



IMPLEMENTATION GUIDELINES

PRADHAN MANTRI RASTRIYA KRISHI VIKAS YOJANA-PER DROP MORE CROP (PMRKVY-PDMC)



TELANGANA MICRO IRRIGATION PROJECT (TGMIP)

**DEPARTMENT OF HORTICULTURE
GOVT. OF TELANGANA**



Non-Negotiables for implementation of Micro Irrigation Project

- 1) DHSOs should give wide publicity to the Micro Irrigation - Per Drop More Crop scheme (TGMIP) of the PMRKVY (Pradhan Mantri Rashtriya Krishi Vikas Yojana) in newspapers / Electronic Media etc., and by conducting the awareness programmes at village level in coordination with line departments i.e., Agriculture, PR & RD, etc.
- 2) Registration of applications online is mandatory.
Registration of MI applications shall be done through Mee-Seva Centres and in TGMIP online portal or through OTP to Aadhar linked mobile no. only and PPB is mandatory.
- 3) The Farmer Registration Screen is made available in all Mee-Seva centers and through TGMIP online portal for facilitating easy registration to farmers and transparency in the registration.
- 4) Aadhar is mandatory for every individual irrespective of age of the individual for new Registrations.
- 5) Declaration from farmers regarding “survey No., Details of Bore well, its discharge, Electricity Connection, Pressurized systems, Details of lease of land if any, and Non availment of subsidy, secure the MI system for 7 years. I will be held responsible for any mis-utilization of MI system should be obtained on Bond paper worth of Rs.20/- at the time of submission of hard copies of completion certificate, invoices etc.
- 6) Preference may be given to Small and Marginal Farmers, SC/ST/BC/Women and differently abled (PH) farmers.
- 7) DHSOs should ensure that at least 25% of the financial target allocated to the District must be earmarked to Agriculture crop sector in drip including Sugar cane, Sericulture etc.
- 8) DHSOs must ensure that, at least 50% of budget allocation and targets should be earmarked exclusively for SF/MF farmers.
- 9) Preference shall be given to the cases under convergence with the schemes / Departments such as NMEO-OP, MIDH, RD and Agriculture Department etc.
- 10) Approval of District Mission Committee (DMC) is must for issue of administrative sanctions for implementation of the scheme.

- 11) Every aspect from Registration of applications, progress reports, generation of BOQs to releases shall be through online only.
- 12) DHSOs & MI companies should ensure the land suitability, assured water source, energization before issue of Administrative sanctions.
- 13) The beneficiaries should have Aadhar linked bank account preferably having Real Time Gross Settlement (RTGS) transfer facility.
- 14) DHSOs/HOs must ensure verify Bore Well discharge, Power availability, Water and Soil suitability before giving Administrative Sanctions for above 1 ha which is mandatory.
- 15) The Micro Irrigation Company is responsible for bench mark survey, design, installation, correctness of extent of area, quantities of the components. Utmost care should take in survey and design of the MI system and it must be designed as per Bore Well discharge, power availability (hours per day) and water requirement of the crop.
- 16) Priority shall be given to individual families rather than members of same family group (family is a unit comprising of wife, husband and minor children). Preference to be given to the new farmers.
- 17) Horticulture Extension Officer (HEO) / Horticulture Officer (HO) should ensure 100% inspection at the time of preliminary survey by verifying the power supply, functional water source, discharge of bore well, cropping pattern and water requirement of the crop. After installation of MI systems, 40% random field verification should be done by MI Company State Coordinator. At the time of final inspection HO should ensure that the installations are done as per the designs submitted by the MI Company.
- 18) DHSOs, HO should inspect before sending proposals for Final payments of the completed installations as mentioned below:
 - ❖ HEO / HO – 100% Mandatory Preliminary Inspection
 - ❖ HO – 100% Mandatory Final inspections
 - ❖ APD – 50%
 - ❖ DHSO – 25%

The inspections should be done at random (in case of DHSO & APD) covering all MI Companies and the jurisdiction of all HO on each payment. The DHSO & APD has to complete the % of Random Inspections indicated above and enter the same online in the screen provided for this purpose.

- 19) Monitoring the implementation and review of the programme should be done on a monthly basis by District level and Mandal level monitoring committees.
- 20) Micro Irrigation Companies should conduct extensive awareness campaigns, trainings, After Sales Service and should give acid treatments, fertigation & irrigation schedules, automation etc., on a monthly basis. In oil palm plantations, they should guide the farmers in placing the micro jets and advise pulse irrigation instead of continuous irrigation.
- 21) Micro Irrigation Companies should make available service centers in all Districts in the State at least one at every Division Headquarters.
- 22) Crop Manual (containing crop wise agronomical, irrigation and fertilizer schedules) in Telugu should be printed by the Micro Irrigation Companies and handed over to the farmers after installation of Micro Irrigation System along with other certificates etc.
- 23) Supply of Fertigation equipment i.e., Ventury is mandatory with every installation of Drip System.
- 24) One Drip lateral Roller for each drip beneficiary farmer is optional. The cost of drip lateral Roller @ Rs.1530.84/- is included in unit cost of drip system.

1. INTRODUCTION

In 2006, the Government of India launched a Centrally Sponsored Scheme (CSS) on Micro Irrigation to promote efficient water use in agriculture. Since its inception, the scheme has been implemented under various flagship programs. From 2010–11 to 2014–15, it was carried out under the National Mission on Micro Irrigation (NMMI). During 2014–15 to 2015–16, it was subsumed under the National Mission for Sustainable Agriculture (NMSA). Subsequently, from 2015–16 to 2021–22, it was implemented as part of the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) under the “Per Drop More Crop” (PDMC) component. From 2022–23 onwards, the scheme is being continued under the Pradhan Mantri Rashtriya Krishi Vikas Yojana (PMRKVY) – Per Drop More Crop, further strengthening efforts to enhance water use efficiency and agricultural productivity.

Micro Irrigation (Per Drop More Crop), will be implemented by TGMIP, Horticulture Department. The components under PMRKVY-Per Drop More Crop are:

1. Drip irrigation for wide spaced crops (Online)
2. Drip irrigation for closed spaced crops (Inline).
3. Micro sprinkler
4. Mini sprinkler
5. Sprinkler systems
 - ❖ Portable
 - ❖ Semi-permanent
 - ❖ Rainguns

2. IMPORTANT GUIDELINES TO IMPLEMENT THE PROGRAMME

2.1 Plan of action

- 2.1.1** The physical and financial targets should be strictly adhered to without any deviation under each component.
- 2.1.2** DHSOs should achieve the target allotted with the existing subsidy pattern for Drip and 65% subsidy (limited to 1 ha) for Portable Sprinkler.
- 2.1.3** Achievement of targets both physical and financial under SCSP (16.05%) and TSP (9.55%) is mandatory and at least 25% for Backward Class farmers & Not exceeding 10% of financial target shall be covered by other farmers (2-5 ha).
- 2.1.4** The Component wise & Category wise targets for Drip and Sprinklers communicated by Head Office have to be followed by each district and by each MI Company.
- 2.1.5** DHSOs should ensure that atleast 25% of the financial target allocated to the District must be earmarked to Agriculture crop sector in drip including Sugarcane, Sericulture etc.

2.2 Norms

- 2.2.1** The Farmer Beneficiaries who have already availed the benefit of Micro Irrigation cannot avail further assistance for the same land, for the next 7 years.
- 2.2.2** Priority shall be given to individual families rather than members of same family group (family is a unit comprising of wife, husband and minor children). Preference to be given to the new farmers.
- 2.2.3** In Addition to TGMIP guidelines, additions for MI in Oil Palm, are applicable as per GO Ms. No. 25, Dt: 29.06.2021 of the A&C(H&S) Dept, Govt of TG.
- 2.2.4** The registered beneficiary should be sensitized and awareness programmes are to be conducted on utilizing the MI system. MI Companies must ensure land suitability, assured water source and energization at time of benchmark survey, preliminary inspection, BOQ inspection etc., by visiting farmers fields and should submit applications

based on such suitability only to DHSOs office for Administrative sanction. DHSOs to ensure the land suitability, assured water source and energization before issue of Administrative sanctions.

2.2.5 The beneficiaries should have live Aadhar linked bank account preferably having Real Time Gross Settlement (RTGS) transfer facility.

2.2.6 Selection of MI Company is the choice of the beneficiary and it should be within the MI Suppliers allotted to the district.

2.2.7 GPS has to be invariably used to find out the exact location of the installations and appropriate extent of the field. Coordinates at water source shall be recorded as land mark. These coordinates should be noted in Bench mark survey report and Beneficiary application. These coordinates should be invariably checked during preliminary and final inspection by the inspecting authorities. Coordinates should be obtained at all corners and bore well point and the same should be entered in online BMS Report.

2.2.8 Proposed and installed area should be tallied invariably with the Geographical Positioning System (GPS) with a margin of (+) or (-) 5% variation.

2.2.9 The DHSOs should maintain separate registers for issue of Administrative Sanctions & Final Sanctions applications to HOs for verification. The date of issue and date of return should be noted in the register for verification by the inspecting officers.

2.2.10 Sanction of mobilization advance and proceedings for release of final payment should be done as per the seniority of the master register while submitting the BOQ and invoice respectively by MI Companies.

2.3 Online Process

2.3.1 Online process should be done in their respective logins only i.e.,

- ✓ Benchmark survey and Bill of Quantities (BOQ) by MI Supplier.
- ✓ Approval of BOQ by MIE & DHSO.
- ✓ Approval of proposals by DHSO.

2.3.2 The process flow of implementation of Per Drop More Crop programme should be done through online only i.e. registration of beneficiary

through Mee-seva/ TGMIP online portal, preliminary inspection, BOQ generation, Bench mark survey report, mobilization advance, invoice, commissioning and completion report, Micro Irrigation Engineer (MIE) approval, Horticulture Officer-Tech (HO (T)) approval, DHSOs approval, generation of Final Sanction proceedings and payments to MI Companies.

2.3.3 The District wise progress will be considered through online reports only. The DHSO has to update the Jurisdiction details of Horticulture Officers in DHSO login of TGMIP Portal to facilitate generation of HO wise Reports.

2.4 Random inspections by the District Team

2.4.1 DHSOs, HO should inspect before sending proposals for Final payments of the completed installations as mentioned below:

- ❖ HEO / HO – 100% Mandatory Preliminary inspections
- ❖ HO – 100% Mandatory Final inspections
- ❖ APD – 50%
- ❖ DHSO – 25%

by the DHSO. The inspections should be done at random (in case of DHSO & APD) covering all MI Companies and the jurisdiction of all Hos on each payment. The DHSO & has to complete the % of Random Inspections indicated and enter the same online in the screen provided for this purpose.

3.A. TIME LINES FOR IMPLEMENTATION OF THE PROJECT

S. No	Process flow	Timeline	Responsible Officers/ Personnel
1	Wide publicity through advertisement at state level in 2 leading prominent newspapers.	-	DHSO
2	At present Registration of the applications is done at Mee-seva centres / TGMIP online portal. The DHSO should maintain the day wise seniority list of applications.	Immediately after receipt of application	Mee Seva & Suptd.,of DHSO office.
3	The applications which were already registered in the TGMIP online portal and applications through Mee-seva should be scrutinized and verified or finalization of the Beneficiaries.	(2) days after receipt of applications	HO(T), APD, Accountant and Superintendent, MIE & DHSO
4	Preliminary inspection	Within (7) days after scrutiny	Beneficiary, HO, MI company Representative
5	Benchmark Survey, BOQ & Design Collection of farmer Contribution	Within (7) days after completion of Preliminary inspection	Beneficiary, HO, MI Company
6	Submission for 10% Administrative sanction.	Within (10) days after submission of BMS, BOQ & Design	MIE, Suptd., & DHSO
8	Generation of individual proceedings and Transfer of BC to concerned MI Companies along with	Within (3) days after Issue of Administrative Sanctions.	MIE & DHSO

S. No	Process flow	Timeline	Responsible Officers/ Personnel
	proceedings.		
9	Trench Marking	Within (7) days after issue of Individual Proceedings	MI Company
10	Trenching	Within (18) days after Trench marking	Beneficiary MI Company to Coordinate
11	Installation of MI Systems	Within (15) days after Trenching by the Beneficiary	MI Company
12	Submission of Invoice & other required documents for Final payment in DHSOs office	Within (7) days in full shape after completion of Installation	MI Company
13	Final Inspection	Within (7) days after submission of invoice	Beneficiary, HO & MI company Representative
14	Random Inspection	Within (10) days after completion of Final inspection	APD & DHSO
15	Final Payment		Immediately after completion of random inspection. The DHSO should obtain approval of District Collector and submit to head office for payments.

The entire process of installation of MI System right from preliminary inspection to final payment shall be completed within 120 days

3.B. TIMELINES FOR DRIP INSTALLATIONS TO OIL PALM PLANTATIONS

S. No	Process flow	Timeline	Responsible Officers / Personnel
1	Wide publicity through advertisement at state level in 2 Leading Prominent newspapers.	Throughout the year	DHSO & Horticulture Officers
2	At present Registration of the applications is done at Mee-seva centres/TGMIP online portal. The DHSO should maintain the day wise seniority list of applications.	Immediately after receipt of application	Mee-Seva & Suptd., of DHSO office.
3	The applications which were already registered in the TGMIP online portal and applications through Mee-seva should be scrutinized and verified for finalization of the Beneficiaries.	(1) day after receipt of applications	HO (T), APD, Superintendent, MIE & DHSO
4	Preliminary inspection	Within (2) days after scrutiny	Beneficiary, HO, MI company Representative
5	Bench Mark Survey, BOQ & Design Collection of farmers Contribution	Within (3) days after completion of Preliminary inspection	Beneficiary, HO, MI company
6	Submission for 10% Administrative sanction.	Within (3) days after submission of BMS, BOQ & Design	MIE, Suptd., & DHSO
7	Generation of individual proceedings and Transfer of BC to concerned MI Companies along with Proceedings.	Within (2) days	MIE & DHSO

S. No	Process flow	Timeline	Responsible Officers / Personnel
8	Trench Marking	Within (1) days after issue of Individual Proceedings	MI Company
9	Trenching	Within (5) days after Trench marking	Beneficiary
10	Installation of MI Systems	Within (5) days after Trenching by the Beneficiary	MI Company
11	Submission of Invoice & other required documents for Final payment in DHSOs office	Within (2) days in full shape after completion of Installation	MI Company
12	Final Inspection	Within (2) days after submission of invoice	Beneficiary, HO & MI company Representative
13	Random Inspection	Within (3) days after completion of Final inspection	APD & DHSO
14	Final Payment	Within (1) day	Immediately after completion of Random Inspection. The DHSO should obtain approval of District Collector and submit to Head Office for Payments.

The entire process of installation of MI System right from Registration of application to Final Payment should be completed within 30 days exclusively for Oil Palm Plantation as per the revised time lines.

3. METHODOLOGY OF IMPLEMENTATION OF THE PROGRAMME

3.1 Selection of Beneficiary

3.1.1 Definition of beneficiary:

3.1.1.1 The term “Beneficiary” under the project is defined as “every land holder, who possesses own land or leased land for a period of atleast for the projected life of the irrigation system (7 years) for the purpose of growing crops and who has a water source fitted with a pumping unit, either own or shared.” The tenant farmer should submit registered lease agreement for atleast (7) years.

3.1.2 Definition of family:

3.1.2.1 Family is a unit comprising of wife, husband and minor children

3.1.3 Definition of beneficiary categories:

3.1.3.1 Farmers with holding up to 2.5 acres of dry land or 1.5 acres wet land are defined as Marginal farmers.

3.1.3.2 Farmers with a holding upto 5 acres dry land or upto 2.5 acre of wet land are defined as Small farmers.

3.1.3.3 Farmers with land holding above 5acres dry land or above 2.5 acres of wet land are defined as other farmers.

3.1.4 Selection of beneficiaries:

3.1.4.1 The DH&SO is responsible for organizing awareness campaigns in potential Villages, Mandals to sensitize, motivate and convince beneficiaries to take up MI System on priority & 100% coverage of villages declared as Over Exploited villages by Groundwater Dept.

3.1.4.2 The team comprising the officers of Horticulture & Sericulture Department and allied departments (Agriculture, Sugar cane, Oil fed, Co-operative societies and ITDA Departments) and representatives of MI companies may visit all potential villages very frequently to sensitize the beneficiaries. The team may conduct a detailed village wise survey involving the elected representatives of Panchayat and Revenue officials and prepare a list of eligible beneficiaries and their applications should submit in the MPDOs office etc., as mentioned in time line point 3, along with details of land holdings, crops being grown / to be grown.

3.1.4.3 CONVERGENCE WITH OTHER DEPARTMENTS

- a. 100% convergence with Oil palm, MIDH, RKVY, & State Plan programmes.
- b. Convergence with SC Corporation for 100% Coverage of SC farmers having assured irrigation for all the crops.
- c. Convergence with Tribal Welfare, ITDA & MADA for 100% coverage of ST farmers having assured irrigation for all the crops.
- d. Convergence with RD and Agriculture Department.

3.1.4.4 The Registration of the applications shall be done by the farmer through Mee-seva centres/TGMIP online portal wherein unique ID number will be generated.

Registration can be done through oil palm app also wherein HPOP ID will be generated and sent to TGMIP portal

3.1.4.5 After registration, the Farmer / MI Company / HEO / HO shall submit the hard copies of the applications along with required documents submitted by the farmer to the DHSO.

3.1.4.6 Beneficiary may indicate choice of MI Companies (3 No.s) in the order of priority at the time of registration for installation of MI system.

3.1.4.7 A preliminary inspection has to be conducted by both MI supplier and HEO / HO of TGMIP jointly / separately so as to ascertain the eligibility such as ownership of the beneficiary over the proposed land, energy connection, assured water source with required pumping system, suitability of the soil, water etc. to submit a report in the prescribed proforma.

3.1.4.8 It is Mandatory for the Horticulture Officer Concerned to take up Final Inspection.

3.1.5 Order of Preference for the selection of Beneficiaries

3.1.5.1 Priority shall be given to SC, ST/ BC farmers Marginal, Small and Women & PH farmers.

3.1.5.2 Priority shall be given to separate individual families rather than the member of the families of the same family group (Family is a unit comprising of wife, husband and minor children).

3.1.5.3 Preference to be given to the new farmers.

3.1.5.4 Preference shall be given to the cases under convergence with the schemes / Departments such as NMEO-OP, MIDH, RKVY, State Plan, RD and RAD, Agriculture Department etc.

3.1.5.5 Persons with disabilities shall be accorded priority in the implementation of the scheme.

3.1.5.6 Every application submitted by the beneficiary whether it is accepted or rejected should be kept separately for future reference and record.

3.1.6 Determination of Beneficiary category:

3.1.6.1 The total land holdings of the farmer as per the Title Deed shall determine the category of farmers.

3.1.6.2 In case of tenants, the extent of land held by the owner / Registered Lease holder atleast for 7 years shall determine their eligibility category not exceeding 5 ha limit either by Owner / Lessor.

3.1.6.3 In the absence of title deed, other documents like attested copy of the Registered Sale Deed along with the Encumbrance Certificate from the Registration Department, shall determine the category of the Beneficiary Farmer, duly taking the total land holdings of the farmer into consideration.

In the selection of beneficiaries, not less than:

- a. 16.05% of the total financial target shall be covered by SC farmers under SCSP.
- b. 9.55% of the total financial target shall be covered by ST farmers under TSP.
- c. Not less than 25% of total financial target shall be covered by BC farmers.
- d. Not less than 50% of the total financial target shall be covered SF/MF farmers.
- e. Not exceeding 10% of financial target shall be covered by other farmers (more than 5 acres land holding/2-5 ha)

3.1.7 Area limit:

The area will be restricted to a farm size of 5 ha / 12.5 acres per each family. Beneficiaries who have already availed the benefit of the scheme cannot avail further assistance for the same land for the next 7 years.

3.2 Subsidy pattern:

Government of India have revised the Operational Guidelines under PM-RKVY which are follows:

Sl.No	Category	Sub Category for TG	As per Gol Subsidy (%)	Funding pattern (%)				Subsidy provided in Telangana (%)
				GOI Share (60)	Manda- tory State Share (40)	Additi onal State Share	Total State funding	
1	2	3	4	5	6	7	8	9
Drip Irrigation System								
1	SF/MF	SC, ST, MMF*	55	33	22	35	57	90
2		BC, Others				25	47	80
3	Others	SC, ST, MMF*	45	27	18	45	63	90
4		BC				35	53	80
5		Others				25	43	70
Portable sprinkler irrigation system								
6	SF/MF	All categories	55	33	22	10	32	65
7	Others		45	27	18	20	38	65

* Minority Marginal Farmers (MMF) target for first 1000 beneficiaries

Note: from year 2026-27 onwards in case of Drip – differential subsidy as per GO Ms.No.18, dt: 17.02.2026, A&C(H&S) Dept, Govt of TG shall be followed as shown below.

"All category farmers in revenue village irrespective of their economic status are eligible for Drip Irrigation / Micro Irrigation systems up to 5 ha or land holding possessed by the farmers in Title Deed, whichever is less, with the following subsidy pattern:

- ❖ **All SC /ST Farmer are eligible for 90% subsidy.**
- ❖ **All BC, SF, MF farmers are eligible for 80% subsidy.**
- ❖ **All other farmers are eligible for 70%.**
- ❖ **Portable Sprinklers for all category farmers are eligible for 65% subsidy limited to 1 ha, unit only.**

3.3 Documentation required for release of Mobilization advance:

3.3.1 Prescribed application form available in TGMIP website (Annexure-1) shall be followed in all Districts.

- 3.3.2** Application form duly incorporating the Aadhar linked bank account with IFSC code, details with the latest passport size photo. The contact number of the beneficiary is mandatory.
- 3.3.3** All columns should be filled in every application.
- 3.3.4** Copy of the Title Deed or 1(B) Register or Pattadar Pass Book duly attested by the Deputy Tahsildar / Tahsildar
- 3.3.5** Wherever the original Title deeds are in the custody of bank, a Photostat copy of the same duly attested and endorsed by the bank manager may be accepted.
- 3.3.6** In the absence of Title Deed, other documents like attested copy of the Registered Sale Deed along with the Encumbrance Certificate from the Registration Department, shall determine the category of the Beneficiary Farmer, duly taking the total land holdings of the farmer into consideration.
- 3.3.7** Copy of the combined sketch / FMB (Field Measurement Book) if available.
- 3.3.8** In case of Lease agreements DH&SO must personally examine and inspect to ensure genuineness.
- 3.3.9** Copy of Aadhar Card / Ration card / Electoral Photo Identity Card / Passbook of PACS / Bank passbook / Driving License / Passport etc.
- 3.3.10** In case of water sharing cases, water sharing certificate duly signed by HEO, by both farmers & MI Company and certified by HO, must see whether water from sharing bore/open well can cater for original & sharing land or not.
- 3.3.11** Copy of Caste certificate attested by any Gazetted officer in case of SC/ST & BC farmers.
- 3.3.12** After survey, the MI Company should submit Bench Mark survey report and Bill of Quantity (BOQ) and GPS polygon sheet. These are mandatory for issue of Administrative sanctions.
- 3.3.13** Remittance of Non-subsidy amount should be given in the form of DD / UTR No. (if paid through online)
- 3.3.14** Preliminary inspection report (PIR) along with the photograph of farmer, HEO, MI Company representative and land marks in back drop should be submitted by HEO in the prescribed format.

- 3.3.15** The checklist for sanction of Mobilization advance is at Annexure-9.
- 3.3.16** While processing the application in DH&SOs office, it should be ensured that the beneficiary has not availed subsidy for the same land within 7 years preceding the date of sanction orders issued.
- 3.3.17** The DHSOs office should ensure that the beneficiary has not utilized subsidy previously in the data base of beneficiaries available from since last 7 years.
- 3.3.18** A stamp containing matter i.e., "Checked and verified the database and the beneficiary has not availed subsidy for the same land within 7 years" should be affixed on each application verified by the Accountant and Superintendent duly attested by DHSO.

3.4 Preliminary inspection:

- 3.4.1** The HEO / Horticulture Officer (HO), MI Company Representative should jointly conduct preliminary inspection of the proposed field along with beneficiary.
- 3.4.2** The HEO / Horticulture Officer (HO) should verify whether the beneficiary has availed MIP subsidy for the same land previously within 7 years from the date of sanction order issued.
- 3.4.3** During the inspection the following issues should be observed and ensured by HEO / HO / MI Company:
- Assured water source
 - Energization
 - The existing crop and spacing.
- 3.4.4** Farmer having own land with assured water source and pump set with authenticated power connection are eligible. Pump sets having Oil Engines without power connection are also eligible. The Oil Engine should generate the required pressure suitable to the requirements of MI System.
- 3.4.5** In case of annual crops the cropping pattern has to be ascertained from the beneficiary and noted in the Preliminary Inspection Report (PIR). In case of Orchard crops the age of the trees and number of plants has to be noted.
- 3.4.6** GPS instrument should be used to determine the extent and exact location of the land.

- 3.4.7** GPS coordinates fixing the land boundaries and water source as land mark.
- 3.4.8** Depth of Bore well and water delivery pressure may be checked before designing of drip irrigation system.
- 3.4.9** During the preliminary inspection, a digital photo graph with date & time covering beneficiary, Horticulture Extension Officer (HEO), representative of MI Company depicting the water source and land mark of the respective field should be taken.
- 3.4.10** The DHSOs / APD and District Coordinating Officer (DCO) of MI Companies to ensure 100% preliminary inspection of the proposed field prior to sanction.
- 3.4.11** The preliminary inspection should be completed by the HEO / HO along with MI Company representative & farmer within 7 days after receipt of application from DHSOs office.
- 3.4.12** The HEO / HO should submit the preliminary inspection report with the signature in the format prescribed (**Annexure – 5**).

3.5 Bench Mark survey, Design of MI systems and Preparation of BOQs:

3.6 Bench Mark Survey (Annexure – 6)

- 3.6.1** The MI Companies have to complete Bench Mark Survey, preparation of BOQ and Design within 7 days after completion of preliminary inspection by the HEO, MI Company representative & farmer.
- 3.6.2** MI companies should design the Micro irrigation system for annual crops taking into account the cropping pattern having same water requirement for growing a range of crops by the beneficiary. This recommendation is only for sustainable use of MI system by the beneficiary.
- 3.6.3** While conducting the bench mark survey the land boundaries of surrounding lands with survey numbers and names of the beneficiaries and land marks shall be depicted so as to enable to identify and locate the land of the beneficiary. Rough route map should also be given.
- 3.6.4** The following conditions are mandatory.
 - 3.6.4.1** GPS Coordinates
 - 3.6.4.2** Power availability: Number of hours per day
 - 3.6.4.3** Water yield (LPS)

3.6.4.4 Water availability: Number of hours per day.

3.6.4.5 Crop Area and Spacing (cropping pattern)

3.6.4.6 Area proposed under Micro Irrigation (ha)

3.6.4.7 Motor Capacity in HP

3.6.4.8 Diameter of outlet pipe (mm)

3.7 Design:

3.7.1 The MI Companies should submit designs prepared manually by qualified Technical person (Graduate in Agricultural Engineering / Civil Engineering) on a drawing sheet with legend reflecting field on ground for easy understanding of the design. Preference may be given for CAD designs.

3.7.2 The design of MI systems for Water Sharing case has to be made by taking the total area as one unit for effective functioning of MI system.

3.7.3 The design layout should indicate the entire area in which the individual areas are clearly earmarked.

3.7.4 Water sharing certificate to be obtained from the beneficiaries sharing common water source duly signed by the HEO, both the farmers, MI company and certified by the HO (**Annexure-7**).

3.8 Preparation of Bill of Quantities (BOQ) (Annexure– 8):

The MI companies should prepare BOQ based on the design & spacing. The BOQ should clearly indicate the extent proposed for MI irrigation, spacing, number of plants, type of MI system proposed. BOQ should be prepared with estimated quantities of MI components. The rates proposed in the BOQ should be as per the approved rates of MIP as per GO.Ms.No.9, A&C(H&S) Department, Dt:28.03.2022. The following Points are to be considered for preparation of BOQs.

3.8.1 Head Control Unit (HCU):

3.8.1.1 Only one HCU for one pumping system is to be provided.

3.8.1.2 Where the bores are interconnected for augmenting discharge, only one HCU is enough for the combined discharge.

3.8.1.3 A suitable platform made of cement concrete is required for HCU for its longevity and to arrest leakages. Beneficiaries are to be motivated for construction of platform at their own cost.

3.8.2 Fertigation:

Either Fertigation Tank or Ventury assembly is mandatory as opted by the beneficiary. The details are covered under chapter – 5.

3.8.3 Screen Filter

According to the guidelines of MIP the unit cost worked out and communicated are inclusive of screen filter. However, if the water quality warrants either sand filter or disc filter or hydro cyclone filter, is also permissible. Installation of Sand filter is mandatory if the water source is through open well / Farm Ponds. The details are covered under chapter - 5.

3.8.4 Water Sharing:

- 3.8.4.1** The applications for water sharing can be considered only when the borewell / well / pump set has additional capacity to irrigate more area.
- 3.8.4.2** The design of MI systems for Water Sharing case has to be made by taking the total area as one unit for effective functioning of MI system.
- 3.8.4.3** The design layout should indicate the entire area in which the individual areas are clearly earmarked.
- 3.8.4.4** Irrigation plans are also to be mentioned field wise in the design. Similarly the BOQs are to be made for entire system and proportionate BOQs for the individual beneficiaries.
- 3.8.4.5** In case of water sharing, using common water source, the cost of the additional pipe line should not be part of the estimates & BOQs of MIP.
- 3.8.4.6** The cost of the HCU can be proportionately divided among the beneficiaries under common water source as per their land holdings.
- 3.8.4.7** The water carrier and distribution systems can be calculated as per the extent of the beneficiaries.
- 3.8.4.8** One common file is to be maintained with sub-files for the water sharing proposals for cross referencing.
- 3.8.4.9** The transport, installation, accessories & fittings costs shall be apportioned proportionately among the water sharing beneficiaries.
- 3.8.4.10** DHSOs has to personally inspect water sharing installations before proposing for payment of Final subsidy.

3.8.5 Double lateral:

Double lateral should be considered for orchard crops of above 8 years of age with 8 Drippers per plant. The details are covered under chapter – 5.

3.8.6 Sugarcane:

3.8.6.1 Tripartite agreement is made between the beneficiary farmer, Sugarcane Company and MI company for providing drip irrigation to sugarcane crop.

3.8.6.2 The farmer share to be collected from the concerned Sugarcane company. Separate individual file shall be maintained for each beneficiary and file shall contain all relevant documents pertaining to each case.

3.9 Process flow for release of mobilization advance:

After preparation of BOQ, design, Bench mark survey report by the MI Company, the company has to enter the BOQs data and bench mark survey report online.

The farmer contribution has to be collected within 7 days after preparation of BOQ.

3.9.1 The MIE shall verify the designs, BOQ, Bench mark survey report and all the documents required for sanction of mobilization advance as per check list (**Annexure -9**).

3.9.2 During scrutiny, the MIE should ensure that the area proposed for drip irrigation on the application, preliminary inspection, BOQ and Bench mark survey report should be the same and should not exceed the total extent in land document.

3.9.3 Administrative sanction will be accorded to the crop as per the choice of the beneficiaries in the application form.

3.9.4 The Accountant and Superintendent should verify whether the beneficiary has remitted beneficiary contribution to the DHSOs account as indicated in the online calculation.

3.9.5 After the approval of proposals by the DHSOs, the proposals will be submitted to the District Collector for approval duly enclosing downloaded formats.

3.9.6 After the approval of the District Collector, the mobilization advance shall be immediately released to the MI Companies.

3.9.7 After the approval of District Collector, DHSOs to issue sanction proceedings to the individual beneficiaries, MI Company, HEO, HO and concerned.

3.10 Issue of administrative sanctions for the entire District target for the every financial year shall be completed as far as possible before 10th February of the financial year, so as to enable to achieve the target and request for additional target from GOI.

3.11 Pre installation:

Marking:

3.11.1 The MI Company should give marking in the field of the beneficiary as per the design within 7 days from the date of Administrative sanction.

Trenching:

3.11.2 Beneficiary has to take up trench opening as per the design approved and marking given by the representative of MI Company within 21 days after receipt of sanction proceedings. Otherwise the sanction will be deemed to have been cancelled. The beneficiary has not taken up the trench within the prescribed period i.e., 21 days, the beneficiary has submit the application afresh.

It is the responsibility of the farmer and MI Company to get the trenches dug within the specified time to avoid the delay in installation drip irrigation system. The width of trench should be 45 cm to 70 cm and the depth of the trench should be 75 cm or as instructed by the MI Company representative. The trenches should be in straight line, farmers should ensure that there are no stones or any sharp objects in the trenches.

3.11.3 Trenching has to be done by the beneficiary on his own cost and also the beneficiary is responsible for closing of the trench immediately after trail run.

3.11.4 DHSOs should coordinate with the MI Company and beneficiary and ensure that the installation is completed within the stipulated time i.e. 15 days, after Trench opening by the beneficiary. If the installations are not completed by the MI Company the administrative sanction should be cancelled

3.11.5 Preferably a suitable size of platform of brick masonry or cement concrete should be constructed by the farmer for installation of Head Control Unit (HCU) and shade may be provided to avoid rusting of HCU.

Installation process:

3.11.6 MI Company shall supply the material as per BOQ only after trenching is completed by the beneficiary.

3.11.7 The MI Company should give delivery challan in telugu / english for the quantities of MI material supplied to the beneficiary with acknowledgement.

3.11.8 MI Company should install the system as per design already submitted with BOQ. If any change in design arises depending on the field condition the design may be changed. Installation of MI system should be done within the quantities mentioned in BOQ. Increase in quantities of components in Invoice will not be permitted in online system

3.11.9 MI Company may install the MI System prior to plantation / sowing but at the time of final inspection there should be a standing crop and photographs taken at the time of final inspection should clearly depict the crop, HCU and distribution and MI Carrier system.

3.11.10 Components approved by MIP are only to be installed in the beneficiaries field.

3.11.11 The MI Company should install NON METALLIC control valves (Non-return valves, Throttle valves, Ball valves/flow control valves) of approved brands only. (Annexure- 3)

3.11.12 The MI components should have Bureau of Indian Standards (BIS) and should be embossed with “**Made for TGMIP**”.

3.11.13 The installed system should match the water requirement of the crop.

3.11.14 Necessary orientation and training is to be given to beneficiaries for operation, maintenance and agronomic practices to be followed for irrigation the crop with drip / sprinklers irrigation.

3.11.15 Installation may be allowed prior to plantation / sowing, however the final payments shall be done only when there is standing crop installed with drip.

3.12 Points to be checked during installation.

- 3.12.1 Farmer to check that the material received is free from any defect and damages.
- 3.12.2 MI Company should check that the trenches are done as per the layout.
- 3.12.3 Check that the installation is done as per design
- 3.12.4 Check the system for the leakages by adjusting the design pressure for each section and then close the trenches immediately.
- 3.12.5 DHSSOs to ensure for issue of proper warranty (Annexure-10) and a user manual for running & maintenance of the system to the beneficiary in Telugu.
- 3.12.6 A certificate towards successful installation / commissioning of the system is to be obtained from the beneficiary (**Annexure 11,12**).

3.13 Post installation:

- 3.13.1 The MI Company has to ensure that on the day of installation, atleast 2 Photographs have to be taken covering HCU, Control valves, laterals spread on the field and also along with standing crop. The photos should display the date and time
- 3.13.2 The MI Company should demonstrate the usage of ventury / fertilizer tank and functioning and maintenance of system
- 3.13.3 The MI Company should give the address particulars of contact person and also the place of the availability of spare parts.
- 3.13.4 The MI Company has to submit the final invoice and other required documents for release of Final Payment within 7 days after completion of installation.

3.14 Documentation required for release of Final payment:

- 3.14.1 Original invoice for the MI components installed should be given by the MI Company.
- 3.14.2 Commissioning and completion certificate signed by HO, Farmer and MI company representative (**Annexure- 11**).
- 3.14.3 Guarantee letter from the MI Company (**Annexure- 10**).
- 3.14.4 Delivery challans with the signature of the farmer.
- 3.14.5 In case of change of design updated design should be enclosed.
- 3.14.6 Certificate from farmer for release of Final subsidy amount.

3.14.7 Final inspection report duly filled and signed by the farmer, HO, MI company and check whether the Random inspection by the district team is completed or not.

3.14.8 The check list for release of final payment is given at **(Annexure- 15)**.

3.14.9 Seniority on the basis of receipt of invoices should be maintained in a Separate register in the DHSOs office. **(Annexure – 13)**

3.15 Final inspection:

3.15.1 A schedule for inspection should be prepared as per the seniority on the basis of receipt of invoice in the DHSOs office and final inspection to be completed within 7days.

3.15.2 “Final inspections should be conducted by HO based on the final invoice, Commissioning and completion certificate and design but not based on the BOQ” and also ensure that all lateral bundles should be cut and spread at the time of the inspection”

3.15.3 HO should ensure 100% of inspection of all installations under his / her jurisdiction within 7 days after submission of invoices in DHSOs office.

3.15.4 The inspecting authority (HO/ DHSOs) and MI Company concerned are jointly responsible for proper installations, the correctness of the extent of area, design, quantities of components supplied to the beneficiary and discharge of water uniformly from all emitters within a variation of 10%.

3.15.5 During final inspection by HO, the **area & material should be tallied with final invoice** and Commissioning & completion certificate. If any shortage in area and material is noticed, notice should be issued to the concerned MI Company and after examining the explanation of MI Company, steps to be taken to deduct proportionate subsidy.

3.15.6 Random Inspections: DHSO has to coordinate and monitor the following percentage of random inspections.

HO	–100% Mandatory Final inspections
DHSOs	– 25%

At random covering all MI Companies and the jurisdiction of all HOs on each payment and DHSOs has to coordinate and monitor the percentage of Random Inspections.100% MI beneficiary inspection by 3rd party evaluation to be conducted.

- 3.15.7** Random inspections by the District team should be completed within 10 days after completion of final inspection by HOs.
- 3.15.8** The officer who is conducting Random Inspection has to sign with date and remarks on the Final Inspection Report given by the HO as per **Annexure – 14** .
- 3.15.9** Installed area should be tallied invariably with the Geographical Positioning System (GPS) with a margin of 5% variation.
- 3.15.10** At the time of final inspection for **inline system**, the following points shall be taken into consideration for making payment;
- a. When the beneficiary has applied for a crop having approved spacing and installation is done with reduced spacing, the payment should be restricted to approved spacing of that crop only.
 - b. If the sanction has been given for closer spaced crop and the installation is done for wider spaced crop, the payment should be restricted for wider spaced crop only.
 - c. If the beneficiary has been sanctioned for one crop and the installation is done for another crop with the same spacing and unit cost, the beneficiary is eligible for same amount of subsidy since there is no change in spacing and unit cost.
 - d. In cases where, there is a deviation in the crop compared to the administrative sanctioned crop, the payment shall be arranged on the following conditions;
 - At least 5 digital photos (with date) covering the beneficiary, HO & MI Company representative clearly depicting the crop, laterals spreading in the field shall be attached to the file with a detailed notes addressed to the DHSOs indicating the background of the case. Then the payment can be made of the approved unit cost and spacing of the actual crop available at the time of installation.
 - e. Distribution of the drip laterals and emitters should be in accordance with crop spacing duly ensuring effective root zone wetting.
- 3.15.11** Mere supply of material to the beneficiary by the MI Company cannot be treated as completed installation. The entire material should be

installed in the field and a trial run has to be conducted in the presence of the beneficiary.

3.15.12 Subsidy should be given to the material exactly required, supplied and installed in the field as per the approved design. No subsidy shall be given for any extra material which is not required.

3.15.13 At the time of final inspection two photographs have to be taken, one photograph depicting HCU and **the land mark of preliminary inspection** along with beneficiary, MI company representative and HO, second one with long shot depicting the ball valves, flush valves, laterals, drippers etc.

The beneficiary should be covered in the photographs either in preliminary inspection or in final inspection.

3.15.14 The beneficiary ID as generated through online should be painted on HCU.

3.15.15 A sticker with a measurement of 12" x 4" duly mentioning the ID No. and proceeding No. of the farmer along with phone numbers of DHSOs / DCO of MI Company and Toll free number of the district should be adhered to HCU to be arranged by MI Company.

3.15.16 All the Micro Irrigation Systems shall be QR Coded. The QR code of the system will be linked to Unique application no./ Sanction ID of the farmer on installation of the system as per Gol instructions.

3.15.17 Final inspection report should be submitted in **(Annexure-14)** by the HO. DHSOs / MIE should counter sign on the final inspection report submitted by the HO after random inspection.

3.15.18 DHSO & APD Random inspection to be completed within 10 days after completion of final inspection by HOs.

3.16 Process flow for release of Final subsidy:

3.16.1 The bills should be scrutinized on seniority basis for process of final payments. No bill shall be unattended to, without proper justification, beyond the time permitted.

3.16.2 Accountant and Superintendent / HO (T) should scrutinize the claims as per the seniority of receipt of invoice as per the checklist in **(Annexure – 13)**.

- 3.16.3** After the approval of proposals by the DHSOs the proposals will be submitted to the District Collector for approval duly enclosing downloaded formats.
- 3.16.4** Before sending proposals to the Collector, DHSOs should ensure Random inspections are conducted as mentioned in Para No 4.15.6 by selecting the installations in format available in the Online among the officers concerned through random basis.
- 3.16.5** After the approval of the District Collector, the requests for release of 90% payment should be forwarded to TGMIP Section, O/o DoH. The consolidated proceedings approved by the District Collector should be sent to TGMIP Section, O/o DoH office along with required certification that random inspections were conducted as per guidelines mentioned at Para No 4.15.6 and the systems are functioning satisfactorily for release of payments.
- 3.16.6** On receipt of proposals from the DHSOs for release of 90% payment through the online, the payment will be processed and will be released to MI Companies by Head office.
- 3.16.7** Monitoring the implementation of the programme and to review the implementation status on monthly basis or as deemed necessary.

District level monitoring committee

- | | | |
|--|---|------------------|
| • Collector & Chairman, TGMIP | - | Chairman |
| • DHSOs | - | Convenor |
| • DRDO | - | Member |
| • DAO | - | Member |
| • EDSC Corpn., / SCDO | - | Member |
| • DTWO | - | Member |
| • BC Welfare | - | Member |
| • DD Ground water | - | Member |
| • Coordinator DATT centre/KVKs | - | Member |
| • Progressive farmers representing each revenue division | - | Special invitees |

3.17 Refund of excess beneficiary contribution:

The excess beneficiary contribution if any paid by the farmer has to be refunded at the time of Final payment to MI Company. Under any

circumstances the excess non subsidy amount remitted by the farmer should not be kept in DH&SOs office after release of final payment to the MI Company. This subject is to be monitored by the Accountant and Superintendent.

4. MI SYSTEMS AND REQUIREMENTS

This chapter includes various types of MI Systems covered in PMRKVY-PDMC guidelines.

4.1 Inline drip systems

This type of drip system is suitable for the row crops like vegetables, papaya, banana, sugar cane, Maize, Cotton, Turmeric and other crops as mentioned in online portal.

4.2 Online drip systems

On line drip systems are ideal for irrigating orchard crops/Crops mentioned in online portal-where plant to plant spacing is more.

4.3 Double lateral system

The system of two laterals (with 8 Drippers per plant) for the same row is used for the Orchards having more than 8 years of age to meet the water requirement.

4.4 Micro Jet

Micro jets are mostly used for irrigating Oil palm and Banana which require more water.

4.5 Micro Sprinklers (up to 3m radius of throw)

Micro Sprinklers are mostly used for irrigating leafy vegetables, nurseries, hardening of seedlings etc,. Micro sprinklers are low radius sprinklers which have a radius of throw up to 3 m. Discharge of micro sprinkler varies from 20 lph to 150 lph.

4.6 Sprinkler Irrigation

It is widely used for irrigating cereals, pulses, oil seeds and other field crops. The sprinkler irrigation systems may be portable, semi-permanent or large volume systems (Rainguns).

4.6.1 Portable Sprinkler Irrigation System

In portable sprinkler irrigation system, the HDPE pipes are used for mains and sub-mains which can be shifted from one place to another as per the irrigation schedule with respect to design layout. These types of sprinklers, having a radius of throw from 12m to 18m with a discharge of 1200 lph to 1800 lph.

4.6.2 Large Volume Sprinkler Irrigation System (Rain gun)

Large volume sprinkler irrigation systems (Rainguns) are used where larger areas are to be covered with one or two sprinklers. These sprinklers have a discharge ranging from 10,000 lph to 32,000 lph and radius of throw from 24 m to 36 m. As these systems cover larger areas they require high pressure and high discharge pipes & pumps to operate them. These are preferred for irrigating crops spread over large areas in short time. Mostly use full for fodder crops.

4.6.3 Semi-Permanent Sprinkler Irrigation System:

In this system, the piping network for main line and lateral lines are permanently buried with risers fitted on the lateral lines. The sprinkler nozzles are fitted on each riser pipe and can be easily shifted from one place to another to irrigate the required area in shifts as per the irrigation schedule or the crop water requirement. To reduce the system cost PVC pipes are being used in the design and plastic sprinkler heads are used in place of brass sprinkler heads. This system eliminates all the disadvantages of portable sprinkler system and helps in reducing the labor requirement considerably. Components of Micro Irrigation Systems.

4.7 Screen Filters

The screen filters are characterized by filtration degree, filtration surface and filtration ratio. Filtration degree is designated in microns or mesh number. One of the main disadvantages of screen filter is the rapid accumulation of dirt on the screen's surface. Monitoring the pressure difference between the filter and outlet is necessary to prevent excessive dirt accumulation on the screen. The filter has to be flushed when the pressure difference between inlet and outlet reaches 0.5 bar. It is used as primary filter for shallow bore wells and as secondary filter for open water sources like open wells, canals, tanks, pond etc.

4.8 Disc Filters

Disc filters are suitable for filtration of water containing mixed, inorganic and organic impurities. The casing is made of metal or plastic materials. The filtering element is as tack of grooved rings, tightened firmly by a screwed on cap or by a spring that is compressed by a water piston. The intersections of the

grooves provide in-depth filtering. The disc filters have a higher dirt retention capacity than screen filters.

Disk filter used as primary filter for bore wells and secondary filter for open water sources.

4.9 Sand filters / media filters:

To remove organic matter and inorganic contaminants from water sources like rivers, tanks and open wells sand/media filters are required. Media (sand) filters are available with the capacity to efficiently remove most types of physical plugging sources. The size and type of media used determines the degree of filtration. The finer the media, the smaller the particle size that will be removed shows the relationship between sand grade and screen mesh size. Media filters protect emitters when using water with a high organic load from open water bodies or reclaimed water. The filtering media are 1.5 - 4 mm size basalt, gravel, crushed granite particles or fine silica sand. The accumulated dirt should be back flushed routinely in order to eliminate excessive head losses.

Sand filter is Suitable for open water sources as primary filtering unit to filter algae and organic matter.

4.10 Hydro Cyclone Filters / Sand Separators:

High loads of sand and other solid particles should be removed before reaching the main filtration unit. Centrifugal (vortex) sand separators remove sediment sand and other suspended particles heavier than water by the centrifugal force. The sand particles thrown against the container walls by the centrifugal force settle down and accumulate in a collecting chamber at the bottom. The collector is washed out manually or automatically.

Hydro Cyclone filters are used as primary filter for bore wells to separate sand of 300 to 100 micron particulars.

4.11 Acidification

Acidification of water is required when "hard" water containing high concentration of bicarbonates is used for irrigation. The acid injected neutralizes the transient hardness and dissolves calcium carbonate precipitates. Acid can be applied with ordinary fertigation equipment or by a dedicated metering pump. The common acidifying agents are sulfuric, nitric, hydrochloric and phosphoric acids.

4.12 Flushing

To minimize sediment build up, regular flushing of drip irrigation pipelines is recommended. Valves large enough to allow sufficient velocity of flow should be installed at the ends of mains, submains, and manifolds. Also, allowances for flushing should be made at the ends of lateral lines. Begin the flushing procedure with the mains, then proceed to submains, manifolds, and finally to the laterals. Flushing should continue until clean water runs from the flushed line for at least two minutes. A regular maintenance program of inspection and flushing will help significantly in preventing emitter plugging. To avoid plugging problems during fertigation, it is best to flush all fertilizer from the lateral lines prior to shutting the irrigation system down.

4.13 Fertigation

The combined application of water and fertilizers through the irrigation system increases crop yields and minimize environmental pollution caused by excess fertilizer application. Diverse technologies are available for injecting fertilizer into the irrigation water. Fertigation equipment is mandate in BoQ of Drip System

4.14 Fertilizer Tank

Optional to the farmer. Over and above cost of ventury should be borne by farmer. A pressure differential is created by throttling the water flow in the control head and diverting a fraction of water through a tank containing the fertilizer solution. A gradient of 0.1-0.2 bar (1-2m) is required to deflect an adequate stream of water through a 9-12mm diameter connecting tube. The tank, made of corrosion resistant enamel-coated or galvanized cast iron, stainless steel or fiberglass, must with stand the network working pressure. The diverted water is mixed with soluble or liquid fertilizers.

Fertigation Tank is optional to orchard crops of below 1 Ha. Hence, it shall not be insisted, wherever the farmers have realized the importance of fertigation system, in such cases, fertigation tank of 30 liters is only to be supplied with Head Control System.

Wherever the area is more than 2 Ha, 60 liters fertigation tank can be supplied.

For the land holding between 1 and 2 Ha depending on the economic condition of the farmers, the size of the tank i.e., 30 or 60 liters can be provided.

In case the farmer is not financially sound, 30 lit tank can be supplied for less than 1 ha and 60 lit for land holding between 1 to 2 ha.

4.15 Ventury Injector

Suction of the fertilizer solution is created by water flowing through a constricted passageway (Ventury). The high flow velocity of water in the constriction reduces the pressure to below the atmospheric pressure, so that the fertilizer solution kept in an open tank / buckets is sucked into the constriction through a narrow diameter tube.

4.16 Unit cost and formulas for working out of subsidy

4.16.1 The crop wise spacing's and unit cost and formulas for calculating the eligible subsidy are enclosed in (Annexure-16 & 17).

4.16.2 The technical specifications as per Bureau of Indian Standards (BIS) for various Micro irrigation components are enclosed in (Annexure-18).

4.17 List of BIS Standards for Micro Irrigation DHSOs to ensure use of only BIS approved components of Micro irrigation systems installed under TGMIP component.

List of BIS Standards

SN	Component Description	BIS
1	Polyethylene pipes for Irrigation- Laterals with amendment number 6	IS 12786: 1989 (reaffirmed 2009)
2	Irrigation Equipment-Emitters- Specification	IS 13487: 1992 (reaffirmed 2009)
3	Irrigation Equipment-Emitting pipes system- Specification (first revision)	IS 13488: 2008 (reaffirmed 2014)
4	Irrigation Equipment-Strainer type filters Specification (first revision)	IS 12785: 1994 (reaffirmed 2011)
5	Irrigation equipment rotating sprinkler Part I, Design and Operational requirements (1st revision)	IS 12232 (Part I) -1996 (reaffirmed 2011)
6	Irrigation equipment rotating sprinkler Part 2, Test method for uniformity of distribution (1st revision)	IS 12232 (Part 2) -1995 (reaffirmed 2011)
7	Fertilizer and Chemicals Injection system Part I Venturi Injector	IS 14483 (Part 1) 1997 (reaffirmed 2009)
8	Irrigation Equipment-Media Filters- Specification	IS 14606: 2022
9	Irrigation Equipment-Hydro cyclone filter-Specification	IS 14743: 1999 (reaffirmed 2009)
10	Unplasticized PVC pipes for agriculture - Specifications	IS 4985 – 2021 TYPE B
11	Irrigation Equipment –Quick Coupled Polyethylene Pipes and Fittings for Sprinkler Irrigation Systems.	IS 17425:2020
12	High Density Polyethylene Pipes for water supply- Specification (fourth revision)	IS 4984 : 2016
13	Fertilizer & Chemical Injector System- Part 2 Water Driven Chemical Injector Pump	IS:14483 Part 2 – 2002
14	Fertilizer & Chemical Injector System- Part 3 Fertilizer Tank	IS:14483 Part 3 – 2018
15	Irrigation equipments- Micro sprayers-Specifications	IS:14605:1998
16	Agricultural Irrigation equipment- Manually operated serviceable plastic valves- Specifications	IS: 18286 :2023
17	Injection Moulded PVC Socket Fittings with solvent Cement Joints	IS:7834:1987 (Part1 to Part7)
18	Fabricated PVC-U fittings	IS:10124:2009 (Part1 to Part13)
19	Injection moulded/machined polyethylene fittings	IS:8008:2022
20	Fabricated Polyethylene fittings	IS:8360:2022

Source: Online catalogue of Bureau of Indian Standards

5. AFTER SALES SERVICES AND CAMPAIGNS

Effective after sales service is the mandate of MI companies. The DHSOs must ensure proper after sales services by the MI companies.

- 5.1** The MI Company should have network for providing after sales service in their areas of operation. Operation and Maintenance of the system, though simple, requires training for maintenance, fertigation, and acid treatment etc. in the initial stage. Therefore the MI Company, should provide detailed operational and maintenance manuals printed in Telugu language at the time of installation of the system to the beneficiaries. The beneficiaries should be advised to follow the instructions provided by the MI Company for the operation and maintenance of drip / Sprinkler irrigation systems.
- 5.2** Service Centers and MI Companies in the district should have facilities to provide technical guidance on agronomic practices, system maintenance schedules, supply of spare parts and ensure satisfactory performance of the system during the warranty period. List of service centers / offices with full addresses / telephone numbers / e-mail should be widely published and MI Companies must establish at least one service centre at each Revenue Division.
- 5.3** The Micro Irrigation Companies have to extend after sales services for a period of 3 years for the Micro Irrigation Systems installed under this programme. Free after sales service should be provided by the MI Company at least for 3 years. If any MI Company fails to provide such free service, the same should be brought to the notice of DHSOs.
- 5.4** Staff deployment by the MI Companies:

DHSOs to ensure that the required staff, as mentioned below is deployed by the MI Company in the district.

1. District Team:

One District Coordinator, one or more MI Engineers depending upon the work load is mandatory. Agronomist / Horticulturist should be appointed as a part of District Team to assess the feasibility of Micro Irrigation in the farmer's field basing on the conditions of Soil, Water & Crop. Moreover the team should train the farmers in all aspects of management of water, nutrients and Soil in addition to the MI System maintenance. Hence the presence of an Agriculture or Horticulture Graduate in the district team is non-negotiable.

2. Mandal Team:

One Mandal or Field Coordinator for every 250 ha of target given.
One Mandal or Field Coordinator for every 250 ha of area covered by the MI Company.

- 5.5** In addition to the routine services rendered by the companies each MI company should also conduct Service Campaigns @ 8 by big companies (>5000 ha at state level) and 5 by small companies (<5000 ha at state level) per month or the required number as decided depending upon the acreage covered by the company.

In addition to the routine services rendered by the companies each MI company should also conduct Service Campaigns @ 5 by big companies (>5000 ha at state level) and 5 by small companies (<5000 ha at state level) per month or the required number as decided depending upon the acreage covered by the company.

- 5.6** The campaigns should cover all beneficiaries who were sanctioned Micro irrigation systems by that company in a financial year.
- 5.7** The campaign should cover the aspects of maintenance of MI Systems, Fertigation, Acid treatment etc.
- 5.8** In order to ensure proper after sales service, each MI Company should constitute separate teams comprising technical people for rendering service.
- 5.9** Service campaigns should be conducted by the MI Company in Remote potential areas also.
- 5.10** The DHSOs should prepare month wise schedule of campaigns well in advance and should see that MIE / DHSOs / HO should attend the campaign along with HEO concerned.
- 5.11** Documentation should be done by each company and submit to DHSOs office in every month.
- 5.12** DHSOs to report on after sale service campaigns in the prescribed proforma by 5th of every month to DOH office.
- 5.13** Feedback Questionnaires in a post card along with reply card to be posted to each individual MI beneficiary for their feedback & response to assess impact of MI System on their crop yield.

6. QUALITY TESTING OF MI COMPONENTS

- 6.1** The DHSOs should send the samples of MI Components to the CIPET, Hyderabad once in a financial year covering all companies, all mandals to have representative samples of all the installations in the district.
- 6.2** Collection of samples with batch number is mandatory. The samples should be collected from godowns of MI companies and from the beneficiaries fields before installation of the systems.
- 6.3** During the collection of samples, panchanama should be done. Statement from beneficiary should be recorded duly signed by the collecting officer.
- 6.4** After collection of samples, they should be coded for security purpose.
- 6.5** For analysis, the samples are to be sent to the following address:

CENTRAL INSTITUTE OF PLASTICS ENGINEERING & TECHNOLOGY
IDA-Phase-II, Cherlapally, Hyderabad-500051 Phone No:+91-40-27264040
Mobile No.:+91-9959333415.

Fax No.:+91-40-27264051

E-Mail:hyderabad[at]cipet[dot]gov[dot]in/

- 6.6** The charge for testing of samples as per the agreement entered with CIPET by MIP are given below. These are subject to change as per Cipet prices

Sl.No.	Product	Test as per IS:	Testing charges per sample (Short term tests) (After 50% Discount)	Sample Requirement for Teting
1	Irrigation Laterals	IS:12786	5413/-	5 mts
2	Emitters	IS:13487	2700/-	30 no's
3	Emitting Pipe	IS:13488	6363/-	25 mtrs coil with 30 number of emitters.
4	HDPE Pipe	IS:4984	7913/-	1m X 6 no's
5	Sprinkler QC PE Pipes with fittings	IS:17425	17500/-	1m X 6 no's (2no's welded with fitting)
6	UPVC Pipe (Socket end)	IS:4985	5625/-	1m X 6 no's (2no's with socket ended)
7	Rotating Sprinklers	IS:12232 (pt.1)	11800/-	3 no's
8	Strainer type filters	IS:12785	5625/-	2 no's
Service Tax @ 18 % extra on above test charges				

- 6.7** If any material does not conform to the quality parameters of BIS norms, necessary action to be initiated by the DDH/DHSO to replace the entire batch of the material by concerned company and necessary penalties have to be levied. The details of the test, not conforming to the standards to bring to the notice of DoH office for notifying to other affected districts.
- 6.8** Quality Testing of MI Companies:
- Targets for analysis of MI components samples, if the target of the District is less than 1000 Ha, 3no.s of samples covering atleast 1 sample for each MI Company have to be analyzed. For the Districts where the target is more than 1000 ha., 3 no.s of samples per each additional 1000 ha., of target have to be analyzed covering all the MI companies depending on the target.
- 6.9** The expenditure towards the testing charges shall be met from the Administrative charges.

7. TRAINING PROGRAMMES

Human Resources Development through training programmes for officials, beneficiaries, entrepreneurs and other active players involved in micro irrigation is an important element of the scheme. These training programmes will be coordinated by the DH&SO and will be organized through PFDCs, SAUs, ICAR Institutes etc., involving MI companies including exposure visits in respect of equipment and accessories required for micro irrigation system.

- 7.1** Field visit to beneficiaries may be organized to the nearest field for demonstrating the Fertigation technique, Acid treatment and maintenance of the system.
- 7.2** 2 Nos. of One day Training Programmes should be organized every month in each HOs jurisdiction by utilizing the budget allocated for training programme in each district and integrating with MIDH, RKVY, ATMA, RAD Banks & Voluntary organizations.
- 7.3** Trainings should be conducted by involving MI Companies under service campaigns.
- 7.4** Detailed guidelines on conduct of trainings will be issued separately.
- 7.5** Resource persons:
 - ❖ Progressive farmer
 - ❖ MI Company Agronomist / Technicians.
 - ❖ Agri./ Horti University Scientist.
 - ❖ TGMIP Officials.
- 7.6** Contents of training programme:
 - ❖ System operation & maintenance.
 - ❖ Fertigation.
 - ❖ Irrigation scheduling
 - ❖ TGMIP guidelines.
 - ❖ Crop management aspects.
 - ❖ After Sales Services
 - ❖ Software innovations
- 7.7** Documentation:

Documentation of training programme should be done with photos.

7.8 Preparation of study material:

Study material including the agronomic practices of the major crops in the District, Fertigation schedules and water requirement of crops to be prepared in consultation with the scientists.

The DHSOs are requested to organize the training programmes as per the target allotted to the districts.

8. Penalties for Violation of responsibilities by MI Supplier:

TGMIP is a unique Project involving the participation of not only several MI Companies and also thousands of beneficiaries spread all over the state. Since the Project is gigantic in nature involving a series of activities the following system of penalties have been devised to reduce violations in project implementation. **The District Collectors & Chairman, DMC/ TGMIP are competent to take action against the MI companies for violations of terms and conditions.** As and when the violations by the MI companies are brought to notice all such violations shall be looked into personally by the District Horticulture & Sericulture Officer. **If proper design is not prepared as per the discharge of borewell/ well / pump and if excess material / short material is delivered, all the payments are to be withheld for particular field.**

In the case of violations / irregularities in the implementation of MI programme noticed by the Addl. Director / Joint Director / Dy. Director / Asst, Director of Horticulture, OSDs of TGMIP, during their field visits, the Director of Horticulture is competent to take action against the MI Companies for the violation of Terms and conditions, based on the reports.

In the case of irregularities noticed by the Vigilance & Enforcement Department, ACB etc., and communicated to the Department for follow up action, the Director of Horticulture is competent to take action against the MI Companies on such reports for violations.

In the case of 3rd Party Verification Reports on the deviations / irregularities noticed in the implementation of MI Programme, the Director of Horticulture is competent to take action against the MI Companies on such reports.

A due process shall be followed and the MI companies shall be heard before taking a final action.

VIOLATION NO. 1:

Not positioning sufficient staff as prescribed.

PENALTY: Penalty of amount equal to the cumulative amount of the salary of the said post vacant due to absence of employee **after a period of two months from the date of absence / vacancy.**

VIOLATION NO. 2:

Delays in execution of assigned work - Review of work once in a month

- (a) Failure to complete installation of 80% of the total sanctioned (work order issued) units within the stipulated time in two successive months in each district .

PENALTY: *Rs. 20,000/- per District.*

- (b) Failure to complete 80% of the total sanctioned (work order issued) units within the stipulated time for three successive months in each district.

PENALTY: *: Review by District Collector and cancellation of sanctioned area of the non performing MI Supplier area and reallocation of this area to other MI Companies in the Project in the District as opted by the farmer in his application and impose penalty of **Rs.50,000/-**per District.*

VIOLATION NO. 3:

Delays in submission of bills / Invoices and wrong claims

- (a) Failure to submit the hard copies of bills / invoice within 15 working days of completion of installation and after uploading of Completion Certificate and Final Invoice.

PENALTY: *A cut of 5% of the cost of system for every **15 days** delay.*

- (b) Uploading of Completion Certificate and submission of bills without installations in the field

- (c) Uploading of Completion Certificate, submission of bills without installations, but material dumped and

(d) Uploading of Completion Certificate, submission of bills with incomplete or partial installations or trench not closed, mains and sub-mains are not buried, improper installations.

PENALTY: For b, c & d, Penalty of Rs.10,000/- for each such case.

(e) Uploading of Completion Certificate, submission of bills for those installations found on the fields of un-connected / different farmers field.

PENALTY: A penalty of the double the amount of the cost of system, recovering the subsidy amount if already paid and A fine of Rs.2,00,000/ for each such case.

(f) Without the embossing of "Made for TGMIP"

PENALTY- A penalty of Rs. 10,000/ for every such case

(g) Uploading of completion certificate by MI Supplier without using laterals produced by their own company (own manufactured) / use of old material / Use of material without ISI.

PENALTY: De-listing the company for a period of one year or more as decided by SLSC and A fine of Rs.2,00,000/- for each such case.

VIOLATION NO. 4:

Irrigation system design, installation & Bill of quantities of each installation district wise (for the sanctions and completed works)

(a) Improper benchmark survey

PENALTY: Correction of bench-mark survey report at MI Supplier Cost and a penalty of Rs.**Rs.2,000/-**-per installation

(b) Improper Micro Irrigation installation which is not as per approved design & system components affecting the functioning the system.

PENALTY: Correction of improper micro irrigation installation system at Supplier cost and a penalty of **Rs.5,000/-** per installation.

(c) Wrong communication with regard to status of implementation (deviation from Monitoring system software guidelines)

PENALTY:

First time .-Warning and immediate correction of the same

Second time:Rs.2000/-for each wrong intimation in a particular month.

VIOLATION NO. 5:

(a) Quoting higher price than pre- approved rates *PENALTY:*

First time : Rs. 20,000/- per BOQ invoice ***Second time***: A penalty of Rs 50,000/ and Cancellation and reallocation of target to other best performing MI companies

VIOLATION NO. 6:

(a) Quality control & Quality assurance

- i. Use of spurious/recycled raw material (deviation from specified technical specifications)**
- ii. Deviations from prescribed standards in the agreement**
- iii. Use of low grade/class products in comparison to specified standards**
- iv. Use of certain components of brands which are not approved by MIP**

PENALTY:

First time :A penalty equal to the cost of component supplied and replacement of the component at suppliers cost

Second time :Cancellation of works sanctioned in the concerned district with a penalty of double the cost of component.

Third time :De-listing/black the company for a period of one year or more as decided by SLSC., reallocation of the area to other MI companies opted by the farmer (2nd option) and forfeiting the bank guarantee of Rs. 30 lakhs.

VIOLATION NO.7: Quality Control:

In case of violations in respect of failure in quality control & quality assurance following penalties shall be imposed:

- First time in a year, a warning letter may be issued to the manufacturer instructing to rectify the shortcoming immediately.
- Second time in same year, a warning letter may be issued to the manufacturer instructing to rectify the shortcoming immediately with a penalty of 10% of invoice value.
- Third time in same year, a penalty of 25% of invoice value may be charged.
- Fourth time in same year, a show cause notice may be issued to the company and the case may be refer to SLSC for de-listing the company for a period of one year or more as decided by SLSC.

VIOLATION NO. 8:

Maintenance & After sales Services- Review every 3 months

- (a) The after sales services include Supply of drip/sprinkler Operation & Maintenance manual, Practical demo of system operation including fertigation, filtration and valves, Acid treatment, Chlorination, Supply of spare parts etc.**

PENALTY:

Failure to deliver services (Not satisfactory) -

Penalty of Rs. 2,000/- per every default

Failure to deliver services (Not satisfactory) for second time -

Penalty of Rs.4,000/- per every default

Failure to deliver services (Not satisfactory) for third time -

Penalty of Rs 10,000/- per every default

VIOLATION NO. 9:

Wrongful submission of Farmer Affidavit:

In case of sale of the MI system by the beneficiary to other farmers before expiry of average life of the system, for which subsidy has been claimed by the beneficiary, legal proceedings against the beneficiary as per applicable law may be initiated and the beneficiary may be blacklisted from availing any government assistance in future. **In such cases where the farmers affidavit is submitted by the MI Company is not accepted as his own by the beneficiary in such cases the MI Company is liable to pay the penalty amount as prescribed in the Affidavit.**

The affidavit has to be attested by the HEO concerned. If any forging of signature of farmer or Officer or the photos, is noticed, criminal case will be filed against the MI Company.

The list of violations mentioned above is not exhaustive and any other deviations, which affect the implementation of the project adversely, can be considered by the District Collectors, as deemed fit.

9. ACCOUNTING PROCEDURE FOR TGMIP

INTRODUCTION

The procedure of accounting approved by Comptroller and Auditor General of India (C&AG) is adopted in TGMIP also.

The following procedure is prescribed to all the districts in the maintenance of accounts & Audit. The earlier practice may be adhered to in respect of payments related to previous years.

- 9.1** The accounts should be maintained on commercial principles i.e., double entry book keeping system
- 9.2** The DHSOs should maintain monthly/annually inter-alia the following
 - a. Receipt and Payment Account
 - b. Income & Expenditure Account
 - c. Balance Sheet
- 9.3** There should be an audit by a chartered accountant (C.A) which is mandatory and C.A should be appointed by the Collector /chairman. Same C.A cannot be more than (3) years continuously. The audited utilization certificate in GFR 12C is to be signed by C.A, DH&SO/Deputy Director of Horticulture and Collector / Chairman and sent to Head office. The audit fees to be paid as per the rates communicated by Head office.
- 9.4** Test audit by Accountant General (A.G) is also conducted and the DHSOs should provide all the relevant records to the audit team.
- 9.5** Cash books and subsidiary registers/ledgers should be maintained in the uniform formats prescribed.
- 9.6** Specific time limits are prescribed for compilation and submission of annual accounts. The annual accounts are to be compiled by 30th April and got audited by the C.A as per the rules, on or before 31stMay. A copy of such audit report duly certified by the auditor and signed by the DDH/DHSO and collector/Chairman of the district shall be forwarded to the P.O, TGMIP not later than 30th June.
- 9.7** The powers of P.Ds/DHSOs for signing cheques have been retained at Rs.1.00 lakh. Without splitting up any bill.
- 9.8** An imprest amount of Rs.5000/- is allotted from the administrative charges for meeting the day to day expenditure and should be maintained by a regular employee.

- 9.9** Only (1) Bank Account in Union Bank shall be maintained for administrative charges (CSS +State).
- 9.10** Only one cash book i.e., for Administrative charges is to be maintained.
- 9.11** The Deputy Director of Horticulture/ DHSO shall acknowledge receipt of funds from the MIP Head Office in the format prescribed immediately after the receipt of funds. (Annexure-19)
- 9.12** Interest earned on funds of the Administrative charges should be reported to Head Office on annual basis in the 1st week of April for the preceding financial year and register of interest earned should be maintained in the format prescribed. (Annexure-22)
- 9.13** The DHSOs should maintain a register of permanent/semi-permanent assets or partially acquired out of Project funds (Annexure-23).
- 9.14** Maintenance of Cash Book
- 9.14.1** The DHSOs should maintain one separate cash book for administrative charges and other for scheme funds (subsidy). The cash books shall be maintained in the prescribed format in double entry system on commercial principles (Annexure-20).
- 9.14.2** The cash book shall be closed on every transaction day. All receipts and payments should regularly be posted in the cash book. After completion of month, the cashbook should be closed and signed by the Accountant and the DHSOs.
- 9.14.3** Interest accrued on the account should also be reflected in the cash book.
- 9.14.4** The monthly closing balance should have the details of Bank balances supported by the copies of Bank statements. A certificate in this regard should be recorded in the end of every month.
- 9.14.5** The debits and credits for Bank charges, commission or interest, which may appear in the monthly Bank statement should be incorporated in the cash book forth with, so that cash book balances tally with the Bank Balance.
- 9.15** Guidelines for payment
- 9.15.1** All payments pertaining to Administrative charges shall be made through cheques only supported by documents such as bills/receipts and cash memos, while obtaining proper acknowledgement.

- 9.15.2** All paid vouchers shall have to be retained for a period of 7 years or till completion of the statutory audit whichever is earlier
- 9.15.3** A system of debit voucher for each payment shall be introduced. The debit voucher shall indicate sanction no., particulars of expenditure, ledger head/sub head under which it is to be classified. The debit voucher shall have to be approved by the DHSOs and the same will be the basis for posting the cash book and ledgers.
- 9.15.4** Wherever payments are made in respect of bills there should be stamping on such bills/ receipts, indicating paid and cancelled, so that no double payment can be claimed or made.
- 9.16** Procedure for Bank Reconciliation
- 9.16.1** The Bank account should be reconciled on the last day of the every month. If there is any discrepancy that should be rectified immediately. The Bank Reconciliation Statement (BRS) should be pasted in the cash book at the end of each month. The BRS should be prepared as per format (Annexure-22).
- 9.16.2** Cheques older than (3) months from the date of its issue and not presented to the Bank should be investigated by the DHSOs and expenditure entry should be written back in cash book and accounts noting the reference No., date of payment, voucher and head of account.
- 9.17** Coordinated functions of Banks with MIP
- 9.17.1** Funds received from MIP Head Office should be kept in a savings Bank account only and in no case be kept in fixed/term deposits.
- 9.17.2** On receipt of intimation from the Bank about the receipt of funds through RTGS/NEFT the DHSOs shall immediately send the passbook to Bank for making necessary entries.
- 9.17.3** Interest earned on the funds is to be added to the account and necessary receipt entries be made in the cashbook.
- 9.18** Guidelines for cheque book
- 9.18.1** On receipt of cheque Book from the Bank, the Accountant shall count cheque leaves and certify on back side of the cheque book that "this cheque Book contains forms". The cheque books shall also be

entered in the register meant for the purpose and kept in the custody of Accountant.

- 9.18.2** No cheque shall be signed unless required for immediate delivery to the person to whom money is due.
- 9.18.3** If a signed cheque could not be delivered to the payee on account of non appearance, it should be lodged in an iron safe and the key of which should be kept in the custody of accountant.
- 9.18.4** In case of cheque lost, on receipt of intimation from the payee the drawee Bank should be asked to provide "Non payment certificate". The payee should be insisted upon to execute an indemnity bond for an amount equal to the value of cheque lost and a fresh cheque can be drawn then only in favour of the payee.
- 9.18.5** In case of time barred cheques, revalidation of cheques shall not be resorted to. The time barred cheque should not be destroyed but preserved as a voucher/sub voucher and a fresh cheque should be issued on this basis. The word "VOID" should be written on the overleaf of the cancelled cheque to avoid its misuse at a later date.
- 9.18.6** Every payment by cheque shall be covered by a stamped receipt if necessary signed by the person to whom the money is due and actually paid.
- 9.18.7** All amounts received through cheques/drafts will be acknowledged through printed receipts which will be signed by the drawing and disbursing officer or any other person authorized on his behalf. The receipt books and their counterfoils will be machine numbered and their record be kept in the receipts register.
- 9.18.8** Counterfoils/Record slips of cheques should bear the name of the payee, date of issue, voucher number and initial of signatories.
- 9.18.9** All cheques other than self cheque should be crossed / account payee and in no case a bearer cheque should be issued.
- 9.19** Guidelines for auditing the accounts of MIP
 - 9.19.1** The C & AG/ internal audit shall have the right of auditing of the accounts of MIP and shall have the access to the books and other relevant records.

- 9.19.2** PMRKVY-PDMC being a Centrally Sponsored Scheme (CSS) implemented through MIP, is subject to internal audit by the Ministry of Agriculture, Govt. of India and State Govt. Teams.
- 9.19.3** A copy of such Audit report duly signed by the auditor, DDH/PD and Collector & Chairman should be forwarded to the DoH office by 31st May.
- 9.19.4** PMRKVY-PDMC being a centrally sponsored scheme implemented through TGMIP is subject to internal audit by the Ministry of Agriculture, Govt., of India and State Government schemes.
- 9.20** Guidelines for selection of CA firms
- 9.20.1** Preference should be given to select experienced CA listed in the panel of AG of the state or C & AG. However in areas where empanelled CAs are not available any other CA with professional qualifications prescribed by the respective State Governments from time to time may be trusted.
- 9.20.2** If any professional misconduct found on the part of CA shall be reported to the Institute of Chartered Accountants of India. CA is liable for any punitive action to be taken by the Institute under the Code of Conduct as defined under provisions contained in the Chartered Accountant Act, 1949.
- 9.21** List of Monthly Statements to be prepared by DHSOs
- The DHSOs shall prepare following monthly statements for each scheme.
- a. Preparation of Bank reconciliation statement.
 - b. Monthly / Fortnightly review of Bank passbooks.
 - c. Monthly closing of pass book having "Summary statement of transactions".
 - d. Monthly closing of receipt and payment register.
 - e. Summary of cheques issued but not presented at Bank during the month.
 - f. Monthly Receipts and Payments for Administrative expenses (Head wise).
- 9.22** Summary of Account books to be maintained by the DDH/PD as applicable
- a. Cashbook

- b. Register for States share
- c. Register for Central share
- d. Register for Beneficiary contribution
- e. Register for RKVY Funds
- f. Register for IJP Funds
- g. Register for NREGS Funds
- h. Cheque issue register
- i. Register of cheque books
- j. Register of cheques/ Demand draft received
- k. Register of advances to staff
- l. Register of Interest accrued on funds
- m. Register of Admn charges: to record the cheques issued against the balances in Union bank and to arrive at the actual balance available from time to time.
- n. Register of remittances of Regular employees in respect of GPF, GIS, APGLIF, PT, income tax, Govt loans, FA etc.,
- o. Register to record recovery and remittance of Outsourcing employees in respect of (1) Employees Provident fund contributions (2) ESI loans (3)PT
- p. Registers to watch the disposal of audit objections of AG's inspection/ internal audit/ CA audit
- q. Assets register in form G.F.R-19.
- r. Bank reconciliation register for reconciliation of balances held in Andhra Bank.
- s. Register of invoices for payment of 90%subsidy
- t. Deposit register to be maintained for Earnest Money, security deposit of employees and income tax deductions.
- u. Scheme wise ledgers.
- v. Any other register considered necessary connected with maintenance of accounts.

9.23 Monthly Receipt & Payments for Administrative charges.

The DHSOs are required to submit Receipt & Payment Account in respect of Administrative charges in the format already communicated by 4th of succeeding month.

9.24 Adoption of Receipts & Payments statements communicated by head office for CA audit reports.

Since different formats of Receipt & Payment Accounts are adopted by the C.As, the DHSOs are to advise the CA's to prepare the R & P Account in the formats designed at Annexures No. 19-25. The C.As may also specifically be advised to prepare separate audit reports for (i).Scheme (ii). Administration Expenditure -Annexures-19-25 as already communicated in Memos earlier.

10.DUTIES AND RESPONSIBILITIES OF OFFICERS, STAFF & MICOMPANIES IN TGMIP

10.1 Duties and responsibilities of DHSOs

- 10.1.1** Ensure achievement of physical and financial targets duly following crop wise targets as allotted by the Project.
- 10.1.2** Ensure convergence with the line departments like DWMA, SC & ST agencies etc to cover required area under SC/ST/BC and SF/MF and maintain the percentages of SCSP 16.05%, TSP9.55% and BC not less than 25%, Women 33% and not more than 10% budget of other farmers (2-5ha) proportionate coverage of area between Inline and Online Drip.
- 10.1.3** Ensure online registration of all eligible Beneficiaries.
- 10.1.4** Ensure entering applications of Beneficiaries in Master Register as per seniority.
- 10.1.5** Ensure online process flow as per the logins.
- 10.1.6** Sanction of administrative sanctions through online for release of 10% subsidy.
- 10.1.7** Ensure to follow the time schedules prescribed to issue administrative sanctions, trench cutting, final inspections, 90% payments etc.
- 10.1.8** Ensure to conduct prescribed Random inspections by DHSOs, MIEs etc., after receipt of final inspection reports from HO.
- 10.1.9** Conduct review meetings with DCOs of MI Companies and HOs and other staff on weekly basis & monitor the progress of MI installations.
- 10.1.10** Ensure positioning of staff by the M.I. Companies as per MIP norms.
- 10.1.11** Ensure for conduct of after sales service campaigns by companies as per MIP norms.
- 10.1.12** Ensure timely replies on the reports being called for by the Commissioner of Horticulture and Project Officer.
- 10.1.13** Impose penalties on MI Companies for violations with the approval of District Collector/ DOH after giving reasonable opportunity.
- 10.1.14** DHSOs should monitor collection of samples of MI Components of all MI companies and obtain results from CIPET. In case of spurious supply the report should be submitted to the Head office.

- 10.1.15** Conduct 25% random inspections of MI Installations by covering all the mandals and all the MI Companies as per allotment.
 - 10.1.16** Act as drawing & disbursing officer for TGMIP at district level.
 - 10.1.17** Submission of monthly receipts and expenditure statements and ensure incurring expenditure in accordance with the allocation and monthly progress report by 2nd every month.
 - 10.1.18** Submission of Utilization Certificates to the DoH.
 - 10.1.19** Ensure periodical checking of all the registers and records.
 - 10.1.20** To follow proper accounting procedures.
 - 10.1.21** Random inspections should be completed within 10 days after completion of final inspection.
 - 10.1.22** Attend all other duties entrusted by superior officers/ District Collector / Project Officer / Director/Commissioner of Horticulture.
 - 10.1.23** Any deviation noticed in the implementation of the scheme involving the loss to the Government as well as to the beneficiary, will attract the disciplinary action.
- 10.2 Duties and responsibilities of HO**
- 10.2.1** Maintaining a Seniority Register of applications received from DHSOs office for preliminary inspection.
 - 10.2.2** Conduct of Preliminary inspection of the applications allotted by the DHSOs as per seniority and collect the hard copies of required documents from the farmer and submit to the DHSO.
 - 10.2.3** Verify the contents of BOQs, Designs, invoices as per norms and guidelines of MIP,
 - 10.2.4** Ensure the unit cost and the quantities specified in BOQ are as per the approved MIP spacing and norms. Coordinate with MI Companies for installation of MI Systems.
 - 10.2.5** Ensure recording of GPS Coordinates in preliminary inspection reports.
 - 10.2.6** Ensure the beneficiary takes up the trench work and update data online.
 - 10.2.7** Coordinate with MI Companies for installations of MI System.

- 10.2.8** Conduct of 100% final inspections with Digital Photographs with date as per guidelines according to seniority and allotment made by DHSOs.
- 10.2.9** Coordinate with the officers for conduct of Random Inspections.
- 10.2.9.1** Educate the beneficiaries where Micro irrigation system is installed at frequent intervals on fertigation schedule, Pest management, adoption of new varieties and new cropping system under drip/semi permanent sprinkler etc. systems.
- 10.2.9.2** Coordinate with MI companies with regard to after sales service for a period of 10 years from the date of installation.
- 10.2.10** To interact and co-ordinate with the staff of other line departments with regard to TGMIP activities .
- 10.2.11** To maintain tour diary and submit the same with full details to DHSOs, TGMIP.
- 10.2.12** Ensure eligibility of the beneficiary duly verifying the required documents attached to the application before sanction of 10% Administrative sanction & 90% final payment.
- 10.2.13** Maintain progress reports on MI Installations, Crop wise, Online & inline wise according to the targets.
- 10.2.14** Assist the DHSOs in overall implementation of project i.e. in achieving the physical & financial, inline / online ratios, SC, ST, BC and Women etc., as per targets.
- 10.2.15** Monitor the trench cutting status of the sanctioned applications.
- 10.2.16** Ensure for preparation of all reports called for by Head Office / District Collector.
- 10.2.17** Attending to the rectification reports of 3rd party evaluation.
- 10.2.18** Supervise the work of Office.
- 10.2.19** Ensure maintaining the seniority in Master Registers for both 10% and 90%payments.
- 10.2.20** Conduct 100% inspections of MI Installations by covering all the mandals and all the MI Companies as per allotment.
- 10.2.21** Ensure to circulate all MI files (10% & 90%), Registers, Records, Cash Book, Ledgers etc., as per MIP norms after verification to DHSOs in time for approval.

- 10.2.22** Attend the meetings as directed by the DHSOs.
- 10.2.23** Attend all other duties entrusted by superior officers from time to time.
- 10.2.24** Random inspections should be completed within 10 days after completion of final inspection.
- 10.2.25** HOs/DHSO should ensure that the farmer has not availed subsidy under the scheme during the last 7 years for the same land for applications received before issue of Mobilization sanction.
- 10.2.26** Any deviation noticed in the implementation of the scheme involving the loss to the Government as well as to the beneficiary, will attract the disciplinary action.

10.3 Duties and responsibilities of Superintendent, TGMIP

- 10.3.1** Ensure the staff to attend office in time and submit attendance Particulars to the DHSOs everyday.
- 10.3.2** Maintenance of all registers and records as required as per TGMIP guidelines.
- 10.3.3** Ensure prompt submission of files and reports.
- 10.3.4** Ensure proper maintenance of Master registers as per seniority for the applications received for sanction of 10% administrative sanctions and for payment of 90% subsidy.
- 10.3.5** Ensure maintaining of Personal Register(PR)s.
- 10.3.6** Maintain beneficiary wise individual files(village wise and mandal wise).
- 10.3.7** Supervise the work of the staff of the office.
- 10.3.8** Submission of files for release of 10% and 90% payments after verification.
- 10.3.9** Ensure timely action on RTI Applications.
- 10.3.10** Follow-up action on all Audit related files.
- 10.3.11** Ensure submission of Cash Book by Accountant daily to the DH&SO and ensure bank reconciliation at the end of the every month.
- 10.3.12** Ensure remittance of 10% beneficiary contribution to the beneficiary contribution account of the DHSOs office on daily basis. Further the excess amount collected, if any from the beneficiaries may be refunded to concerned beneficiaries as per norms.
- 10.3.13** Attend to Farmer and MI company grievances.

- 10.3.14** Attend all other duties entrusted by superior officers from time to time.
- 10.3.15** Data base of the farmer has to be verified while processing the application that the farmer has not availed subsidy under the scheme for a period of 7 years for the same land, even within the subsidy limit.
- 10.3.16** Any deviation noticed in the implementation of the scheme involving the loss to the Government as well as to the beneficiary, will attract the disciplinary action.

10.4 Duties and responsibilities of MIEs

- 10.4.1** Collection of applications of beneficiaries and also ensure the crop suitable as per target through HEOs
- 10.4.2** Scrutinize the farmer's applications and verify BMS report, the BOQ values system cost, subsidy arrived at etc., as per the MIP norms & guidelines and ensure recording of GPS Coordinates and arrive at area in BMS are tallied Coordinates of final inspection.
- 10.4.3** Scrutiny the BOQs, Designs, invoices as per norms and guidelines of MIP and ensure the availability of fertigation equipment in the BoQ.
- 10.4.4** Verify the unit costs and quantities are as per the MIP approved spacing and unit cost.
- 10.4.5** DHSOs in matters related to Unit Costs, calculations, BOQs verifications, Online related issues etc.,
- 10.4.6** Responsible for thorough technical scrutiny of the 10% and 90% MI files submitted by the MI Companies.
- 10.4.7** Conduct Random verification of 100% installations before making 90% payments as per allotment.
- 10.4.8** Coordinate with DWMA and other agencies for covering more area under IJP/EGS and SC/ST.
- 10.4.9** Responsible for collection of MI component samples from the field and sending for analysis to CIPET.
- 10.4.10** Random inspections should completed within 10 days after completion of installation.
- 10.4.11** Responsible for preparation of after sales service campaigns in coordination with MI Companies and HOs and ensure to organize them as per the schedule and for organization of farmer's training programme.

- 10.4.12** Attend all other duties entrusted by superior officers from time to time.
- 10.4.13** The MIE responsible for any financial loss or any other irregularities committed is liable for Criminal Action.

10.5 Responsibility of MI Companies:

- 10.5.1** The mandatory coverage of SC, ST & BC beneficiaries SC, ST Act 16.05% and 9.55% funds are to be targeted for SC & ST farmers respectively under SC sub - plan and Tribal sub - plan and at least 25% funds for Backward Class farmers respectively is to be taken up by the MI company and Not exceeding 10% of financial target shall be covered by other farmers (2-5ha).
- 10.5.2** The MI company should achieve Inline and Online crop targets in the ratio of 80:20.
- 10.5.3** Survey of beneficiary's land with GPS including the collection of data on land holding, crops grown / to be grown, water source and yield, land topography etc & must ensure land suitability, functional water source, energization by visiting farmers fields and should submit applications of such suitable applications only to DHSOs office for 10% sanctions.
- 10.5.4** Appropriate MI system to be designed based on the water requirement of proposed crop.
- 10.5.5** The MI company is responsible to login and complete the required process for sanction of 10% and 90% payments.
- 10.5.6** Marking has to be given by the MI Company within 7 days after receipt of administrative sanction.
- 10.5.7** The MI Company should coordinate and motivate the Beneficiary to open trench as per the marking given by the MI Company and as per the recommendations of the MI company representative (Trench size) within 7 days after marking given by the MI Company.
- 10.5.8** MI company has to submit photographs of preliminary inspection, Final inspection and at the time of installation as per guidelines
- 10.5.9** Trail run has to be given to farmer after completion of MI Installation.
- 10.5.10** The MI company should demonstrate the usage of ventury/ Fertigation tank and maintenance of system.

- 10.5.11** Warranty certificate to be issued by the MI company to farmer for a period of 5 years.
- 10.5.12** After sale campaigns to be organized as per the target allotted and should give acid treatments, fertigation & irrigation schedule etc., at interval of 6 months
- 10.5.13** To co-ordinate with DHSOs in quality testing of MI components in CIPET fertigation for 6 months.
- 10.5.14** To provide technical guidance to farmer in maintenance of MI system.
- 10.5.15** The MI Company should give the address particulars of contact person and also the place of availability of spare parts and at least one at every Division Head Quarters.
- 10.5.16** The design should be in accordance with the crop and water availability.
- 10.5.17** The DCOs & MIEs of MI company should tour intensively in the District and to verify the details of BMS report given by the Mandal representative.
- 10.5.18** BMS, Design, BOQ to be submitted by the MI company within 7 days for sanction of 10% Mobilization advance.
- 10.5.19** MI company has to submit original invoice, Completion and warranty certificate duly signed by the farmer within 7 days after installation for release of 90% Final payment.
- 10.5.20** MI company should install the MI system within 15 days after trenching by the farmer.
- 10.5.21** The MI company should submit BOQ and Invoice in DHSOs office.
- 10.5.22** The MI Company is responsible for proper installations correctness of extent of the area, design, quantities of components supplied to the beneficiary.
- 10.5.23** The MI Company has to deploy sufficient staff as per the guidelines.
- 10.5.24** MI Company should install the system as per the design already submitted with BOQ. If any change in design arises depending on the field conditions, re design has to be submitted.
- 10.5.25** The MI Company should provide a sticker with a measurement of 12" x 4" duly mentioning the ID No. and proceeding No. of the farmer along phone numbers of the DHSOs, DCO of MI Company and Toll

free number of the District for adhering to HCU unit at the time of final inspection.

10.5.26 The MI Company should pay the penalties imposed by the District Collector & Chairman, TGMIP.

10.6 Responsibility of Beneficiaries/ farmers:

10.6.1 Necessary documents required for sanction of MI system to be provided to the HO.

10.6.2 The particulars provided in the application form should be correct and should be genuine.

10.6.3 The Beneficiary has to apply the MI system to the crop available on land or proposed crop to be taken in the crop rotation.

10.6.4 The Beneficiary has to open trench as per the marking given by the MI Company and as per the recommendations of the MI company representative (Trench size) within 7 days after marking given by the MI Company.

10.6.5 Beneficiary has to coordinate with the MI Company at the time of Survey /installation.

10.6.6 Beneficiary has to verify the quantities of components received in the field with the delivery challan.

10.6.7 Trenching has to be done by the beneficiary on his own cost.

10.6.8 Beneficiary should coordinate with the MI Company for completion of installation within 15 days after Trench opening.

10.6.9 Beneficiary has to preferably construct the suitable size of platform of brick masonry or cement concrete should be constructed by the Beneficiary for installation of Head Control Unit(HCU).

10.6.10 Beneficiary to Check that the material received is free from any defect and damages.

10.6.11 Cooperate with MI Company/HO for trial run, and after trial run of the MI system the Beneficiary has to verify the leakages if any and the trench has to be closed.

10.6.12 The Beneficiary has to maintain the system as per the suggestions given by the MI Company.

10.6.13 Beneficiary has to attend the training programmes /service campaigns conducted by the Department and MI Company.

- 10.6.14** Beneficiary should ensure that the MI system is used sustainably.
- 10.6.15** Beneficiary has to allow all the inspection teams to be inspect the MI system and to give feedback of operation of the MI system.
- 10.6.16** The Beneficiary has to attend preliminary inspection and final inspection. In unavoidable circumstances farmer representative can attend PIR but farmer has to attend Final inspection.



తెలంగాణ ప్రభుత్వము

తెలంగాణ సూక్ష్మనీటి పారుదల పథకము (TGMIP)

----- జిల్లా

డ్రైవ్ / స్ప్రింగ్లర్ / సెమి పర్మనెంట్ స్ప్రింగ్లర్ / మినీ స్ప్రింగ్లర్ / పైల్డ్ స్ప్రింగ్లర్ / రెయిన్ గన్

కొరకు దరఖాస్తు వత్తము

ఆర్థిక సంవత్సరం :

దరఖాస్తు అందిన తేది :

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దరఖాస్తు సీనియారిటీ క్రమసంఖ్య :

రైతు పాస్‌పోర్ట్
సైట్ ఫోటో ఇక్కడ
అటంచవలెను.

1. రైతు పేరు :

2. తండ్రి / భర్త పేరు :

3. గ్రామము :

4. మండలము :

5. కులము :

షెకు	షెతె	వెత	ఇతరులు
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6. కేటగిరి :

సన్నతారు	చిన్నతారు	ఇతరులు
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7. ఆడ / మగ :

8. వయస్సు :

9. చిరునామా : ఇంటి నెం : వీధి, :

గ్రామము : (పోస్టు) గామ పంచాయితీ పేరు

మండలము : జిల్లా :

ఫిన్ : మొబైల్ నెం:

10. రైతుకు ఉన్న మొత్తం భూమి హెక్టార్లు

11. గతంలో రాయితీ పొందిన భూమి వివరములు:

క్రమ సంఖ్య	మండలం	రెవెన్యూ గ్రామము	సర్వే నెం.	విస్తీర్ణం (హె)	వంట పేరు	కంపెనీ పేరు	నష్టాడి పొందిన సంవత్సరం మరియు రాయితీ	రాయితీ మొత్తం (రూ)
1	2	3	4	5	6	7	8	9
మొత్తం								

12 : జిందు సేద్య పరికరాల కొరకు దరఖాస్తు చేసిన భూమి వివరములు :

క్రమ సంఖ్య	మండలం	రెవెన్యూ గ్రామము	సర్వే నెం.	1జి ప్రకారం విస్తీర్ణం (హె)	దరఖాస్తు చేసిన విస్తీర్ణం (హె)	వంటి పేరు
1	2	3	4	5	6	7
మొత్తం						

13. రైతు ఇష్టపూర్వకంగా ఎంపిక చేసుకున్న కంపెనీ పేర్లు (ప్రాధాన్యత క్రమంలో)

1):

2):

3):

14. సాగు నీటి వనతి :

బావి	బోరు	కాలువ	కుంటలు	ఇతరములు	
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15. నీటి వనరు సామర్థ్యం (అంగుళములలో) :

16. నీటివనరు యజమాని పేరు :

17. నీటి పంపు సామర్థ్యం (కరెంటు పంపు / డీజిల్ పంపు / సోలార్ పంపు) :

18. కరెంట్ సర్క్యూస్ కనెక్షన్ ఉందా / లేదా

19. ఈ వనరు నుండి నీరు పంచుకుంటున్న లబ్ధిదారుల వివరములు మరియు భూమి వివరములు :

క్రమ సంఖ్య	పేరు	సర్వే నెం	విస్తీర్ణం (హె)
1	2	3	4
1			
2			
3			
4			
5			
6			
7			
8			
9			
మొత్తం విస్తీర్ణం (హె)			

20. బ్యాంకు ఖాతా వివరములు: ఖాతా నెం.

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బ్యాంక్ పేరు: : బ్రాంచి పేరు , IFSC ode

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21. ఋణం మంజూరు చేసిన / చేయవలసిన బ్యాంకు మరియు బ్రాంచి :

ఈ దరఖాస్తులో తెలిపబడిన వివరములన్నీయు నిజము. ఒక వేళ ఏదైనా తప్పు అని ఋణాధికారి యెడల నా దరఖాస్తును నా సమ్మతము లేకుండా తిరస్కరించవచ్చును.

రైతు సంతకము

రైతు ధృవీకరణ పత్రము

- నేను/ మేము ప్రభుత్వము ద్వారా బిందు సేద్యమునకు ప్రస్తుతం దరఖాస్తు చేసిన భూమికి గత 10 సంవత్సరములలో రాయితీ పొందలేదు.
- నేను / మేము ఈ పథకము క్రింద మంజూరు అయిన బిందు సేద్య పరికరములు గానీ లేదా అవి బిగించిన భూమిని కానీ (5) సంవత్సరముల వరకు ఎవరికీ విక్రయించటం గానీ, దానం చేయటం గానీ, చేయనని / చేయమని ధృవీకరించుచున్నాము.
- నా / మా భూమిలో అమల్లో ఉన్న ఈ సిస్టమ్ అయిదు సంవత్సరాలలో ఏ ప్రభుత్వ వ్యవసాయ అధికారి/ఉద్యాన అధికారి / మైక్రోఇరిగేషన్ అధికారి మరియు ఏ ఇతర ప్రభుత్వ అధికారులైన ఎల్లవేళలా తనిఖీ చేసుకొనుటకు అంగీకరించు చున్నాను /చున్నాము.
- నాకు/మాకు మంజూరు చేసిన బిందుసేద్యపరికరములను నాకు ఏ ఉద్దేశ్యంతో మంజూరు చేసినారో ఆ ప్రకారం పూర్తిగా ఉపయోగించుకొనుగలవాడను/వారము. నా/మాపాలంలో అమర్చబడిన బిందుసేద్య పరికరము (పాడ్ కంట్రోల్ యోగిట్) మరియు నీటి పంపిణీ వ్యవస్థ (పి,వి,సి మరియు ల్యాటర్ల పైపులు) పూర్తి స్థాయిలో ఉపయోగించుకొనుగలవాడను.వారము.
- నేను/మేము దరఖాస్తు చేసికొన్న పంటకు సంబంధించిన మైక్రోఇరిగేషన్ పథకము వారు నిర్దేశించిన స్టేసింగ్ (మొక్కలు మరియు లేటర్ల మధ్య దూరము) నియమనిబంధనలను తప్పనిసరిగా పాటించగలను/గలము.
- నా / మా పాలములో మార్కింగ్ చేయబడిన డిజైన్ ప్రకారం, మార్కింగ్ చేసిన తర్వాత 15 రోజులలోపు పూర్తిగా కాలువలు (ట్రైచ్) త్రవ్వి, పరికరాలు అందచేసిన 15 దినముల లోపు బిందుసేద్య పరికరముల అమర్చుటక కంపెనీ సిబ్బందికి పూర్తిగా సహకరించెదనని, లేని యెడల నాకు అందజేసిన మొత్తం పరికరాలు తిరిగి వాపస్ తీసుకొనే అధికారం మైక్రో ఇరిగేషన్ పథకము అధికారులకు పూర్తిగా హక్కు కలదని ధృవీకరిస్తున్నాను(ము).
- ఈ క్రింద తెలిపిన పత్రములు ఈ దరఖాస్తుతో పాటు జతపరచడమైనది.
 - తహసీల్దారు మరియు డిప్యూటీ తహసీల్దారు ధృవీకరించిన టైటిల్ డిడ్ (భూమి యాజమాన్య హక్కు పత్రం లేదా 1బి.
 - గుర్తింపు కార్డు (ఆదార్ కార్డు, రేషన్ కార్డు, ఓటరు గుర్తింపు కార్డు మొదలగునవి)
 - సి. వాటర్ షేరింగ్ సర్టిఫికేట్.
 - డి. తహసీల్దారు ధృవీకరించిన యస్.సి, యస్.టి రైతుల ధృవీకరణ పత్రము.
 - ఇ. విస్తీర్ణం సర్వే కల్గిన FMB (గ్రామ రెవెన్యూ కార్యదర్శి ధృవీకరించినది.
 - ఎఫ్. కౌలు రైతులు అయినట్లైతే కనీసం 5 సంవత్సరముల కౌలు ఒప్పంద పత్రము (నోటరీతో ధృవీకరించబడినది)

పైన పేర్కొన అంశములకు భిన్నంగా చేసిన ఎడల ప్రభుత్వపరంగా తీసుకొను చర్యలకు నేను కట్టుబడి ఉంటానని ధృవీకరిస్తున్నాను (ము).

తేది.

రైతు సంతకము

మైక్రోఇరిగేషన్ కంపెనీ ఇంజనీరు ధృవీకరణ

ఈ రైతు యొక్క భూమిలో బిందు సేద్య పరికరాలు అమర్చుటకు కావలసిన నీటి వనరుల లభ్యత ఉన్నదని, తగిన సామర్థ్యం కలదని, మోటారు వనతి తగిన సామర్థ్యము కలదని మరియు యితర సాంకేతిక పరమైన వసతులు కలవని ధృవీకరించడమైనది.

తేది.

సంతకము

తనిఖీ చేసే అధికారి సిఫార్సు

బిందు సేద్య పరికరాలు అమర్చుటకు దరఖాస్తు చేసిన ఈ రైతు యొక్క భూమిని కంపెనీ ప్రతినిధులతో పాటు రైతు సమక్షంలో ముందస్తు తనిఖీ నిర్వహించినాను, ఇట్టి భూమిలో బిందుసేద్య పరికరాలు అమర్చుటకు అనువైనదిగా ధృవీరించుచున్నాను.

తేది.

తనిఖీ అధికారి సంతకము

కార్యాలయ నిమిత్తము:

రైతు వాటా వివరములు

1. చెల్లించిన రైతు వాటా మొత్తము (రూ) :
2. డి.డి.నెం. :
3. RTGS వివరములు :
4. తేదీ :
5. బ్యాంకు పేరు :
6. బ్రాంచి :

ఈ దరఖాస్తు అందచేసిన రైతుకు ముట్టినట్లుగా రసీదును సీనియారిటీ క్రమ సంఖ్యను నమోదు చేసి ఈ రోజే అందజేయడమైనది.

తేది.

పరిశీలన అధికారి సంతకము

Annexure - 2

Master Register proforma for registration of farmer applications

Sl.No	Date	Name of the Farmer	Village	Mandal	Contact No.	Aadhar Card No	Survey No	Area in ha	Category	Crop	Spacing	Type of Drip/sprinkler	System cost	Non subsidy amount remitted	MI Company
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

ANNEXURE No. 3**List of approved brands:**

Sl.No	Item	Brands approved	Reference Letter No.s	Year	Size
1	2	3	4	5	6
1	Hydrocyclone Filter	Kimplas	Lr.No.TSMIP/Tech/167/2014, Dt:04.09.2014	2014	-
2	Throttle Valve				-
3	PP Ball Valves	Kaveri	Lr.No.TSMIP/Tech/167/2014, Dt:31.12.2015	2015	-
4	Ventury Injector	Kimplas	Lr.No.TSMIP/Tech/167/2014, Dt:02.02.2018	2018	3/4", 1" & 2"
5	Disc Filter	Gajanand Irrigation Industries	Lr.No.TSMIP/Tech/167/2014, Dt:09.05.2018	2018	2, 2&half, 3
6	Screen Filter				2, 2&half, 3
7	Ventury Injector				3/4", 1" & 2"
8	Header Assembly				2&half, 3
9	PP Ball Valves				50, 63MM
10	PP Screen Filter	Ravands Plastech	Lr.No.TSMIP/Tech/167/2014, Dt:14.03.2019	2019	-
11	Control Valves	Kothari Agritech Pvt Ltd	Lr.No.TSMIP/Tech/167/2014, Dt:14.03.2019	2019	63MM
12	Screen Filter	Udyogi Safety Appliances Pvt Ltd	Lr.No.TSMIP/Tech/167/2014, Dt:14.07.2021	2021	-
13	PP Hydrocyclone Filter	Tirupati Sprinklers Pvt Ltd	Lr.No.TSMIP/Tech/167/2014, Dt:14.07.2021	2021	-
14	PP Screen Filter				-

Sl.No	Item	Brands approved	Reference Letter No.s	Year	Size
1	2	3	4	5	6
15	Inlet Manifold				-
16	Outlet Manifold				-
17	Ventury Injector				-
18	Air Release Valve				-
19	Sand Filter	Mach Clean - Automat Irrigation Pvt Ltd	Lr.No.TSMIP/Tech/167/2014, Dt:29.07.2022	2022	25,30,40 meter cube
20	PVC Ball Valve	Ashwa Brand - Kothari Agritech Pvt Ltd	Lr.No.TSMIP/Tech/167/2014, Dt:01.03.2023	2023	2"
21	PP Ball Valve				2"
22	PP Inlet & Outlet Manifold				2"
23	Air Release Valve				1"
24	Krystal Clean Screen Filter				25 - 40 meter cube
25	PVC Pipes	Kumar	TGMIP/Tech/469/2024, Dt:26.09.2024	2024	40, 50, 63, 75, 90 & 110mm
26	PP Throttle Valve	Ashwa Brand - Kothari Agritech Pvt Ltd	TGMIP/Tech/469/2024, Dt: 17.04.2025	2025	2"
27	PP Non Return Valve				2"
28	Ventury Assembly				25 & 50MM
29	PP Hydrocyclone Filter				80MM (50 Meter Cube)

Sl.No	Item	Brands approved	Reference Letter No.s	Year	Size
1	2	3	4	5	6
30	PVC SU Union Ball Valve	Ravands Controls LLP			2"
31	Flush Valve				2"
32	PP Butterfly Valve				2"
33	Glycerine Pressure Guage				0-6KG/Centimeter Square
34	Micro Sprayer				1 & 1.2MM
35	Hydrocyclone Filter				2" & 3"
36	Disc Filter-Strainer type				50 & 65MM
37	Flush Valve				-
38	Screen Filter	Automat Irrigation pvt Ltd	TGMIP/Tech/469/2024, Dt: 24.05.2025	2025	2"
39	Disc Filter				2",2.5" & 3"
40	Hydrocyclone Filter				2"
41	ventury Injector				2"
42	Air Release Valve				1"
43	Pressure Guage				0-10Kg/Cm Square
44	Non Return Valve				2" , 2.5" & 3"
45	Throttle valve with Head unit	Automat Irrigation pvt Ltd	TGMIP/Tech/469/2024, Dt: 13.06.2025	2025	2" , 2.5" & 3"

Sl.No	Item	Brands approved	Reference Letter No.s	Year	Size
1	2	3	4	5	6
46	PP Ball Valve				2", 2.5" & 3"
47	PVC Ball Valve				2", 2.5" & 3"
48	Screen Filter				2.5" & 3"
49	Micro Sprayer				1 & 1.2mm
50	Hydrocyclone Filter				2" & 2.5"
51	Venturi Injector				3/4" & 1"
52	Media Fillters	Pragathi Agrotech Industry	TGMIP/Tech/469/2024, Dt: 24.06.2025	2025	2", 2.5" & 3"
53	PP Throttle Valve	Ashwa Brand - Kothari Agritech Pvt Ltd			2.5" & 3"
54	PP Non Return Valve				2.5" & 3"
55	Inlet & Outlet Manifold				2.5" & 3"
56	PVC Flush Valve				1.25", 1.5" & 2.5"
57	PP Butterfly Valve				2.5" & 3"
58	PP Ball Valve Double Union				1 1/4", 1 1/2", 2.5" & 3"
59	PVC Ball Valve SU				1 1/4", 1 1/2", 2.5" & 3"
60	Screen Filter				65mm

SI.No	Item	Brands approved	Reference Letter No.s	Year	Size
1	2	3	4	5	6
61	Ventury Injector				3/4"
62	Hydrocyclone Filter	Automat Irrigation pvt Ltd			3"
63	Ventury Injector	Ravands Plastech LLP			3/4", 1" & 2"
64	Air Release Valve				1"
65	Disc Filter				3"
66	Inlet & Outlet Manifold				2" , 2.5" & 3"
67	Media Fillters	Laxmi Engineers			2" (20m3), 2.5" (30m3) ,3" (40m3) & 3" (50m3)
68	Media Fillters	Krishna Agritech	TGMIP/Tech/469/2024, Dt: 28.07.2025	2025	2" (20m3), 2.5" (30m3) ,3" (40m3) & 3" (50m3)
69	PVC Pipes	Sudhakar PVC Products			25mm, 40mm, 50mm, 63mm, 75mm, 90m & 110mm
70	PVC SU Union Ball Valve	Poonam Industries	TGMIP/Tech/469/2024, Dt:24.11.2025	2025	2" & 2.5"
71	PP Flush Valve				1 1/2", 2", 2.5" & 3"
72	PP Air Valve				1/2", 1" & 1.5"
73	PP NRV Threaded				2", 2.5" & 3"
74	Screen Filter				2", 2.5" & 3"

Sl.No	Item	Brands approved	Reference Letter No.s	Year	Size
1	2	3	4	5	6
75	Hydrocyclone Filter				2" & 3"
76	Ventury Injector				1" & 2"
77	Pressure Guage				2" & 2.5"
78	Screen Filter	M/s. ALOFT IRRITECH PVT. LTD	TGMIP/Tech/469/2024, Dt:01.07.2026	2026	2" (50mm)
79					2.5" (65 mm)
80	Hydrocyclone Filter				2.5" (65mm)
81					2" (50mm)
82	Ventury Injector				1""(25mm)
83					3/4" (20mm)
84	PP Ball Valve				2" (63mm)
85	Air Release Valve				1.5"

APPLICATION FORMAT FOR ONLINE REGISTRATION

I. The Following Certificates / Documents are to be attached

1. Copy of land document
2. Copy of Aadhar card / Ration Card / any photo proof
3. Consent letter from other share holders of water source

II. General Details

4. Name of the Applicant :
5. Fathers / Husband's Name :
6. Social Status :
7. Age :
8. Gender :
9. Type of land :
10. Identification Proof
 - a. Ration Card No :
 - b. Aadhar Card No. :
 - c. House No. :
 - d. SC No :
 - e. Voter Identity Card No. :
11. Land Owned :
12. Land Leased :
13. Total Land :
14. Total Area under Horticulture :
15. Classified Wet Land Area : Survey No:
16. Classified Dry Land Area : Survey No:
17. Category :

III. Technical Information

1. Texture of Soil :
(light, medium & heavy)
2. Type of Soil :
(Red Soil, Alluvial Soil, Black Soil,
Sandy Soil, Loamy Soil, problematic soil and others)

IV.Address for correspondence

1. Door No. :
2. Street :
3. District :
4. Mandal :
5. Gram panchayat :
6. Village :
7. Habitation :
8. Pincode :
9. Contact No. :
10. Mobile No. :

V. Crop Address same as corresponding Address : Yes / No

VI.Details of crops for availing Micro Irrigation facility

1. District :
2. Mandal :
3. Gram panchayat :
4. Village :
5. Habitation :
6. Survey No. :
7. Area proposed :
8. Type of crop :
9. Crop Grown :
10. Name of Crop :
11. MI System Required :
12. Irrigation Sub type :

VII. Available irrigation facility details

1. MI Company selected by the farmer :
2. Water Pump :
3. Capacity (HP) :
4. Electric Service No./
other alternative sl.no:
5. Source of Irrigation :

6. Date of Application :

VIII. Bank Account with details

1. Account Number :

2. Name of the Bank :

3. Branch :

4. IFSC Code :

TELANGANA MICRO IRRIGATION PROJECT

Name of the District. _____

S. No. _____

PRELIMINARY INSPECTION REPORT OF

Year __

Drip / Sprinkler

Name of the Farmer : Sri/Smt. _____ S/o / W/o. _____

Contact No. _____

Village : _____ Hamlet _____

Mandal _____

Whether File is having : PPB/Title Deed / IB / Registered Sale Deed below two years

Name of the Crop : _____

Area in ha : _____

No. of Plants : _____

Spacing : _____ mts x _____ mts

Age of the Garden : _____ Years,

In case of New Garden pitting done or not _____ No. of pits done : _____

Lateral Proposed : Single / Double _____

Proposed System Cost : Rs. ____/-

Source of Irrigation Yield : Bore Well / Open Well / Sump

Whether the irrigation source is functional : Yes / No

Whether water source located: With in the field :
/ Out of the field (Approximate distance mts.) _____ Mts

Whether existing Pipe Line is available : Yes / No

If Yes Size & Length of Existing Pipe Line : _____ in mm & _____ mts

Whether beneficiary opting for water sharing : Yes / No

If yes, No. of Farmers and their relationship :

Yield of bore well : _____ inches

Motor / Oil Engine is available : Yes / no

If Yes. Capacity of the Motor / Oil Engine : _____ HP

Availability of Power connection and Service no/ other alternative sl.no: : Yes / No

GPS Coordinates : One at water source and others on the boundaries of field.

Area with GPS : _____ ha

Drip / Sprinkler installation is taken up previously : Yes / No

If Yes, Area _____ (Ha)

Subsidy already availed Rs _____

Other Observations in field (Specify):

1)

2)

Recommended for sanction of MI System in _____ ha) for _____ for _____ crop with a spacing of _____ mts X _____ mts

Signature of MI Company
Representative
Name:
Date:

Signature of the Farmer
Name

Signature of the Inspecting Officer
Name:
Designation :
Headquarter:

BENCHMARK SURVEY REPORT
(Surveyed and Prepared by MI Supplier)

1. Details of the Micro irrigation Supplier

1. Name of the Company _____
2. Name of the Authorized Representative _____
3. Village _____ Block _____
Mandal _____ District _____
Phone No. with STD Code _____ Mobile No. _____

2. Details of the Farmer

1. Name of the Farmer _____ S/O _____
Category (SC/ST/BC/OC) _____
2. Village _____ Block _____
Mandal _____ District _____
3. Phone No. with STD Code _____ Mobile No. _____
4. Application No. _____ Date of Application _____ Aadhar ID _____
5. Name of the bank _____

3. Farmer's Land – General information

1. Area _____ ha Future extension, if any _____ ha
2. Area under irrigation _____ ha
3. Direction of slope of field _____
4. Type of soil _____
5. Depth of sheet rock (in case of orchard crop) _____
6. Coordinates of GPS _____

4 Area proposed to be irrigated under drip:

Details of Crop	Plot1	Plot2	Plot3	Plot4
Name of the Crop				
Area under crop (ha)				
Row to row distance (m)				
Total No. of Plants				

5. Type of irrigation system

1. Drip: Inline or Online or Gravity-fed family drip system
2. Sprinkler: Overhead or Micro sprinkler or Rain gun

6. Water, Pump and Power supply

1. Water source: Bore well / Open well / Reservoir / Stream / River / Canal
2. Water availability: Continuous or During part of the season from _____ to _____
3. Water yield _____ LPS
4. Pump details: Company _____ Model No. _____ H.P. _____
Speed (High/Low) _____ Head range _____ Discharge range _____
In case of submersible pump- Depth of installation _____ No. of stages _____
5. Power availability: Continuous or During part of the day from _____ to _____

7. Water Assessment

- a. Depth of water table (in meters) :
- b. Date and season during which assessment made :
- c. Draw down (in meter) :
- d. Height of outlet above ground level :
- e. Assessment of water availability (in liters/second) :
- f. Method used for determining water availability :
- g. Total duration for which pumping was done :
- h. Duration of pumping after which constant water level obtained :
- i. Pump used (mentioned make) (electric/diesel) :
- j. Horse power of pump :
- k. Diameter of outlet pipe :

8. Crop details

1. Crops for installation of microirrigation system

- Orchard _____ Spacing _____m x _____m Area _____ ha
- Plantation _____ Spacing _____m x _____m Area _____ ha
- Vegetable _____ Spacing _____m x _____m Area _____ ha
- Spice _____ Spacing _____m x _____m Area _____ ha
- Sugarcane _____ Spacing _____m x _____m Area _____ ha
- Field _____ Spacing _____m x _____m Area _____ ha
- Medicinal & Aromatic _____ Spacing _____m x _____m Area _____ ha
- Oil palm _____ Spacing _____m x _____m Area _____ ha

2. Intercrop (if any) _____ Area _____ ha

3. Rooting depth _____ m

4. Age of the plant _____ Ground cover _____%

5. Other information if pertinent _____

Signature of MI Supplier _____

Name in Block letters _____

Designation _____

Date _____

Company seal _____

Verified by _____
(MIE MIP)

Water sharing Certificate

To,
The Project Director/DH&SO,
MIP

_____ Dist.

Sri,

We/I, Sri _____ S/o _____,

2. Sri _____ S/o _____ etc. are residents of _____ Village of _____ Mandal here by agreeing for water sharing among ourselves and submit herewith, in the _____ Sy. No., Bore well / Open well is existing with Electrical motor or Oil engine functional which belongs to Sri _____ S/o _____ of _____ Village of _____ Mandal. Under this Bore well / Open well, _____ ha of extent under cultivation.

I Sri _____ S/o _____ of _____ Village of _____ Mandal, have agreed to share water from my Bore well for the extent of _____ ha of _____ No. Farmers in Sy.No. _____ of _____ Village of _____ Mandal.

Through this water sharing agreement made, among our selves, irrigation water is being supplied to the farmers to whom this agreement was made, without any interruption for crops under cultivation for drip irrigation. Further it is agreed up on, to continue this agreement for water sharing, under any circumstances / disputes in future.

We here by promise that we continuously share water from the Bore well /Open well for cultivation of crops under micro irrigation in joint farming system.

Witness

1.

Date:

Place:

Signature of HEO
Name

Name & Signature of water sharing farmers

1.

2.

Certified by HO
Name

BILL OF QUANTITIES (BOQ) FOR DRIP IRRIGATION SYSTEM

Name of the farmer: _____ Aadhar No: _____

Village : _____ Mandal : _____

District : _____ Survey No. : _____

Area : _____ ha Water source : Bore well / Open well / Farmpond

Power source : Electric / Oil engine Meter : Available / Not available

Crop : _____ No. of plant _____ Variety : _____

Spacing : _____ m x _____ m Irrigation System : Drip (online / inline system)

Lateral spacing : _____ m Drippers/plant : _____

Dripper spacing : _____ cm Drinker discharge : _____ LPH

Peak water requirement : _____ mm Application rate : _____ mm

S.No.	Item	Size	Unit	Quantity	Unit cost (Rs.)	Amount (Rs)
I. HEAD CONTROL UNIT						
1.1	Filtration unit					
1.2	Fertilizer Tank					
1.3	Non return valve					
1.4	Throttle valve					
1.5	Air release & Vacuum breaker valve					
1.7	Pressure gauge					
1.8	Optional items					
	SUB TOTAL					
II. WATER CARRIER SYSTEM						
2.1	PVC for main (4/6kg/cm ²)					
2.2	PVC for sub-main (4/6kg/cm ²)					
2.3	Control valve					
2.4	Flush valve					

	SUB TOTAL					
III. WATER DISTRIBUTION SYSTEM						
3.1	Plain lateral					
3.2	Emitters					
3.3	Emitting pipe					
3.4	Grommet					
3.5	Start connector					
3.6	Nipple					
3.7	End cap					
3.8	Spaghetti					
3.9	Barbed connector					
	SUB TOTAL					
IV	FITTINGS & ACCESSORIES					
V	TRANSPORTATION					
VI	INSTALLATION					
	GRAND TOTAL					

Date:

Signed by

Company Representative
Name

TELANGANA MICRO IRRIGATION PROJECT, _____ DISTRICT**CHECK LIST FOR SANCTION OF MOBILISATION ADVANCE**

1.Name of the Applicant:

2.Village :

3.Mandal :

S. No	Particulars / Documents	Yes or No
1	Whether all columns in Farmers application filled up and whether the passport size photo, Signatures of the farmer, MI Company representative and MIAO/HEO with date available?	
2	Whether proposed crop name and variety of the crop/No.of plants and inter crop name if any is mentioned at relevant places in application, survey report and PIR?	
3	Whether the columns which are not applicable are struck down in application by the concerned?	
4	Documents Whether PPB/Title deed duly attested by Deputy Tahsildar / Tahsildar extract of 1.B register attested by Deputy Tahsildar / Tahsildar or copy of registered document attested by Gazetted officer enclosed and whether extent is tallying with the total land mentioned in application? Whether categorization of farmer "SF/MF/BF" mentioned in application is correct as per the extent in Title deed /1.B/PPB.	
5	Whether Ration card copy/Voter Identity card / other identity card enclosed and is it tallying with the name, address and photo furnished in the application?	
6	Whether Copy of FMB or village map signed by Revenue officials, if available is enclosed.	
7	Whether water sharing certificate duly signed by HEO (In case of water sharing) enclosed?	
8	Whether caste certificate for SC, ST farmers issued by Tahsildar enclosed?	
9	Whether all columns in Preliminary Inspection report filled and signed by HEO/MIAO with date enclosed?	
10	Whether copy of Bank DD/UTR no. towards farmer contribution enclosed?	
11	Whether Bench mark survey report duly filled in all columns and signed by the MI company representative enclosed?	
12	Whether BOQ signed by MI company representative	

	enclosed?	
13	Whether Design of MI system duly signed by MI company representative with all details enclosed?	
14	Whether Photograph/ Photographs of the farmers with land marks in back drop enclosed.	
15	Whether Details of GPS coordinates furnished and polygon sheet enclosed?	
16	Whether the coordinates & area tallied with application or not	

Signature of MIAO/HEO with office seal
Name

Signature of verifying officer
Name

MIE
Name

APD
Name

**GUARANTEE FROM THE DRIP FIRM IN TELUGU
(To be given on Company's Letter head)**

We hereby guarantee smooth functioning of the drip system installed in the field of Sri / Smt _____ for _____ crop/s for an area _____ ha in Sy. No. _____ of _____ village _____ Mandal _____ Dist. _____ and also promise to undertake maintenance and repairs free of cost, against the defective machinery / parts / installation for the guarantee period of five years from the date of installation _____ (Date of installation to be mentioned).

Date:

Authorized Signature from the MI Company.
Name (with seal)

IRRIGATION SYSTEM COMMISSIONING AND COMPLETION CERTIFICATE
(Should be given on Company letterhead)

1. Farmer's Name & Aadhar no. :
2. Address :
3. Name of Bank Branch & Loan a/c No.
4. Date of release of 10% 1st installment& amount:
5. Location of Farm :
6. Micro Irrigation System Details :
 - MIS Supplier name :
 - Irrigation System Type :
 - Area sanctioned in ha :
 - Total Area installed in ha :

Sr.No	Name of the Crop	Spacing	Area
Total			

7. Material Supply Date :
8. Installation Completion Date :
9. Was the System Installed as per the Design Drawing : Yes/No
10. Was the "Update Map" handed over by MIS Supplier : Yes/No
11. Was entire material supplied as per Invoice/Estimate : Yes/No

If no, please provide details of short-supply and/or discrepancies:

12. Was the System (Mains/Submains/Laterals) flushed before fixing the emitters:
Yes/No
13. Was the system tested and found to be performing satisfactorily: Yes/No

14. Please provide following details of the system performance:

Pressure at Head Control Inlet, kg/cm² :

Pressure at Outlet of Head Control, kg/cm² :

Pressure at Inlet of Submains, kg/cm² :

Average Emitter Discharge, Lph :

15. Please mention whether the following aspects of System Operations and Maintenance clearly explained and demonstrated by the MIS Supplier to farmer:

Flushing of Laterals	Yes / No	
Flushing of Sub-mains	Yes / No	
Cleaning the Filter element	Yes / No	
Backwashing the Sand Filter	Yes / No	
Operation of Fertigation Equipment	Yes / No	
Procedure for Chemical Treatment	Yes / No	
Procedure for Fertigation	Yes / No	

Hereby certify that all the above information provided was true and complete to my knowledge.

1	Signature of farmer	
2	Signature of MI Supplier	
3	Signature of MIAO/HEO	
4	Signature of Banker	
5	Signature of inspecting officer nominated by DHSO/PD T.G.M.I.P.	

Date : _____

Location : _____

Acknowledgment

Received the copy of Commissioning & Completion certificate on _____(date)
from M/s_____

Date:

Signature of the farmer
Name

To, The Applicant and PD, MIP.
Copy to the concerned Financing Agency if any.

Certificate from farmer
(For release of 90% amount)

This is to certify that the _____ MI Company has fulfilled the following requirements.

1. The MI Supplier has handed over the MI System Maintenance Manual.
2. I have been trained by the MI Company for system operation and maintenance.
3. All works related to Micro Irrigation System are completed to my satisfaction.
4. Received copy of final invoice tallied with the material installed in the field as per the update design.
5. Trail run was done by the MI company and is working satisfactory.

Date:

Signature of the farmers
Name

Witness:

Signature of authorized representative
of MI Company
Name:

Annexure - 13

Master Register proforma for invoices received in DHSO/PDs offices

Sl.No	Date of receipt of invoice	Name of the Farmer	Village	Mandal	Survey No	Area in ha	Category	Crop	Spacing	Type of Drip	Total Cost of the system	MI Company
1	2	3	4	5	6	7	8	9	10	11	12	13

TELANGANA MICRO IRRIGATION PROJECT**Name of the District** _____ **S.No** _____**FINAL INSPECTION REPORT OF** _____

Drip/ Sprinkler

MI Company : _____ **Proc. No.** _____**Date:** _____ **Phase** _____ **Year** _____**Sanctioned Area:** _____ **ha, Crop:** _____ **Amount Rs.** _____

Name of the Farmers Sri/Smt : _____ S/o / W/o _____

Contact No _____ Village _____ Hamlet _____ Mandal _____

MI System Installed Area in ha. _____ Crop _____ No. of plants _____

Age of Plant _____ Row to Row Spacing _____ Plant to Plant Spacing _____

Drippers Spacing _____ No. of Drippers per plant _____

source of irrigation _____ Drip: (Online/Inline) Lateral
single / Double

1. Photographs taken with Land mark, HCU & Crop pertains to the Field: Yes / No
2. GPS Coordinates tallied with Preliminary Inspection : Yes / No
3. Installation area tallied with GPS system : Yes / No
4. Installation done as per design submitted to PD/DHSO office : Yes / No
If No Please specify the deviation and enclose revised design _____
5. Trench closed or not : Yes / No
6. Checked the discharge of emitters : Yes / No
7. Trail run of the system by MI Company done : Yes / No
8. Demonstration of fertigation with ventury / Fertigation tank

done by MI Company:

Yes / No

9. Whether farmer received administrative sanction :

Yes / No

10. Supplied a copy of Delivery Challan in Telugu / Rythu Dairy / Letter of

Guarantee to Farmer in telugu :

Yes / No

11. Date of Installation : _____ Date of Inspection : _____

Details of main line, sub line laterals and other MI Components measured in the field given below:

S.No.	Item	Specification	as per BOQ	as in field	
1. Head Control Unit					
1.1	Filtration Unit				
	a) Screen Filter				
	b) Disc Filter/Hydrocyclone Filter				
	c) Sand Filter				
1.2	Fertilizer Tank / Ventury				
1.3	Non-return Valve Approved Brand or Not				
1.4	Throttle Valve Approved Brand or Not				
1.5	Air release & Vacuum breaker valve				
1.6	Pressure guage				
1.7	Optional Items				
2. Water Carrier System		No.s	Mtrs.	No.s	Mtrs.
2.1	PVC for Main				
2.2	PVC for Sub-main				

2.3	Control Valve Approved Brand or Not				
2.4	Flush Valve Approved Brand or Not				
3. Water Distribution System		No. of Bundles	No. of Mtrs.	No. of Bundles	No. of
3.1	Lateral (16mm / 12mm)				
3.2	Drippers				
3.3	Spaghetti				

Remarks

1)

2)

CERTIFICATE

1. It is to certify that I have visited and conducted final inspection in the field of _____ Crop of Sri/ Smt _____ of Village _____ of _____ mandal _____
2. Certified that the functioning of Micro Irrigation system is satisfactory as per norms.
3. Certified that the material supplied and installed are of approved brands.
4. Hence recommended for release of 90% final payment.

Name & Signature of the MIAO/MCO/HEO:
Designation : Headquarter :

Name & Signature of the HO:
Designation : Headquarter :

Signature of the Farmer:
Signature of the MI Company Representative:

Remarks

1)

2)

Counter signed
Name of inspecting officer (MIE / MIDC / APD / PD)

TELANGANA MICRO IRRIGATION PROJECT
CHECK LIST FOR SANCTION OF 90% FINAL PAYMENT

- 1.Name of the Applicant :
 2.Village :
 3.Mandal :

S. No	Particulars / Documents	Yes or No
1	Whether Photograph showing HCU and Crop at the time of final inspection enclosed?	
2	Whether photo is tallying with the land marks in PIR photo?	
3	Whether Final Inspection report duly filled and signed by farmer, inspection authority, MIAO/HEO and MI company representative enclosed?	
4	Whether Commissioning and Completion certificate signed by farmer, MIAO/HEO, inspection authority and MI company representative enclosed?	
5	Whether Guarantee letter from the MI company (Should be given on company letterhead in telugu) enclosed?	
6	Whether Final Invoice from MI company enclosed?	
7	Whether Delivery challans with signature of the farmer from MI company enclosed?	
8	Whether Updated design in case of any change enclosed?	
9	Whether certificate from farmer for release of 90% amount enclosed?	
10	Whether the letter from MI Company for release of 90% amount enclosed?	
11	Whether GPS Co-ordinates verified or not and area tallied with sanctioned area or not	
12	Any deviation noticed and documents to that extent enclosed?	

MIAO/HEO Signature
Name:

Signature of verifying officer
Name:

MIE
Name:

APD
Name:

Annexure – 16

Unit Cost for Drip Irrigation

Rupees per ha

Sl. No.	Spacing (mxm)	Type of Drip	Unit cost (Rs. per ha)	
			12mm	16mm
1	2	3	6	7
1	10 x 10	Online	29858	33500
2	9 x 9	Online	35136	39278
3	8 x 8	Online	37908	42381
4	9 x 9 Triangular with Microjets	Online	0	49059
5*	9 x 9 Triangular with Microjets & online emitters	Online	0	53465
6*	9 x 9 Triangular with Microjets, online emitters & Inline for Inter Cropping	Online	0	130358
7	7 x 7	Online	39780	44917
8	6 x 6	Online	41909	47708
9	6 x 6	Inline	42436	-
10	5 x 5	Online	46736	53696
11	5 x 5	Inline	47442	50217
12	5x3	Inline	-	50220
13	5x3	Online	-	52960
14	5x2.5	Inline	-	50220
15	5x2.5	Online	-	53120
16	4.5 x 2.7	Online	48537	56326
17	4 x 4	Online	55442	57649
18	3 x 3	Online	63599	69115
19	3 x 3	Inline	-	67106
20	3x2	Online	-	75886
21	3x1.5 (High Density)		-	79210
22	1.5 X 1.5	Online	85956	97185
23	2.7 x 1.5	Inline	74763	70382
24	2.7 x 1.5	Online	68634	79489
25	2.5x2.5	Inline	-	76130
26	2.5x2.5	Online	-	82260
27	2.25 x 0.6	Inline	77143	79633
28	2.0 x 0.6	Inline	81642	85088
29	2 x 2	Online	-	92767
30	2x1 (ultra high density)	Inline	-	89870
31	1.8 x 1.8	Inline	-	91365
32	1.8 x 1.8	Online	86753	104686
33	1.8 x 1.5	Online	90453	104426
34	1.8 x 0.6	Inline	84193	91365
35	1.8 x 0.9	Online	-	104686
36	1.8x0.4	Sub Surface	-	92000
37	1.5x0.4		-	106000
38	1.5 x 0.6	Inline	-	103349
39	1.2 x 0.6	Inline	118863	126334
40	1.0 x 0.6	Inline	124773	144202

Unit Cost for Sprinkler Irrigation

Sl. No	Name of the Sprinkler	Unit cost (Rs. per ha)
1	2	4
41	Portable Sprinkler (25 Nos HDPE Pipes, 5 Sprinkler Nozzles, 5 Nos Sprinkler Coupler etc)	23385
	Portable Sprinkler below 0.4 Ha(GO.Ms.No.45, Dt:21-09-2017) (18 Nos HDPE Pipes, 3 Sprinkler Nozzles, 3 Nos Sprinkler Coupler etc)	16969
42	Micro Sprinkler (Plain Lateral 3500 mts, 1120 Micro Sprinklers etc)	91791
43	Semi-Permanent (PVC 90mm (102m), 75mm (54m) & 25mm (810m), Riser Pipe &Valves etc)	61511
44	Mini Sprinklers (Plain Lateral 1000m, Sprinkler Nozzles 100Nos & PVC Main (60m)& Sub Main (108m) etc)	106995
45	Rain Guns (HDPE Pipes 25Nos, Rain Gun Nozzle, Rain Gun 1 No etc)	
	75mm	31629
	90mm	36345

FORMULAE INCLUDED IN ONLINE APPLICATION:

1. ONLY MAIN CROP

- IF BOQHCUCOST = 0

GUIDED COST= (INDICATIVE COST – HCU COST) * AREA+
OPTIONAL ITEM COST

- ELSE IF ONLINE DRIP AND LATERAL=DOUBLE (Double lateral formula)

GUIDED COST= (((INDICATIVE COST – BOQ HCU COST) *
AREA) + BOQ HCU COST) + [[(area x 10,000/lateral spacing) x
Lateral cost(3.97)]+[(area x10,000/ lateral spacing x plant to
plant spacing)x No. of Drippers x dripper cost(2.3)]] +[(Sub
main/Lateral spacing)*2*Nipples cost(1.34) and Start Connector
cost(1.28) and Grommets cost (1.14) and end Cap cost(1.17)]]+
)]+[((areax10,000/ lateral spacing x plant to plant spacing)/2)x
No. of Drippers * spaghetti cost (1.48) and barbed connector for
spaghetti cost (0.52)] + optional Item cost

- ELSE

GUIDED COST= (((INDICATIVE COST – BOQ HCU COST) *
AREA) + BOQ HCU COST) +OPTIONAL ITEM COST

2. MAIN CROP AND ONE INTER CROP

- IF BOQ HCU COST = 0

GUIDED COST= ((INTER CROP INDICATIVE COST – HCU COST)
* AREA) +OPTIONAL ITEM COST

- ELSE IF ONLINE DRIP AND LATERAL PROPOSED IS DOUBLE

GUIDED COST= (((INDICATIVE COST -BOQ HCU COST) * MAIN
CROP AREA) +BOQ HCU COST) + (((MAIN CROP AREA
*10000)/MAIN CROP LATERAL SPACING)*LATERAL COST 3.97)
+ ((MAIN CROP AREA *10000)/ (MAIN CROP Plant to plant
SPACING* MAIN CROP LATERAL SPACING)) x No .of

$\text{Drippers} \times \text{DRIPPER COST}(2.3)] + [(\text{Sub main/Lateral spacing}) \times 2 \times \text{Nipples cost}(1.34) \text{ (or) Start Connector cost}(1.28) \text{ and Grommets cost } (1.14) \text{ and end Cap cost}(1.17))] +$
 $] + [((\text{area} \times 10,000 / \text{lateral spacing} \times \text{plant to plant spacing}) / 2) \times$
 $\text{No. of Drippers} \times \text{spaghetti cost } (1.48) \text{ and barbed connector for spaghetti cost } (0.52)] + \text{optional Item cost}$

- ELSE

$\text{GUIDED COST} = ((\text{INDICATIVE COST} - \text{BOQ HCU COST}) \times \text{AREA}) + \text{BOQ HCU COST} + \text{OPTIONAL ITEM COST}$

- ELSE (If main crop and multi crop area is different)

$\text{GUIDED COST} = ((\text{Inter crop INDICATIVE COST} - \text{BOQ HCU COST}) \times \text{AREA}) + ((\text{main crop INDICATIVE COST} - \text{BOQ HCU COST}) \times \text{AREA}) + \text{BOQ HCU COST} + \text{OPTIONAL ITEM COST}$

3. MAIN CROP WITH SINGLE MULTIPLE CROP / MORE THAN ONE INTER CROP

- IF(BOQ HCU COST = 0)

$\text{GUIDED COST} = \text{SUM} (((\text{INDICATIVE COST} - \text{HCU COST}) \times \text{AREA}) + \text{OPTIONAL ITEM COST}) \text{ FOR ALL THE CROPS}$

- ELSE IF LATERAL=DOUBLE AND ONLINE DRIP

$\text{GUIDED COST} = \text{SUM} (((((\text{INDICATIVE COST} - ((\text{BOQ HCU COST} \times \text{AREA}) / \text{TOTAL AREA})) \times \text{AREA}) + ((\text{BOQ HCU COST} \times \text{AREA}) / \text{TOTAL AREA})) + (((\text{AREA} \times 10000) / \text{L SPACING}) \times \text{LATERAL COST } 3.97) + (((\text{AREA} \times 10000) / (\text{Plant to Plant SPACING} \times \text{L SPACING})) \times \text{No. of Drippers} \times \text{DRIPPER COST}(2.3)] + [(\text{Sub main/Lateral spacing}) \times 2 \times \text{Nipples cost}(1.34) \text{ and Start Connector cost}(1.28) \text{ and Grommets cost } (1.14) \text{ (or) end Cap cost}(1.17))] +] + [((\text{area} \times 10,000 / \text{lateral spacing} \times \text{plant to plant spacing}) / 2) \times \text{No. of Drippers} \times \text{spaghetti cost } (1.48) \text{ and barbed connector for spaghetti cost } (0.52)] + \text{OPTIONAL ITEM COST FOR ALL THE CROPS}$

- ELSE

GUIDED COST= SUM (((((INDICATIVE COST -((BOQ HCU
COST*AREA)/TOTAL AREA)) * AREA) + ((BOQ HCU
COST*AREA)/TOTAL AREA)) + OPTIONAL ITEM COST) FOR
ALL THE CROPS

Technical Specifications (Bureau of Indian Standards) of various Micro irrigation System Components

MIP SPECIFICATIONS - 1

PRODUCT : SCREEN FILTER

I.S. NUMBER : IS 12785:1994

1	Technical data	
	Nominal size (mm and inches)	1.5", 2.0", 2.5", 3.0"
	Nominal operating pressure (kg/cm ²)	1 – 4
	Range of flow rates	10 to 50 m ³
	Type of connections to piping network	Male threaded end or Flanged
	Aperture size (microns)	Variable (0.1 to 0.13mm or 100 - 130μ)
2	Material of construction	
	Body	(MS or Plastic)
	Filter element	Stainless steel or Plastic or combination of both
	Wall thickness (mm)	Minimum 3mm
3	Coating	
	Type	• Powder coating or • Hot dip galvanized
	Thickness (microns)	• Minimum 70 microns for powder coating • Zn coating of 500 g/m² for hot dip galvanized
4	Maximum pressure	4 kg/cm²
5	Clean pressure drop	0.05 to 0.2 kg/cm ² at nominal flow rate
6	Safe maximum pressure drop	Maximum 0.5 kg/cm ²

MIP SPECIFICATIONS - 2

PRODUCT : SAND FILTER / MEDIA FILTER

I.S. NUMBER : IS 14606:1998

1	Technical data	
	Nominal size (mm and inches)	1.5", 2.0", 2.5", 3.0"
	Nominal operating pressure (kg/cm ²)	1 – 4
	Recommended range of design flow rates	10 to 50 m ³
	Type of connections to piping network	Male threaded, Female threaded end & Flange type
	Type of media	Crushed granite, silica, or quartz
	Media grade	300 to 2000 microns (10 – 40 mesh)
2	Material of construction	
	Body	MS
	Wall thickness (mm)	Minimum 3mm
3	Uniformity coefficient of sand media	1.4 to 1.6
4	Coating	
	Type	• Powder coating or • Hot dip galvanized or • Epoxy painting
	Coating thickness (microns)	• Minimum 70 microns for powder coating / Epoxy painting • Zn coating of 500 g/m² for hot dip galvanized
5	Maximum pressure	4 kg/cm ²
6	Clean pressure drop	0.1 to 0.5 kg/cm ²
7	Safe maximum pressure drop	0.7 kg/cm ²

MIP SPECIFICATIONS - 3

PRODUCT : HYDROCYCLONE FILTER

I.S. NUMBER : IS 14743:1999

1	Technical data	
	Nominal size (mm and inches)	2", 2.5", 3"
	Nominal operating pressure	1.0 to 6.0 kg/cm ²
	Range of flow rates	15 to 50 m ³
	Type of connections to piping network	Male Threaded & Flanged ends
	Capacity of under flow chamber	5 to 10 L
2	Material of construction	
	Body	MS / PP
	Wall thickness (mm)	Minimum 3mm
3	Coating	
	Type	• Powder coating or • Hot dip galvanized or • Epoxy painting
	Coating thickness (microns)	• Minimum 70 microns for powder coating / Epoxy painting • Zn coating of 500 g/m² for hot dip galvanized
4	Maximum pressure	6.0 kg/cm ²
5	Clean pressure drop	0.2 to 0.7 kg/cm ² at nominal flow rate
6	Safe maximum pressure drop	0.7 kg/cm ²

MIP SPECIFICATIONS - 4**PRODUCT : DISC FILTER****I.S. NUMBER : NOT AVAILABLE**

1	Technical data	
	Nominal size (mm and inches)	1.5", 2", 2.5" & 3"
	Nominal operating pressure (kg/cm ²)	1 – 4
	Range of flow rates	10 to 50 m ³
	Connection type	Threaded or Flanged
	Mesh	120 to 130 (130 microns)
	Filtration surface area	Variable (700 to 2000 cm ²)
	Filtration volume (cm ³)	Variable (1225 to 3500 cm ²)
	Filter length (mm)	250 to 500mm
	Filter width (mm)	230 to 300mm
2	Material of construction	
	Body	MS/Polypropylene
	Discs	Polypropylene
3	Maximum operational pressure	4.0 kg/cm ²
4	Clean pressure drop	Maximum 0.20 kg/cm ² at nominal flow rate
5	Safe maximum pressure drop	Maximum 0.50 kg/cm ²

MIP SPECIFICATIONS - 5**PRODUCT : FERTILIZER TANK****I.S. NUMBER : IS14483 (part 1) 1997**

1	Technical data	
	Capacity	30 to 220 Litres
	Height (cm)	Variable (30 to 95 cm)
	Diameter (cm)	Variable (30 to 51cm)
	Type of connections to piping network	½" to ¾" or 1.0" BSP Thread connection
	Maximum operating pressure at the inlet	4.0 kg/cm ²
	Fertilizer injection rate in system (LPH)	100 – 500 LPH
	List of Components	Vacuum breaker valve, drain valve, elbow, tee, nipple, hose pipe, inlet & outlet valve etc
	Recommended head loss for fertigation (kg/cm ²)	0.4 kg/cm ² for fertigation 0.8 kg/cm ² for chemigation
2	Material of construction	
	Body	MS
	Wall thickness (mm)	Minimum 3mm
3	Coating	
	Type	Powder coating (Electrostatic or Pure polyester)
	Coating thickness (microns)	Minimum 70 microns
	Resistance to chemicals commonly used during irrigation	Fertilizers and other agricultural chemicals
4	Safe maximum Pressure drop (kg/cm²)	0.8 kg/cm ²

MIP SPECIFICATIONS - 6**PRODUCT : IRRIGATION LATERALS****I.S. NUMBER : IS 12786:1989**

	Technical data	
1	Working pressure (MPa)	0.25 MPa
2	Class of pipe	Class - I
3	Grade of polyethylene	PE 25
4	Carbon black	
	% in material used	2.5 ± 0.5% by mass
	Dispersion	Satisfactory as per IS:2530
5	Use of rework material (%)	Not more than 10%
6	Dimensions (mm) of lateral (actual)	
	Tolerance on outside diameter	+ 0.3mm
	a) Outside diameter b) Wall thickness (mm)	12mm 1.0 to 1.2mm
	a) Outside diameter b) Wall thickness (mm)	16mm 1.2 to 1.4mm
7	Mechanical properties	
	Tensile strength at 27 ± 1°C (MPa)	Minimum 10.0 MPa
	Elongation at break (%)	Minimum 350%
	Resistance to ESC	No cracks
8	Life expectancy (years)	10 years
9	Limitations of use (fertilizers, chemicals etc)	Free to use with fertilizers & chemicals

MIP SPECIFICATIONS - 7

PRODUCT : EMITTING PIPE (NON-PRESSURE COMPENSATING)

I.S. NUMBER : IS 13488:1992

1	Materials of construction	
	Grade of polyethylene	PE 25
	Carbon black content (%)	2.5 ± 0.5% by mass
	Carbon black dispersion	Satisfactory as per IS:2530
	Use of rework material (%)	Not more than 10%
2	Dimensions (mm) of lateral (actual)	
	Tolerance on outside diameter	+ 0.3mm
	a) Outside diameter	12mm
	b) Wall thickness (mm)	1.0 – 1.2mm
	a) Outside diameter	16mm
	b) Wall thickness (mm)	0.8 – 1.0mm
3	Classification	
	Nominal operating pressure (KPa)	100 KPa or 1.0 kg/cm ²
	Emitter exponent (m)	0.2 to 0.50
	Spacing of emitters (range available) (cm)	0.30 to 1.50m
	Discharge range available (LPH)	1.0 to 4.2
	Emission uniformity (%)	Category A – 95% Category B – 90%
	Uniformity Category (A or B)	A/B
	Pressure compensating or Non Pressure compensating	Non PC
	Class of pipe	12mm – Class III 16mm – Class II
	Working pressure (MPa)	12mm – 0.250 MPa 16mm – 0.125 MPa
	Filtration requirements	100 (150 mesh) to 130 (120 mesh) microns
4	Dimensions of emitter flow path	
	Length (mm)	Lesser the better
	Width (mm)	More the better
	Depth (mm)	More the better
5	Manufacturing coefficient of variation (Mcv)	Category A – 5% maximum Category B – 10% maximum
6	Mechanical properties	
	Tensile strength at 27 ± 1°C (MPa)	Minimum 10 MPa
	Elongation at break (%)	Minimum 350%
	Resistance to ESC	Should pass without any cracks
7	Life expectancy (years)	10 years
8	Limitations of emitters use (fertilizers, chemicals etc)	Free to use with fertilizers & chemicals

MIP SPECIFICATIONS - 8**PRODUCT : ONLINE EMITTER****I.S. NUMBER : IS 13487:1992**

1	Materials of construction	
	Raw material	PP, HD, LDPE, LLDPE, GFPP, PBT
	Protection against UV degradation	U.V. Stabilized
2	Classification	
	Nominal emission rate	As declared by manufacturer
	Nominal operating pressure	100 KPa or 1.0 kg/cm ²
	Emitter exponent (m)	0.2 to 0.5 for PC
	Discharge range available	2, 4, 8,15 & 16 LPH
	Emission uniformity	Category A – 95% Category B – 90%
	Uniformity Category	A or B
	Pressure compensating or Non Pressure compensating	PC or NON-PC
	Working pressure	0.8 to 1.2 MPa
	Filtration requirements	Minimum 100 to 130 microns
3	Dimensions of emitter flow path	
	Length (mm)	Lesser the better
	Width (mm)	More the better
	Depth (mm)	More the better
4	Manufacturing coefficient of variation Mcv (%)	Category A – 5% maximum Category B – 10% maximum
5	Life expectancy (years)	10 years
6	Limitations of emitters use (fertilizers, chemicals etc)	Free to use with fertilizers & chemicals

MIP SPECIFICATIONS - 9**PRODUCT : ROTATING SPRINKLER HEAD/RAIN GUN****I.S. NUMBER : IS 12232 (Part-1):1996 & (Part 2): 1995**

1	Materials of construction	
	Raw material	Metal - Copper alloy, Gunmetal, brass, stainless steel, phosphor bronze, Teflon, rubber, Aluminum alloy Plastic – Polyacetal, brass, stainless steel, phosphor bronze, Teflon, rubber
	Protection against UV degradation (in plastic type)	UV Stabilizers (Carbon black)
	Protection against corrosion (metal type)	Anti corrosion properties
2	Technical data	
	Nominal Flow rate (LPH)	As declared by manufacturer
	Effective test pressure	1.5 – 4.0 kg/cm ²
	Minimum effective pressure (kg/cm ²)	1.0 to 2.5
	Maximum effective pressure (kg/cm ²)	3.5 to 6.0
	CDU for recommended sprinkler spacing, nozzle size and effective pressure	Minimum 85%
	Water distribution curves	As declared by manufacturer
	Water tightness of sprinkler	2% of flow rates > 250 LPH
	Water tightness of nozzle connection	Not more than 0.25% of the nominal flow rate of sprinkler
	Trajectory height	As declared by manufacturer
	Effective diameter of coverage at various effective pressures	As declared by manufacturer
	Durability	10 years
3	Limitations of emitters use (fertilizers, chemicals etc)	Facilitate use of fertilizers and agricultural chemicals

MIP SPECIFICATIONS - 10**PRODUCT : SPRINKLER PIPES****I.S. NUMBER : IS 14151:1999**

1	Diameter useful for MIP	50mm, 63mm, 75mm, 90mm & 110mm				
2	Material & Technical data					
	Class of pipes	1	2	3	4	
	Maximum Permissible working pressure (kg/cm ²)	2.5	3.2	4.0	6.0	
	Grade of polyethylene	PE 63				
	MFR of the material	0.41 to 1.10				
	Pipe length (m)	6m				
3	Carbon black					
	% in material used	2.5 ± 0.5% as per IS:2530				
	Dispersion	Satisfactory as per IS:2530				
4	Use of rework material (%)	Not more than 10%				
5	Dimensions (mm) of Pipe (actual)					
	Tolerance on outside diameter	+0.5	+0.6	+0.7	+0.9	+1.0
	a) Outside diameter b) Wall thickness (mm)	50 2 – 2.4	63 2 – 2.4	75 2 – 2.4	90 2.2 – 2.6	110 2.7 – 3.2
6	Hydraulic characteristics					
	Tensile strength at 27 ± 1°C	19 MPa				
	Elongation at break	Minimum 500%				
	Resistance to ESC	No cracks				
7	Life expectancy (years)	10 years				

MIP SPECIFICATIONS - 11

PRODUCT : CONTROL VALVES (Flow control Valves / Ball Valves, Throttle Valves / Gun Metal Valve & Non-return valve)

I.S. NUMBER : IS 778:1984

1	Nominal sizes	40mm (1½"), 50mm (2"), 65 (2½"), 80mm (3") & 100mm (4")					
2	Class	Class 1 Working pressure - 1.0 MPa			Class 1 Working pressure - 1.6 MPa		
3	Material						
	Body	a) Brass b) Leaded tin bronze c) UPVC					
	Bonnet or cover	a) Brass b)Leaded tin bronze c) Forged brass d) UPVC					
	Stuffing box, disc hinge, check nut, stem nut, disc retaining nut, gland, gland nut, gland flange, body seat rings and disc or wedge facing rings	a) Leaded tin bronze b) Extruded brass rod c) Forged brass d) Brass e) UPVC f) Nitriaile rubber		g) PP h) POM i) Teflon (PTFE)			
	Stem, hinge pin and plug	a) Extruded brass rod b) High-tensile brass c) Forged brass d) UPVC e) Nitriaile rubber		f) PP g) POM h) Teflon (PTFE)			
	Ball for ball type NR Valves	Chromium steel, PVC/PP					
	Bolts, nuts & seal	Mild steel, Nitriaile Rubber					
	Hand wheel	Cast iron					
	Gasket	Compressed asbestos fibre					
	Gland packing	a) Hemp and jute b) Asbestos					
	Spring	Phosphor bronze wire					
	Seating ring	Synthetic rubber					
4	Minimum length of threaded portion						
	Nominal size	40mm	50mm	65mm	80mm	100mm	
	Length of threaded portion	13.5mm	17mm	19mm	21.5mm	26mm	
5	Minimum wall thickness of body and bonnet						
	Nominal size (mm)		40	50	65	80	100
	Minimum wall thickness (mm)	Class 1	2.3	2.5	2.7	3.0	3.5
	Minimum wall thickness (mm)	Class 2	2.9	3.2	3.6	3.9	4.5
6	Hydrostatic body & seat test for leakages	No leakages					
7	Type of end connections	Screwed or Flanged					

Approved brands of valves at Annexure-3s

MIP SPECIFICATIONS - 12**PRODUCT****: GROMMETT, START CONNECTOR, JOINER, END CAP****I.S. NUMBER****: NOT AVAILABLE**

1	Grommett 12mm & 16mm	1) Material – Synthetic rubber (Ethylene Propylene Diene Monomer) 2) Material shall not support the growth of algae & bacteria 3) Shall withstand pressures designed for the pipe 4) Should be water tight and exhibit no leakages 5) Durability – 10 years
2	Start connector 12mm & 16mm	1) Material – Polypropylene 2) Withstand pressures designed for the system 3) Material shall not support the growth of algae & bacteria 4) Should be water tight and exhibit no leakages 5) Durability – 10 years
3	Joiner 12mm & 16mm	1) Material – Polypropylene / ABS 2) Shall withstand pressures designed for the system 3) Should be water tight and exhibit no leakages 4) Protection against UV degradation 5) Durability – 10 years
4	End cap 12mm & 16mm	1) Material – LLDPE 2) Shall withstand pressures designed for the system 3) Should be water tight and exhibit no leakages 4) Protection against UV degradation 5) Durability – 10 years
5	Microtube	1) Material – PE 25 with 2.5 ± 0.5% carbon black for UV protection 2) Shall withstand pressures designed for the system 3) Material shall not support the growth of algae & bacteria 4) Durability – Minimum 10 years
6	Barbed connector for microtube	1) Material – Polypropylene 2) Shall withstand pressures designed for the system 3) Should be water tight and exhibit no leakages 4) Protection against UV degradation 5) Durability – 10 years
7	Air Release valve	1) Material – High strength plastic and corrosion resistant polymer, cast iron 2) Size – up to 1" in plastic and > 1.0" in CI 3) Working pressure – 0.2 to 6.0 kg/cm ² 4) Connection type – Threaded 5) Durability – 10 years
8	Vacuum breaker	1) Material – High strength plastic and corrosion resistant polymer, cast iron 2) Size – up to 1" in plastic and > 1.0" in CI 3) Working pressure – 0.2 to 6.0 kg/cm ² 4) Connection type – Threaded 5) Durability – 10 years

MIP SPECIFICATIONS - 13**PRODUCT : GRAVITY FED FAMILY DRIP SYSTEM****I.S. NUMBER : NOT AVAILABLE**

1	Emitting pipe or Lateral with online drippers (low pressure i.e., 0.2 kg/cm²)	1. Made of LLDPE (PE 25) 2. Carbon black content - $2.5 \pm 0.5\%$ by mass 3. Carbon black dispersion – Satisfactory 4. Use of rework material - Not more than 10%
2	Main/Submain pipe	Made of HDPE (Class 1) with pressure rating of 2.5 kg/cm ²
3	Filter	Made of polypropylene and 120 mesh
4	Elbows	Made of polypropylene
5	Ball valve	Made of polypropylene or PVC
6	Start connector/Insert connector	Made of polypropylene with rubber gasket / "O"ring
7	Drum capacity	200 to 500 Litres
8	Height of drum	1.0m
9	Durability	10 years

**Proforma for Acknowledgement of Administrative charges received
through RTGS.**

From:

Project Director, MIP/DHSO : _____

District : _____

State : _____

Pin : _____

To,

The Project officer/DHSO

T.G.Micro irrigation Project,

Hyderabad

Received a sum of Rs. _____/- (Rupees _____)
from the Project officer/DHSO, T.G.Micro Irrigation Project, Hyderabad towards
Administrative Charges under the MIP Scheme. This amount was sanctioned by the
Commissioner/Director of Horticulture, T.G., Hyderabad vide Sanction order No.
_____ dated _____.

The date on which this amount was credited through RTGS in our Bank account by
our Banker on _____.

Yours faithfully

Project Director /DHSO

ANNEXURE No.20

Format of Cash Book

Name of Office _____

Receipt		Amount Rs.			Disbursement		Particulars (Details of Payee)	Amount Rs.	
Date	Particulars (Details of Source of Receipt)				Date	Voucher no.			
		Cash	Bank					Cash	Bank
	Opening Balance								
	Total Receipts					Total Disbursements			
					Closing Balance				

ANNEXURE No. 21

Format of Register for CSS under Micro Irrigation.(To be maintained for each account separately

[illegible]

Bank Reconciliation Statement

For the amount of : _____

Name of the Office : _____

Address : _____

Bank's Name and Bank Account No. _____

Particulars	Amount Rs.	Amount Rs.
A. Balance as per Bank Statement (Pass Book) Add : i. Amount deposited but not credited by Bank. ii. Amount debited by Bank but not taken in Cash Book. Total : Less: iii. Cheques issued but not presented in the Bank. iv. Amount credited by Bank but not taken in the Cash Book. Total:		
B. Balance as per Cash Book.		

ANNEXURE No. 23

Register of Assets created

[illegible]

ANNEXURE No. 24**Register of interest earned on Administrative charges during the year**

Sl. No	Interest Earned	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
1	CSS													
2	State Share													
Total														

MONTHLY REPORT

**Receipt & Payment Account of (Administrative charges) of Project Director
/DHSO of MIP, _____ district for month of _____**

Sl. No	Receipts	Amount in Rs.	Sl. No	Payments	Amount in Rs.
1	<u>Opening Balance</u>		1	SALARIES	
	a. Cash at Banks.		a	Salaries	
	(As per Cash Book)		b	Leave encashment	
	b. Fixed Deposits.				
			2	WAGES	
2	<u>Receipts</u>		a	Wages	
	i. Grant from C.S.S.		b	Daily wages	
	II. Grant from State Share		3	TA	
			a	TA	
			b	FTA	
			4	OFFICE EXPENSES	
			a	Postage/Courier	
			b	Water & Elect. charges	
3	<u>Interest receipts</u>		c	Telephone	
			d	Purchase of furniture	
4	<u>Miscellaneous</u>		e	Stationary & printing	
	i. Security Deposit		f	Advertisement & publicity	
	ii. Remittance of unspent balance temporary advances		g	Vehicle Hire Charges	
			h	Maintenance of vehicles	
5	<u>Other Income</u>		i	Comp. peripherals & maintenance	
	a. RTI Act fee		j	Bank charges	
	b. Sale of news paper		5	RENTS, RATES & TAXES	
	c. Others if any		a	Rents	
			b	Property Taxes	
			6	OTHE ADMIN. SERVICES	

Sl. No	Receipts	Amount in Rs.	Sl. No	Payments	Amount in Rs.
			a	Hospitality	
			b	Tours	
			c	Conference	
			d	Trainings & Meetings	
			e	Petrol, Oil & Lubricants	
			f	Others if any	
			7	OTHER CONTRACTUAL SERVICES	
			a	Payment of remunerations	
			b	Contract appointments	
			8	PROFESSIONAL SERVICES	
			a	Audit fees	
			b	Consultancy fee(CIPET,E-filing)	
			9	OTHER CHARGES	
				Total	
				Refund of advance to subsidy a/c	
				Refund of advance to beneficiary cont. a/c	
				Payment of Salary deductions(GPF,GIS,PT & IT) of Govt employees	
				Refund of Security deposit	
				TDS	
	Grand Total			Grand Total	