustainability of water supply infrastructure.
iii) Promote the efficient use of resources and cost-effective service delivery.
iv) Ensure community participation and ownership of water supply systems.
v) Enhance the capacity of State/ Districts/ GP/ local bodies and stakeholders to manage O&M activities effectively.

4. Background:

It has been observed that lack of attention to the important aspect of Operation & Maintenance (O&M) of water supply schemes in several villages often leads to their dysfunction or deterioration of the useful life of the systems necessitating premature replacement of many components, incurring huge losses. As such even after creating such assets by investing huge fund, they failed to provide the proper services effectively to the community for which they have been constructed and became dysfunctional or remained underutilized most of the time.

Some of the key issues contributing to the poor Operation & Maintenance (O&M) have been identified as follows:

- Lack of finance, equipment, material, and inadequate data on Operation & Maintenance.
- Inappropriate system design; and inadequate Workmanship.
- Multiplicity of agencies, overlapping responsibilities.
- Inadequate operating staff.
- Illegal tapping of water.
- Inadequate training of personnel.
- Lesser attraction of maintenance jobs in career planning.
- Lack of performance evaluation and regular monitoring.
- Inadequate emphasis on preventive maintenance.
- Lack of O & M manual.
- Lack of real time field information etc.

Therefore, there is a need for clear–cut sector policies and legal framework and a clear demarcation of responsibilities and mandates for O & M of water supply schemes.

5. Legal and Regulatory Framework:

The 73rd Amendment to the Constitution of India in 1992, has placed the subject of drinking water in the Eleventh Schedule and has assigned its management to Gram Panchayats. Article 243G of the constitution mandates States to endow Panchayats with such power and

authority so as to enable them to function as institutions of self-government and plan and implement schemes for social justice and economic development including on 29 matters listed under the Eleventh Schedule**.** Keeping this in view, under JJM, Gram Panchayats and local community will play the pivotal role in planning, implementation, management, operation and maintenance of in-village water supply systems including drinking water sources. Further, Panchayats can collect appropriate suitable local taxes and get grant in-aids to carry out its functions.

The Policy on Operation & Maintenance of rural water supply should be read in accordance with the most current versions of the following legislation and documents:

i.) Manipur Water Supply Act 1992.

ii.) Manual on Operation and Maintenance of Water Supply Systems – 2005, CPHEEO.

iii.) Operation and Maintenance manual for rural water supplies, Dept. of Drinking water and Sanitation, Ministry of Jal Shakti, Govt. of India.

iv.) Operational Guidelines for implementation of Jal Jeevan Mission, Dec. 2019, Dept. of Drinking water and Sanitation, Ministry of Jal Shakti, Govt. of India.

v.) Margdarshika for Gram Panchayat & VWSC to provide safe drinking water in rural households, Dept. of Drinking water and Sanitation, Ministry of Jal Shakti, Govt. of India.

vi.) BIS 10500:2012 Drinking Water – Specification.

6. Institutional Framework:

State Water and Sanitation Mission (SWSM) :

The SWSM would have (i) Apex Committee, (ii) Executive Committee

(I) Apex Committee

The Apex Committee would be headed by Chief Secretary of the state with Principal Secretary/Secretary in charge of PHED as the member secretary which may also be appointed as Mission Director. The main functions of SWSM Apex committee are:

i.) to provide policy guidance and will be responsible for the overall planning, strategizing, and implementation of JJM in the State;

ii.) responsible for finalization of State Action Plan (SAP) to provide FHTC to every rural household of the State;

iii.) decide water service standards;

iv.) responsible for financial planning including ensuring timely utilization of fund and no parking of fund;

v.) responsible for coordination among various Departments and other agencies for convergence;

vi.) responsible for devolution of powers empowering GP/ sub-committee of GP for management of in-village infrastructure, if not done already;

vii.) decide modalities for operation of single nodal account;

viii.) build suitable incentive and disincentive mechanism in the policy to discourage wastage of water as well as to meet recurring expenditure on bulk water, distribution network and household level supply;

ix.) bringing about effective policies & regulations for water use by other sectors, abating water contamination by industries, agricultural practices or mis-management of solid & liquid waste by individual households/ institutions;

x.) to enforce uniform policy for various uses of groundwater within the annual replenishable ground water recharge;

xi.) responsible for water allocation;

xii.) to firm up State policy on engaging dedicated human resource for ensuring water quality testing as well as surveillance using Field Test Kits

xiii.) developing O&M strategy and monthly tariff/ user charges for ensuring financial sustainability of the system/ scheme.

xiv.) decide action on unauthorized/ unmetered/ unaccounted connections to stop continued loss of water/ revenue.

(II) Executive Committee

The Mission Directors will be assisted by an Executive Committee consisting of 5-10 members. The Executive Committee of SWSM will have the following functions :-

i. Support in creation of DWSMs, ensure necessary capacity building, regular monitoring of its functioning; coordinate with DWSMs, collate information, finalize Annual Action Plans (AAPs);

ii. Monitoring of physical and financial performance and management of the water supply projects;

iii. approval for opening a single nodal account and ensure PFMS implementation;

iv. prepare and share design of different types of schemes with DWSMS;

v. promote/ support innovation, new technology wherever feasible;

vi. take up evaluation studies, impact assessment studies, R&D activities;

vii. ensure regular updates of JJM physical and financial progress on IMIS and validate the same;

viii. decide rate contracts and empanel reputed construction agencies/ vendors through centralized tendering for expeditious implementation;

ix. empanel partner NGOs/ VOs/SHGs as Implementation Support Agencies (ISAs);

x. engage third party inspection agencies for inspection of work before payment;

xi. finalize State Information, Education and Communication (IEC)/ Behavioural Change Communication (BCC) strategy. Ensure effective utilization of the earmarked support fund for IEC activity;

xii. prepare capacity building action plan for personnel at various levels of the mission and monitor its implementation, arrange Training of Trainers (ToTs), IEC material use, etc.;

xiii. ensure that Utilization Certificates (UCs), Audited Statement of Accounts (ASA), etc. are submitted to Government of India on time;

xiv. sharing of reports, success stories, best practices on IMIS and within State and disseminate through State social media accounts;

xv. conduct campaigns across State that are initiated by both Central and State governments;

xvi. recognize well performing Districts, Gram Panchayat and/or its sub-committee, i.e. VWSC/Paani Samiti/User Group, etc., ISAs from time-time and develop policy to encourage them;

xvii. create and maintain digital inventory of JIM assets on a GIS platform;

xviii. decide on state-specific slogans for introducing JJM, wall paintings based on the number of houses in a village and areas where it will be painted.

District Water and Sanitation Mission (DWSM):

At the district level, DWSM is responsible for overall implementation of JJM. DWSM will be headed by Deputy Commissioner/ District Collector (DC) with Executive Engineer, PHED/RWS Department as member secretary.

The main functions of DWSM will be as follows:

i) ensure preparation of VAP after taking stock of each village for FHTCs;

ii) finalize a District Action Plan (DAP) to provide FHTC to every rural household;

iii) ensure availability of funds for source sustainability works and greywater management in villages through convergence;

iv) identify villages requiring ISA support.

v) approve the Village Action Plans (VAPs) that would contain the estimate for in-village infrastructure and award of work

vi) help in formation of sub-committee of Gram Panchayats, i.e. VWSCs/ Paani Samitis/ User Groups, etc. and handhold to ensure scheme implementation;

vii) coordinate with Gram Panchayat and/ or its sub committee, i.e. VWSC/ Paani Samiti/ User Group, etc., collate information, prepare District Action Plan (DAP).

viii) converge with PMKVK to create a pool of skilled human resource to be engaged by Gram Panchayat and/ or its sub-committee, i.e. VWSC/ Paani Samiti/ User Group, etc. for creating in-village infrastructure under JJM.

ix) ensure regular updates of JJM physical and financial progress on IMIS and validate the same;

x) monitor and evaluate physical and financial performance;

xi) facilitate deployment of NGO/ VO/ CBO partners as Implementation Support Agencies (ISAs);

xii) implement IEC/ BCC strategy and ensure effective utilization of the earmarked support fund for the same;

xiii) approve and share reports, success stories, best practices on JJM IMIS and within district;

xiv) conduct all campaigns with respect to JJM initiated by both Central and State governments;

xv) recognize well-performing Gram Panchayat and/ or its sub-committee, i.e. VWSC/ Paani Samiti/ User Group, etc. and ISAs from time-time;

xvi) analyze data on health indicators, water-borne diseases, etc. for corrective action;

xvii) arrange exposure visits for Gram Panchayat and/ or its sub-committee, i.e. VWSC/ Paani Samiti/ User Group, etc. functionaries, wherever required;

xviii) ensure state-specific slogans are wall painted in prescribed format across villages as part of JJM introductory programme;

xix) step-in in times of calamities like drought/ flood;

xx) grievance redressal;

xxi) ensuring that all information is placed on IMIS.

Gram Panchayat/Village Authority (VA) and/or its sub-committee, i.e. Village Water and Sanitation Committee (VWSC)/ Paani Samiti/ User Group, etc.

Refer section 8 A of this document.

7. Service delivery and utility development:

The planning for the Mission would be based on the long-term plan for the State water supply sector as a whole and will address the issues pertaining to water security and sustainability of sources and systems. This will require the current administrative structure to transform to 'utility based' based approach. There is a need to shift focus from water supply infrastructure creation to water management, viz. service delivery. The approach, inter alia includes sustainable O&M of the systems, undertaking water budgeting and audits at regular intervals, cost recovery, reducing the energy charges by adopting conjunctive use of water as well as use of conventional and non-conventional energy specifically solar, measuring the water drawl and accounting for the same, addressing the grievances proactively, etc. Further, the long-term plan for the sector needs to be firmed up on the basis of the strategy drawn for ensuring water availability and financial sustainability.

8. Roles and Responsibility of different stakeholders under proposed O&M Policy:

A. Gram Panchayat/Village Authority (VA) and/ or its sub-committee Village Water and Sanitation Committee (VWSC)/Paani Samiti/User Group, etc.

It is envisaged under JJM that the community will play a lead role in planning, implementation, management, operation and maintenance of in-village water supply infrastructure thereby leading to FHTCs to every rural household. The willingness of community, reflected through Gram Sabha resolution and community contribution, will be the foremost criterion for planning of water supply system in villages. GP/VA and/or its sub-committee, i.e., VWSC/Paani Samiti/User group etc. will function as a legal entity as envisaged in the 73rd Amendment to the Constitution. Wherever the sub-committee is chosen, i.e., VWSC/ Paani Samiti/ User Group, etc. it may be headed by Sarpanch/ Up-Sarpanch/ GP member/ traditional village head/ senior village leader as the Gram Sabha may decide. It may consist of 10-15 members comprising elected members of Panchayat/Village Authority up to 25% of the composition; 50% women members (key to success); and remaining 25% may consist of representatives of weaker sections of the village (SC/ST) proportional to their population. Ordinarily, tenure of sub-committee may be kept at 2-3 years and Gram Sabha during the JJM period will have option to reconstitute the subcommittee. Gram Panchayat/Village Authority/VWSC has to firm up and collect water tariff/user charges.

The Gram Panchayat/Village Authority and/ or its sub-committee, i.e., VWSC/ Paani Samiti/ User Group, etc. will discharge the following functions:

i) Provide FHTC to every existing rural HH and any new HH that may emerge in future, and ensure that scattered households located away from main settlements may also get FHTCs;
ii) Plan, design, implement, operate and maintain the in-village water supply schemes and decide seasonal supply hours;
iii) Mobilize and motivate the community to contribute 5% of in-village infrastructure capital expenditure, as the case may be. The contribution may be in the form of cash and/ or kind and/ or labour;
iv) Open bank account for community contribution and depositing O&M service charge. In case an existing account is being used, it should be ensured that a separate ledger is to be maintained for contribution and incentive;
v) Create and maintain register for accounts which should reflect community contribution in terms of cash and/ or kind and/ or labour; costs towards construction; O&M costs/ water tariff collection and incentive received;
vi) Mobilize community for PRA activities;
vii) Firm up and collect water tariff/ user charges;
viii) Will be responsible for management and regular O&M of water supply system including local water sources;
ix) Record drinking water asset details in GP/ village asset register;
x) Facilitate trials runs on scheme completion;
xi) Hold periodic meetings at least four times in a year and maintain minutes/ record of the same;

xii) Ensure water quality testing using Field Test Kits (FTKs), periodic testing at laboratories & disseminate the same among community and undertake sanitary inspection. Engage/ train rural youth/ students/ women to carry out these activities;

xiii) Undertake social audit;

xiv) Conduct awareness campaigns on judicious use of water, come up with mechanisms to ensure no misuse of water and ensure prescribed IEC campaigns including wall-paintings, etc.

xv) Hire/arrange pump operator, barefoot technician, attend regular repair and maintenance work, and operate the system.

B. Public Health Engineering Department:

The Public Health Engineering Department (PHED) as decided by State Government will be the line/ nodal Department for the implementation of Rural Water Supply Scheme in the State. The Department would also be providing guidance for fixing the tariff for recovery from village households, coordinate with other Departments for source sustainability and greywater management, data entry in IMIS, data handling, etc. The role of Public Health Engineering Department (PHED) are as follows:

i) Follow prescribed guidelines and create necessary water supply infrastructure to facilitate supply of safe drinking water by providing FHTCs to all household.

ii) Participate in PRA activities, firm up need assessment of villages and provide technical help in preparation of VAP.

iii) Provide scientific and technical inputs to Gram Panchayat/Village authority and/ or its sub-committee, i.e., VWSC/ Paani Samiti/ User Group, etc. in identifying drinking water sources & carry out trial run and facilitate scheme commissioning;

iv) Identify existing assets that can be retrofitted;

v) Obtain statutory/legal and other clearances for execution of works, wherever required;

vi) Capture details of assets existing/ created and geo-tag them;

vii) After completion of the water supply scheme and ensuring its functionality to benefit the rural population, Public Health Engineering Department will hand over the scheme to the respective VWSC.

viii) After handing over the schemes to VWSC, the necessary capacity building and orientation training shall be conducted by Public Health Engineering Department.

ix) Training of women and SHG for testing of water samples using FTK.

x) Ensure linking of existing FHTCs to head of the household through Aadhar as part of baseline mapping;

xi) Assistant Engineer/Junior Engineer of respective Sub-Division will overall provide technical guidance for O&M whenever required and will represent the Department as joint account holder of VWSC.

xii) Provide design for a fenced "Water Work" complex housing the in-village infrastructure and suggest suitable name as per local context.

xiii) Public Health Engineering Department will initiate time to time monitoring and evaluation on the functionality of the scheme as well as service delivery. Public Health Engineering Department will remain responsible to bridge the gap, if any, while ensuring the functionality of the scheme, as per the Departmental mandate.

9. Establishing Roles and Responsibilities:

A clear role for the O&M of piped water services is mandatory. Particularly at the village level, they need to delineate between the day-to-day service provider (Anurakshak/Jaldoot/Pump Operator) and the local body (VWSC/WUC/WIMC/Pani Samiti) to manage the O&M and make the former accountable to the latter. For example, even if the O&M is contractor-led, the pump operator employed by the contractor needs to be accountable to the VWSC.

10. Preparation of Plan:

A program or a plan has to be prepared for operation and maintenance of every major unit to be specifically written for that particular unit. The overall operation and maintenance plan of an organisation is made up of collecting operation and maintenance programmes of various individual units. This plan has to contain procedures for routine tasks, checks and inspections at intervals viz. daily, weekly, quarterly, semi-annually or annually. The individual plans must be prepared for all units and all pieces of equipment. Each unit must have a plan to fix responsibility, timing of action, ways and means of achieving the completion of action and contain what objectives are meant to be achieved by this action. Generally, actions recommended by the manufacturer or by the engineer who has installed the equipment or who has supervised the installation can be included. Often the contractor's recommended operation and maintenance procedures at the time of design or construction will be a good starting point for writing a sound programme. This plan has to be followed by the operation and maintenance staff and also will be the basis for supervision and inspection and also can be used for evaluation of the status of operation and maintenance. If the labour costs for operation and maintenance are high compared to replacement cost, the latter course of action will be preferable. The managers shall realize that most of the operation and maintenance can be carried out without more staff. The existing operation and maintenance staff with little training can do the operation and maintenance work without any extra expense. Similarly, record keeping and analysing does not require any additional cost.

11. Training:

The personnel who are already available or chosen to carry out the actions contained in the programme may have to be trained through special courses or by "on the job training" to ensure

that these personnel are thoroughly trained to carry out the actions listed in the plan of maintenance. This training is essential to prevent experimentation by operating personnel to meddle with equipment since often these operating personnel may not be capable to take up the required maintenance. On the job training is preferred to class room training.

12. Maintenance of records:

The necessity for good maintenance records is often overlooked. The maintenance plan programme contains as to what should be done and when. But to decide as to how long equipment is to be allowed to be kept in service requires information as to when it was installed, what is its normal life etc. Budgets for operation and maintenance can be prepared only on the basis of records of previous years' maintenance.

Good record system shall include the following minimum information to ensure the required maintenance.

1. Name of equipment and location of equipment
2. Number available or installed
3. Serial number
4. Type and class
5. Date of procurement/installation
6. Cost of procurement and installation
7. Name of manufacturer with address and telephone No.
8. Name of distributor/dealer if purchased through them with address and telephone number.
9. Name of servicing firm with address and telephone number.
10. Service manuals
11. Descriptive technical pamphlets
12. Major overhauls: Details of date, nature of cost
13. When next overhaul is due.
14. Date, type and cost of repairs and replacement
15. Cost of spares and cost of labour for repairs

13. Water audit:

There are considerable losses in the water produced and distributed which leads to reduction in the income of the utility. Some of these losses are physical leakage of water and some are revenue losses. Hence a water audit will be required to be done to get fairly accurate figures of the following - Water production, Water assessed, Losses both Physical and revenue. Water audit could lead to prioritizing actions required to reduce the physical and revenue losses.

14. Energy audit:

Energy charges account for approximately 50 to 70% of the total O&M cost. Hence an efficient use of power and reducing wastage of power will go a long way in efficient functioning of the utility. This could be achieved by a systematic energy audit which can identify the possible

means to save energy and reduce power consumption.

15. Public awareness:

The consumers must be made to understand that potable water is not a free commodity and that it is a value-added commodity with cost implications. The quality of people's lives often depends on what the water utilities do and how they do it. The objective of any programme for public awareness is to achieve better customer relations, greater water conservation, and enhanced organizational credibility.

16. O&M Models:

Operation and Maintenance (O&M) models for water supply schemes are critical for ensuring the sustainability and reliability of water services in rural areas. These models outline the responsibilities and mechanisms for maintaining water supply infrastructure, from the source to the end user. The models vary from decentralized approaches, which involve local community groups, to centralized methods managed by government departments or contractors. Each model has its own set of advantages and challenges, and the choice of model often depends on the specific context, including the scale of the water supply scheme, available resources, and community engagement. The following section details the suggestive O&M models for single village schemes and multi-village schemes, highlighting the different approaches to managing and maintaining rural water supply systems.

Single Village Schemes

i.) Entire O&M of scheme is done by VWSC / Water user group / core group or entity (e.g ward panchayat) authorized by VWSC / gram panchayat with handholding and technical support by PHED / line department in-charge of rural drinking water supply (Decentralized approach).
ii.) Entire O&M of scheme is done by the contractor appointed by PHED / line department in charge of rural drinking water supply (centralized outsourced approach).
iii.) O&M is done entirely by the PHED/ line department (centralized departmental approach).

From the evidence available elsewhere, it is clear that the first model is likely to be sustainable and likely to have lower user charges. The second and third model may be adopted only when the first model cannot be made functional and feasible.

Multi Village Schemes

i.) O&M of the complete water supply infrastructure including water tanks, disinfection system, underground water tanks, pumping machinery, electrical systems, distribution network from source to villages, in-village water supply network is done by cluster

federation of VWSCs of the villages included in the multi village scheme with hand holding support by PHED / line department in charge of rural drinking water supply (Decentralized approach).

ii.) Entire O&M of distribution network from source to villages and in-village water supply network is done by a contractor appointed by PHED / line department in charge of rural drinking water supply (centralized outsourced approach).

iii.) Entire O&M of distribution network from source to villages is done by contractor appointed by PHED / line department and entire O&M from village entry point onwards across the entire in village water supply distribution network is done by each VWSC (Hybrid approach).

iv.) Entire O&M of distribution network from source to villages and from village entry point onwards across the entire in village water supply distribution network is done by PHED / line department (centralized departmental approach).

Models where communities have greater share in O&M may be preferred over the other models as they are likely to be less expensive to households and sustainable.

17. Source sustainability:

17.1 Prioritizing source sustainability in piped water schemes

- Elevate source sustainability as a primary mission, necessitating measurable targets and concerted efforts at the local level.

17.2 Enhancing village capacities for sustainable management

- Capacity issues at the village level have hindered efforts to sustain water sources like groundwater or springs, jeopardizing the longevity of piped water schemes.
- The Village Water and Sanitation Committees (VWSC) and panchayats should actively involve local educational institutions need to build local capacities for accessing scientific information and implementing sustainable water management practices. A special programme on this may be initiated with required budgetary support.
- MGNREGA's focus on various developmental tasks and VWSC's water sustainability goals, need to converge where source management initiatives can be part of MGNREGA.
- At the local level, watershed approach may be followed to undertake water budgeting through appropriate institutional mechanism and the implications regarding the water supply to individual villages should be communicated periodically. The village committee should be responsible for monitoring and operationalising this framework. The water budget shall be revised periodically.
- A strong policy on Information, Education and Communication (IEC) is required, and periodic activities such as *Jal Chaupal* (Water Forum) to be conducted to sensitize local communities, share knowledge and generate awareness on source

sustainability, water conservation, and possible local-based solutions by engaging all stakeholders.

- To achieve long-term sustainability of water sources, it is imperative to establish a comprehensive framework that encompasses a wide array of strategies and practices. There must be prioritization of the conservation and efficient utilization of water resources, safeguard against over-extraction, and mitigate the impacts of environmental variability. The guidelines set forth herein are designed to guide communities, policymakers, and stakeholders in the implementation of sustainable water management practices. These measures are critical for maintaining the balance of natural water cycles and fulfilling the water needs of both human populations and ecosystems.

- **Source Protection:**
  - Establish and enforce legal limits on the amount of water that can be extracted from any given source, ensuring it does not exceed 70% of the available water.
  - Implement strategies to manage the land surrounding the water source, which may include afforestation, controlled grazing, and agricultural practices that minimize soil erosion and runoff.
  - Ensure that infrastructure such as intake structure, weirs, and reservoirs are well-maintained to prevent leaks, breaches, and other issues that could compromise the water source.
  - Sustainable Water Management Practices: Promote practices such as rainwater harvesting, groundwater recharge, and watershed management to ensure the long-term viability of water sources.
- **Alternate source development:** Identify or develop alternate sources of fresh water at local level such as ground water, surface water, springs etc.

18. Financial Sustainability:

Operation & maintenance is important for ensuring functionality of household tap connections. O&M would involve recurring costs like electricity charges, chemical costs, expenditure on preventive and breakdown maintenance, remuneration of pump/ water supply scheme operator, etc. It is envisioned that an empowered and enlightened rural community and PRIs is likely to take responsibility of ensuring a basic service for drinking water supply sector on long term and sustainable basis.

At present, energy cost is borne by the State Government. The successive Finance Commissions have recommended recovery of user charges for the provision of water supply services and revision of their rates commensurate with inflation so that atleast the full O&M cost of providing these services is recovered. Therefore, the responsibility of bearing the energy cost may

be reviewed from time to time. The VWSCs has to ensure that households pay monthly user charges for water and sanitation services to cover O&M expenditure for long-term sustainability.

The VWSC shall prepare monthly and annual O&M budget for the Water Supply Schemes. Post-paid meter are to be provided by Manipur State Power Distribution Company Limited (MSPDCL) vide Office Order 3/2015/MSPDCL-Com/Misc/4013-19 dated 4th September, 2015 (copy enclosed as Annexure-I) to avoid grievances / inconveniences faced by general public.

Necessary alert before disconnection of power supply to any PWSS should be given in case of any default on the part of VWSC/Consumer.

The tentative estimates of monthly O&M expenses in most generalised terms for different PWSSs are given as below:

Annexure-I

(1) SVS **(Oinam Sawombung)**

No. of HH = 514 HH
Plant capacity = 0.2 MLD

Sl no.	Item	Monthly Expenditure (in Rs.)	Remarks
i)	Electricity/Energy Cost(Post Paid Unmetered)	Rs 64,360.25	Vide Bill ID-BILL_16970973347090 Dt 12/10/2023
ii)	Preventive maintenace	Rs 10,000.00	Anaysed rate
iii)	Breakdown maintenance	Rs 10,000.00	Anaysed rate
iv)	Payment for O & M Staff(Wages)	Rs 22,320.00	3nos. @ Rs 248/day/no. as per Orders No. 22/4/2009-FD(PIC) Dated 03/01/2017
v)	Chemical costs	Rs 6,314.40	Approved Rate

Monthly expenditure = Rs 1,12,994.65
Say, Rs 1,12,995.00

(2) SVS **(Khangabok)**

No. of HH = 1033 HH
Plant capacity = 0.6 MLD

Sl no.	Item	Monthly Expenditure (in Rs.)	Remarks
i)	Electricity/Energy Cost(Post Paid Unmetered)	Rs 64,360.25	Vide Bill ID-BILL_16970973347090 Dt 12/10/2023
ii)	Preventive maintenace	Rs 10,000.00	Anaysed rate
iii)	Breakdown maintenance	Rs 10,000.00	Anaysed rate
iv)	Payment for O & M Staff(Wages)	Rs 29,760.00	4nos. @ Rs 248/day/no. as per Orders No. 22/4/2009-FD(PIC) Dated 03/01/2017
v)	Chemical costs	Rs 18,943.20	Approved Rate

Monthly expenditure = Rs 1,33,063.45
Say, Rs 1,33,063.00

Assistant Engineer-V
Thoubal PHE Division
PHED Manipur

Executive Engineer
Thoubal P.H.E. Division
P H E D, Manipur

Even for large MVS (Multi Village Scheme) which will require substantial financial resources for O&M, considering the large number of households covered, it would be financially feasible to recover the O&M expenditure with regular collection of user charges.

User Charges Norms:

Considering the various factors on collection of user charges, VWSC may refer the norms as per order No.20/1/2020-PHE dated 19th August, 2020 on revision of rate for water tariff (Copy enclosed as annexure no. II) which may be updated from time to time. For water supply schemes under Jal Jeevan Mission, every effort should be made to generate revenue to cover O&M expenses and any surplus amount should be credited to the state account.

VWSC/ Paani Samiti/ User Group, etc. will open an account to receive funds for O&M from different sources such as incentive fund from JJM, Finance Commission grants and community contribution, any other sources to meet the recurring charges. Management and O&M of the water supply scheme by the VWSC/ Paani Samiti/ User Group, etc., recovery of user charges and full O&M recovery will form the cornerstone of the long-term sustainability of the scheme.

Financial Budgeting:

Financial budgeting of water supply schemes under the Jal Jeevan Mission (JJM) at the GP/ village level involves anticipating and allocating funds for regular expenses to ensure the sustainability of water services. The VWSC shall prepare monthly and annual O&M budget for the water supply schemes. Expected expenses include:

i.) Routine Maintenance Costs: Expenses for regular upkeep, such as cleaning, minor repairs, and replacement of small components.

ii.) Periodic Maintenance Costs: Costs for scheduled major repairs or replacements that occur less frequently, such as pump overhauls or pipe replacements.

iii.) Operational Costs: Daily operational expenses like electricity for pumping, treatment chemicals, and human power.

iv.) Emergency Fund: A reserve for unforeseen breakdowns or natural calamities that impact the water supply infrastructure.

v.) Capacity Building: Awareness, Training and skill development for local operators and maintenance personnel.

Incentive for community:

The Gram Panchayat and/ or its sub-committee, i.e., VWSC/ Paani Samiti/ User Group, etc. are eligible to receive the incentive when the scheme has been successfully managed for a year ensuring that every rural household covered under the scheme receives water in adequate quantity of prescribed quality on regular basis and water tariff for O&M has been regularly collected.

The incentive will be 10% of the in-village infrastructure cost distributed in a phased manner

over a period of five years. The incentive fund will serve as a revolving fund for meeting any urgent repair costs of in-village infrastructure which might disrupt water supply and the same will be replenished by community. The incentive fund will be provided out of the fund available with the State under JJM (Centre and State matching share) in the prevailing funding pattern.

Financial Audit:

An operation and maintenance financial audit of a rural water supply system assesses the financial management, efficiency, and sustainability of water services. The audit helps ensure accountability, transparency, and long term viability.

Scope of the audit will include:-

- Review of financial records (revenues, expenses, budgets and funding).
- Examination of operation and maintenance activities (water treatment, distribution, repairs, staff costs).
- Analysis of governance and management structures (water committees, local government involvement).
- Compliance with regulations, tariffs, and contractual obligations.
- Performance assessment of cost recovery and financial sustainability.

19. Penal Provisions:

Penal provisions as well as conditions for discontinuation of Water Supply would be under the provision prescribed under Manipur Water Supply Act 1992 which may be amended from time to time.

20. New Connections:

Department is responsible for establishing the procedures for issuing new connections to various types of consumers, including households, commercial entities and institutional users which will involve standardizing the sizes of connection etc.

With the provision of FHTCs, additional greywater will be generated at household level which will need treatment before it can be utilized for agriculture and non-potable uses. In many areas, the treated greywater can be a reasonable source of revenue for the Gram Panchayat and/ or its sub-committee, i.e. VWSC/ Paani Samiti/ User Group, etc. which can be utilized towards meeting part of O&M expenditure.

21. Support Activities:

There is a need to spread awareness and sensitize communities on judicious use of water, community contribution and ownership, build capacities of GP and/ or its sub-committee, i.e. VWSC/ Paani Samiti/ User Group etc. to plan, implement, manage, operate and maintain in-village

infrastructure, focus on setting up long-term sustainable institutional mechanisms, build skills of various human resources required, viz. masons, plumbers, electricians, motor mechanics, pump operators, etc. These activities will help in developing responsible and responsive leadership among communities ensuring long-term sustainability of the water supply systems.

IEC strategies, planning and their effective implementation will be the key to success. IEC activities such as PRA activities, Inter Personal Communication (IPC), Behavioural Change Communication (BCC) and all other related communication activities are to be undertaken.

22. Capacity Building and Community Engagement:

22.1. Preparation and Implementation of Capacity Building Plan for GPs/VWSCs on O&M

Effective Operation & Maintenance (O&M) of rural water supply systems requires enhanced technical, financial, and managerial capacities of Gram Panchayats (GPs) and Village Water & Sanitation Committees (VWSCs). The Public Health Engineering Department (PHED), in collaboration with local authorities, will focused on a structured capacity-building plan to equip these institutions with the necessary skills and knowledge to sustain rural water supply systems.

22.2 Identification of Training Needs

A survey may be needed to assess the knowledge gaps and training requirements of GPs and VWSCs regarding O&M. The assessment will cover:

- Preventive and corrective maintenance of rural water supply infrastructure.
- Water quality monitoring, testing, and safety measures.
- Financial management, tariff collection, and budget planning.
- Community-led monitoring and complaint redressal mechanisms.
- Sustainable water conservation and source protection strategies.

22.3 Development of Training Modules

To ensure effective learning, user-friendly training modules may be developed even in local languages in the line of Margdarshika for Gram Panchayat & VWSC and Operational guidelines published by NJJM. The modules may focused on:

- Basics of water supply system operation, including pumps, pipelines, reservoirs, and valves.
- Routine maintenance procedures and minor repair techniques.
- Water quality testing and simple purification methods.
- Best practices for financial sustainability through community-based tariff collection.
- Roles and responsibilities of GPs and VWSCs in O&M governance.

22.4 Implementation Strategy for Capacity Building

The following steps may be followed for implementing the capacity-building plan:

- Training of Trainers (ToT): A core group of master trainers from PHED and District Water and Sanitation Committees (DWSCs) will be trained first.
- District-Level Training Workshops: Organized by PHED, these workshops will involve hands-on demonstrations for VWSC members.
- On-the-Job Training: Practical sessions will be conducted at the village level for direct engagement with water supply infrastructure.
- Refresher Courses: Training may be repeated preferably every six months to keep members updated with emerging O&M best practices.
- Peer Learning: Experienced VWSC members from well-functioning villages may be paired with underperforming committees for knowledge exchange.

22.5 Use of Digital Tools for Capacity Building

Modern technology will be leveraged to improve knowledge dissemination among GPs/VWSCs. Mobile based application, WhatsApp based support group, e-learning platform shall be introduced on various aspects of O&M wherever feasible.

22.6 Monitoring & Evaluation of Capacity Building

To ensure the effectiveness of capacity-building efforts, a monitoring framework may be established:

- VWSCs will submit progress reports to PHED and DWSCs.
- Assessment of participation rates and knowledge retention among trained members.
- Annual impact assessments may be conducted to measure improvements in water supply management due to capacity-building initiatives.

22.7 Involvement of GPs/VWSCs in Mass Awareness Activities

Public participation is essential to sustain rural water supply systems. GPs and VWSCs will play a key role in leading awareness campaigns to promote water conservation, sanitation, and hygiene practices within rural communities.

Community outreach activities may be conducted to educate the public on:

- The importance of regular O&M in ensuring continuous water supply.
- Household water conservation techniques.
- Safe drinking water practices and hygiene.
- The necessity of paying user charges for system maintenance.
- The role of VWSCs in complaint redressal and service monitoring.

23. Water Conservation, Wastage, and Distribution Management:

23.1 Water Conservation Measures

A. Protection of Water Sources and Recharge Measures

- Construction of check dams, percolation ponds, and recharge wells to enhance groundwater levels.
- Protection and revival of natural springs through afforestation and soil conservation.

Rainwater Harvesting:

- Implementation of household and community-level rainwater harvesting to supplement water supply.
- Construction of rooftop rainwater collection systems in schools, health centers, and government buildings.

B. Demand-Side Water Conservation

- Encouraging the use of low-flow taps, dual-flush toilets, and water-efficient irrigation techniques.
- Conducting community awareness programs to encourage judicious use of water in households and agriculture.

23.2 Prevention of Water Wastage

- Regular inspection and immediate repair of leaks in pipelines, storage tanks, and distribution networks.
- Development of village-level maintenance funds to facilitate quick repairs.
- Implementation of zoning techniques in larger villages to optimize pressure distribution.
- Installation of pressure-reducing valves in high-altitude areas to prevent pipe bursts.
- Routine monitoring by Village Water and Sanitation Committees (VWSCs) to detect excessive usage and wastage.
- Introduction of household-level water meters to promote responsible consumption wherever feasible which will in the future scope of PHED.

Household Awareness and Compliance:

- Penalty for excessive water usage beyond the household quota to discourage wastage.
- Incentivizing water-efficient households through rewards and recognition programs.

23.3 Equitable Water Distribution

A. Ensuring Fair Allocation of Water Resources

- Every rural household to be provided with a minimum of 55 liters per capita per day (LPCD).
- Priority distribution for vulnerable groups, including women-led households and schools may be encouraged.

Prevention of Overconsumption:

- Implementation of household-level supply quotas to prevent excess withdrawal by a few families.

B. Infrastructure to Ensure Equal Access

- Overhead tanks must have equal outlet distribution points to prevent low-pressure zones.

24. Wastewater and Grey Water Management:

24.1 Safe Disposal Systems

- Installation of individual soak pits at household for greywater disposal may be encouraged.
- Construction of lined drains to safely collect and direct wastewater away from drinking water sources.

Scientific Sewage Disposal Systems:

- Promotion of septic tanks with soak pits for household-level sanitation.
- In larger villages, Decentralized Wastewater Treatment Systems (DEWATS) may be encouraged to handle wastewater.

Village-Level Drainage Systems:

- Construction of lined open drains leading to treatment or disposal sites.
- Avoidance of direct wastewater discharge into natural water bodies without treatment.

24.2 Reuse of Treated Water

- Use of natural treatment systems to filter greywater before reuse in agriculture.

24.3 Regulatory Compliance and Monitoring

- Inspections to prevent wastewater illegal discharge.

Community-Led Reporting of Pollution and Contamination:

- Establishing a grievance redressal mechanism to report unsafe disposal practices.
- Train community members on O&M best practices and ensure proper drainage management.
- All wastewater disposal and reuse systems must comply with State Pollution Control Board guidelines.
- Regular public health surveys to identify risks associated with poor wastewater management.

25. Asset and Inventory Management:

Various assets related to Water Supply Systems such as Intakes, Transmission lines, Water treatment plant, Zonal reservoir/Service reservoir, Distribution network, Meter & monitoring system etc. have been created in the state.

It is very critical/important that mapping of these assets is done for planning, designing for future expansion, daily operation and maintenance to provide safe and adequate water supply and also for maintaining a comprehensive asset inventory and its management.

So use of GIS is required for maintaining both spatial and non-spatial data of these assets with necessary updates from time to time. These data should be maintained at both divisional and controlling authority level.

26. Water Quality Framework:

Water testing is important for monitoring the operation of water supply, verification of the safety of drinking water, investigation of disease outbreaks, validation process and preventive measures. Water quality testing tools need to be used for deciding safety of drinking water: at the source; within a piped distribution system; or at the end of consumer.

Drinking water quality monitoring and water quality surveillance are distinct yet, closely related activities. The drinking water quality will be monitored by the PHED whereas the surveillance of water quality at grass roots will be responsibility of the GPs/ rural community.

Monitoring of water quality involves laboratory and field testing of water samples collected from water sources and FHTCs. Facility of laboratories for Water quality monitoring of rural areas already set up at State/ District/ level will be used.

Every Gram Panchayat and/ or its sub-committee, i.e., VWSC/ Paani Samiti/ User Group, etc. is to identify and train five women in every village to undertake surveillance activities. Water quality surveillance is undertaken with the local community as per the specified timelines. The water quality surveillance activities include:

i.) Use of FTKs at GP level to know the extent of contamination and refer the positively tested samples to the nearby water quality testing laboratory for confirmation; and

ii.) Sanitary inspection: an investigative activity to identify and evaluate factors associated with drinking water that may pose a risk to health. The inspection takes care of prevention and detection of risks and help in taking timely remedial action before public health problems occur. Also, identification of the sources of outbreaks of water-borne disease get known timely and corrective action as may be required get taken promptly.

Water quality standard and parameters will be as per BIS 10500:2012 and frequency of testing will be as per prescribed guidelines. Guidelines and Drinking water quality monitoring & surveillance framework of Ministry of Jal Shakti, Department of Drinking Water & Sanitation, published from time to time shall be referred.

27. Zero Leakage Policy:

A **Zero Leakage Policy** in water supply refers to a strict approach aimed at eliminating water loss due to leaks in distribution networks. It involves proactive strategies such as:

1. **Leak Detection & Monitoring** – Using advanced technology like smart meters, acoustic sensors, and satellite imaging to identify leaks early which will be in the future scope of PHED.
2. **Preventive Maintenance** – Regular inspections and timely repairs to prevent leaks before they become significant.
3. **Pipeline Rehabilitation & Replacement** – Upgrading old or damaged pipes with more durable materials.
4. **Pressure Management** – Controlling water pressure to minimize stress on pipes and reduce the risk of leaks.
5. **Public Awareness & Reporting** – Encouraging consumers to report leaks and promoting water conservation.
6. **Legal & Regulatory Compliance** – Enforcing strict policies on infrastructure maintenance and water loss reduction.

A zero-leakage policy helps in conserving water, reducing operational costs, and ensuring sustainable water management. Water Audit will be required to figure out the losses to reduce the physical and revenue losses.

28. Schedule of Supply:

A Reliable Schedule of Water Supply ensures that water is available to consumers in a predictable and consistent manner. Key factors for achieving reliability include:

1. **Infrastructure & Network Management**
    - Well-Maintained Pipelines.

- Adequate Storage Facilities.
- Pressure Management.

2. **Demand & Supply Planning**
    - Accurate Demand Forecasting: Predicting usage patterns helps optimize distribution.
    - Equitable Distribution: Allocating water based on population density and consumption needs.

A reliable schedule ensures water conservation, customer satisfaction, and efficient resource management. At present the department is having intermittent water supply system with supply mainly during morning and evening with a specific time schedule in co-ordination with VWSCs.

29. Emergency Response and Disaster Resilience in Water Supply Systems

Water supply systems are vulnerable to natural disasters (floods, droughts, earthquakes, landslides, cyclones) and man-made emergencies (contamination, infrastructure failure, sabotage.

29.1 Emergency Preparedness Measures:

- Conduct vulnerability mapping of water sources, treatment plants, pipelines, and reservoirs.
- Create a risk register for villages prone to landslides, floods, or seasonal water shortages.

29.1.1 Infrastructure Resilience Measures

Flood Resilience:

- Elevated storage tanks in flood-prone areas.

Drought Resilience:

- Strengthen rainwater harvesting, groundwater recharge, and alternative water sources.

Emergency Water Storage:

- Reserve 20-30% of storage capacity for emergency use.

29.1.2 Emergency Water Supply Planning

- Identify and pre-designate emergency water sources (wells, boreholes, tankers, filling stations).
- Spare pumps, pipes, valves, and repair kits.
- Develop backup power sources (solar, diesel generators) for pumping stations.

30. Handing and Taking over of Water Supply Schemes:

Handing and taking over of completed water supply schemes shall be as per Annexure – III.

31. Monitoring and Evaluation of O&M activities:

All O&M activities are to be monitored regularly by the respective stakeholders and monthly reports shall be submitted to the respective Assistant Engineer (PHED) for necessary perusal.

32. Grievance Redressal Mechanisms:

Implementing robust grievance redressal frameworks ensures prompt resolution of consumer complaints at household, community, and GP/VWSC levels. It should include easier complaint receiving process, responsibilities of individuals/agencies in addressing the grievance along with timeline, escalation procedures and penalties. A complaint register shall be maintained as per format in proforma –II. Measures to allow filling of complaint online is on the pipeline for better accessibility and convenience of the general public.

33. Primary Agricultural Credit Societies (PACS), Women SHGs, Co-operative societies as O&M agencies :

Recognising the need for community engagement and ownership for the rural drinking water supply infrastructure, the completed water supply schemes should preferably be handed over to Panchayat/Village water and sanitation committee (VWSC) /Paani Samiti for O & M and that the panchayats may be advised to engage Women Self Help Group (SHGs) in the villages for collection of user charges and to allow the SHGs to retain the funds so collected for development of O & M personal and carrying out minor repair etc. Supports are also being provided for training and capacity building of the VWSCs/ Paani Samitis/ SHGs through implementation support agencies and for creating a pool of skilled resource personal at Village level by leveraging the structure and framework of skill development mission with funding from JJM. Women SHGs have the necessary community connect that is critical for successfully carrying out the tasks of O & M.

The primary Agricultural credit societies (PACS) and other Co-operative societies also have good grass root connections. The PACS and other Co-operative societies may also have the necessary capacities for successfully carrying out the O & M activities and therefore offer a good option for their engagement in O & M of the PWS. Wherever these Co-operatives are so identified, necessary support in capacity buildings skilling etc. may also be extended. Options may also be provided to Panchayats for engaging PACS and other co-operative societies as O & M agencies for rural PWS.

34. Human Resources and Skilling

Nal Jal Mitra Programme:

Department of drinking water & sanitation (DDWS) in collaboration with the Ministry of Skill Development and Entrepreneurship (MSDE) has developed the Nal Jal Mitra Programme (NJMP). It

is envisaged that implementation of the NJMP shall lead to assured availability of multiskilled person in the villages, who can be engaged by the Panchayats/VWSCs and the SHGs engaged in O & M of the piped water supply schemes in the rural areas.

NJMP envisages multi-skilling of local people in rural areas, covering various essential skill sets, including Plumbing, Electrical work, Masonry, Pump Operations, and other allied skills. The course has been designed by Water Management & Plumbing Skill council (WMPSC), after extensive stakeholder consultations, and has been approved by skill regulator viz. the National Council for Vocational Education and Training (NCVET), as a National Skill Qualification Framework (NSQF) aligned level 4 course.

Guidelines for implementation of the Nal Jal Mitra Programme has been published. Some key features of the NJMP for your quick reference are the following:

I. The NJMP is to be implemented with the convergent efforts of the State Water & Sanitation Mission (SWSM) and the State Skill Development Mission (SSDM), which would act as the Project Implementing Agency (PIA), Nomination of candidates from Panchayats and their mobilization of skilling shall be the responsibility of the SWSM. The two Missions must work in close coordination, both at the state and the district level, to ensure seamless implementation.

II. States/UTs have the flexibility to decide the number of candidates at village and panchayat level. However, it is advised that at least one, and preferably two persons should be trained and certified for each panchayat, under the NJMP.

III. District Collectors/ Deputy Commissioners shall have to provide leadership for implementation of the Programme in their district and to ensure coordination between the DWSM and the District Skill Committee (DSC).

IV. Extant norms, including costs are indicated in the guidelines. The Common Norms notified by MSDE shall be applicable wherever norms are not explicitly indicated in the guidelines.

V. Selection and nomination of candidates must be carried out by the Gram panchayats as the trained NJMs are envisaged to be engaged by the Panchayats. State/UT must decide and advise Panchayats on the mode of engagement of NJMs post successful completion of training.

VI. NJM trainings are to be financed from the Fifteenth Finance Commission (FFC) tied grants for water and sanitation in states and through alternative sources in UTs that are not receiving FFC grants. It is advised that going forward, all skilling efforts may be organized through the NJMP.

VII. The Water Management & Plumbing Skill Council (WMPSC) will be the Awarding Body for certification of skilled beneficiaries, and also responsible for conducting Training of Trainers and Assessors. The Planning and Coordination for conduct of assessments through NCVET recognized Assessment Agencies shall be in coordination with the WMPSC.

VIII. It is recommended that permanent vocational centers approved by MSDE or other Central Ministries/Department, including, State-run institutions like ITIs and Polytechnics, PMKKs, RSETIs (MoRD), School or College based Skill Hubs, etc. may be leveraged for skill delivery. State/UTs are to prepare a training plan commensurate with their needs for achieving the minimum desired results, i.e. at least one trained person for each Panchayat.

IX. The training lifecycle shall be mapped on the Skill India Portal which will also enable real time monitoring of implementation across the country, in addition to the physical monitoring by the respective SSDMs.

X. NJJM shall provide the further necessary clarifications on any issue pertaining to NJMP, in consultation with MSDE.

35. Technology and Innovation:

The integration of advanced technologies in Operation & Maintenance (O&M) enhances efficiency, transparency, and sustainability in rural water supply systems. Technologies such as IoT sensors, SCADA systems, mobile applications, and data-driven management systems will help improve monitoring, reduce losses, and ensure better service delivery which will be a future scope in rural water supply of the state wherever feasible. State PHED have also initiated solar based water supply system.

36. Command and Control Centre & Performance Monitoring:

Effective monitoring and management of rural water supply systems require a centralized Command and Control Centre (CCC) at the district level. This ensures real-time performance tracking, early fault detection, and efficient water distribution management.

36.1 Centralized Monitoring System

Establishment of District-Level Command and Control Centres (CCC):

- Dedicated Water Supply Monitoring Centers to be set up at the district headquarters under the Public Health Engineering Department (PHED) in collaboration with district administration.
- Integration of IoT sensors, SCADA systems, GIS mapping and smart meters will be future scope for PHED wherever feasible.

Proforma - I

LOG BOOK FOR OPERATION OF PUMP OF WATER SUPPLY SCHEMES

Name of the District :

Name of the Block :

Name of the GP/VA :

Name of the Village :

Name of the VWSC :

Name of the Water Supply Scheme with capacity in MLD :

Pump HP :

Date of installation of Pump :

Date	Pumping hour		Observation		Electrical Meter Reading		Cause for Non-Operation of Pump	Remarks	Signature of Pump Operator
	From	To	Voltmeter	Amps	From	To			
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*

Signature of VWSC representative.

Proforma - II

COMPLAINT REGISTER

Name of the District :

Name of the Block :

Name of the GP/VA :

Name of the Village :

Name of the VWSC :

Name of the Water Supply Scheme with capacity in MLD :

Sl. No.	Date	Name of the Consumer (Complainant) with address and Phone number	Nature of complaint	Date of attending complain with remarks	Signature of the VWSC representative
1	*2*	*3*	*4*	*5*	

Manipur State Power Distribution Company Limited
OFFICE OF THE MANAGING DIRECTOR
Manipur, India.

3/2015/MSPDCL-Com/Misc/ 4013 - 19 4th Sept, 2015

OFFICE ORDER

Reference: -

1. No. 12/10/2014-FR (23), dated 30th April, 2015 (Finance Dept., Govt of Manipur)
2. No.3/2015/MSPDCL-Com/Misc/1063-70, dated 5th May, 2015 (MSPDCL, Manipur)
3. No.CE/PHE/3-12 (EC)/2014-15/1521, dated 24th Aug, 2015 (PHED, Govt. of Manipur)

All the Deputy General Manager of 14 Revenue Divisions are hereby informed that Water Pump/Water Supply Zonal Reservoir under PHED and Hospital under Medical Directorate of Government of Manipur should be provided with Postpaid Meter to avoid grievances/inconveniences faced by general public. However, Prepaid Energy Meter installation in all Government offices including administrative offices of PHED and Medical offices should continue.

(R.Sudhan,IAS)
Managing Director
MSPDCL

Copy to:-

1. The Executive Director, MSPDCL
2. GM (Commercial), MSPDCL
3. GM (EC-I/II/III), MSPDCL
4. The Chief Engineer, PHED, Govt of Manipur
5. The Medical Directorate, Govt of Manipur
6. Manager, Commercial (Corporate)
7. File concerned

GOVERNMENT OF MANIPUR
SECRETARIAT : P.H.E. DEPARTMENT

ORDERS BY THE GOVERNOR: MANIPUR
Imphal, the 19th August, 2020

No.20/1/2020-PHE: In exercise of powers conferred under the provision of the Manipur Water Supply Act, 1992 (Manipur Act No.1 of 1993) and in supersession of all previous orders issued in this regards, the Governor of Manipur is pleased to order the revision of rate for water tariff as detailed below:

Sl. No.	Type of water connection	Revised Rate per connection
1	Domestic individual connection	Rs. 250 per month
2	*Hospital:*	
	(a) 25 to 50 beds	Rs. 2,000 per month
	(b) 50 to 100 beds	Rs. 3,000 per month
	(c) Above 100 beds	Rs. 4,000 per month
3	Hostels upto 100 rooms 2 occupancy	Rs. 3,000 per month
4	Restaurants upto 100 seats	Rs. 2,400 per month
5	Hotels upto 100 rooms 2 occupancy	Rs. 5,000 per month
6	(a) School and College	Rs. 800 per month
	(b) Office	Rs. 1,500 per month
7	Cinema Hall, Concert Hall, Theatres	Rs. 1,000 per month
8	*Industries Establishment/Workshop:*	
	(a) Small Scale Industry (upto 20 Workers)	Rs. 300 per month
	(b) Medium and Large Industry (above 20 workers)	Rs. 1,500 per month
9	Public Hydrant	Rs. 600 per month
10	*Tanker Supply:*	
	(a) 8,000 Litres Capacity	Rs. 700 Tanker per Trip
	(b) 9,000 Litres Capacity	Rs. 750 Tanker per Trip
	(c) 10,000 Litres Capacity	Rs. 800 Tanker per Trip
11	Supply of Private Tanker from treatment Plant	Rs. 12 per 1000 Litre
12	Bulk Supply Through Pipe Connection	Rs. 15 per 1000 Litre

2. Since, fixing of water prices and collection of water tariff had already been developed in the Autonomous District Council in the hill Districts, these new prices will be applicable only in those area beyond the jurisdiction of the Autonomous District Council.

3. The new rate of water tariff shall be effective w.e.f. 20.08.2020. Also, the water tariff would be enhanced @5% (Five per cent) every 3(Three) years, effective from 1st January of every 4th year, commencing from 01.01.2024.

By Orders & in the name of the Governor,

(Nidhi Kesarwani)
Commissioner(PHE),
Government of Manipur

Annexure-III

HANDING & TAKING OVER NOTE/AGREEMENT

1. Name of Scheme:
2. Installed Capacity:
3. Type of Scheme:
4. Population to be benefitted:
5. Number of Households :

TERMS AND CONDITIONS:

(A) Role of Public Health Engineering Department (PHED)

1. Provide technical guidance for operation and maintenance of the scheme
2. Help to conduct health & hygiene awareness campaign.
3. Provide water Connection Order on application by consumer with due verification by the VWSC.
4. AE/JE shall represent the department as a member of the VWSC.
5. Issue of no due certificate for any official purpose.

(B) Role of Village Water and Sanitation Committee (VWSC), Water Supply Scheme

1. Collect funds through tariff system for operation & maintenance (O & M) of the scheme.
2. Open a joint bank account with the Assistant Engineer/Junior Engineer of the PHE Division to manage the funds collected through tariff system of O&M.
3. Manage & finance the O&M of the scheme including minor repairs of the scheme on the suitable basis under the guidance of the Executive Engineer, PHE Division.
4. Empower women/ASHA/SHG for day today awareness & affairs of the scheme.
5. Take the responsibility of conservation & protection of water source i/c protection of catchment area and also protection of water supply infrastructure and its land.
6. Water levy to be fixed from time to time in consultation and with the approval of the PHED, Govt. of Manipur.
7. Engagement of persons for day today O&M of the scheme is to be minimum. These persons will not have the right to claim for any appointment to the department.
8. Engagement fee/emolument/incentive of the persons engaged for day-to-day operation is to be made from the VWSC fund and otherwise in kind & voluntary basis.
9. Water connection shall be made with the prior approval of the PHED.
10. The committee shall be fully responsible for day-to-day operation & running of the water supply scheme under the guidance of the PHED.
11. The term of the committee shall be for a period of 2 (two) years from the date of constitution of the Committee.
12. Social auditing of the committee account shall be done once in every three months.

NB: (a) The terms and conditions may be amended from time to time in consultation between the two parties (PHED & VWSC).

(b) The Executive Engineer PHED/Member Secretary, District Water and Sanitation Mission has the right to keep the Agreement /VWSC non operative/dissolved in case of any dispute.

Place:
Date:

Signature of Chairperson/President
Village Water and Sanitation committee,
Water Supply Scheme.

Executive Engineer
PHED, Manipur

In presence of Secretary
Village Water and Sanitation committee,
Water Supply Scheme.

In presence of Assistant Engineer

END