

NATIONAL WATER ACADEMY, PUNE

Training Program on
“Pipe Irrigation Network and Micro Irrigation”
(02 – 06 December 2019)

REGISTRATION FORM

Name (in capitals): _____

Designation: _____

Organization: _____

Responsibilities (in brief): _____

Full Postal Address: _____

Tel Nos. (with STD Code) : _____

Fax No: _____ Mobile : _____

E-mail: _____

Date _____ **(Signature of the participant)**

SPONSORING AUTHORITY

Full Postal Address: _____

Tel Nos. (with STD Code) : _____

Fax No: _____ Mobile : _____

E-mail: _____

Date _____ **(Signature and Seal)**

*Completed Registration Form may be sent by
Fax to: 020-24380110*



Government of India
Ministry of Jal Shakti
Department of Water Resources, RD & GR
Central Water Commission



Training Program on
“Pipe Irrigation Network and Micro Irrigation”
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Organized by
National Water Academy
Pune

Introduction and Objectives

Around 45% of the area of our country is agriculture farms & about 45% of which is irrigated by means of Major, Medium and Minor Irrigation (Surface Water) Projects utilizing both surface as well as ground water resource. Within a river basin, the irrigated farms may either be located in a Watershed Area (hilly terrain) or in a Command Area (plain land with mild slope).

Traditionally, the irrigation network in India has been consisting of open channels like main canal, branch canal, distributory, minors, sub minors, field channels and water courses. Almost all Major, Medium and Minor Irrigation (Surface Water) Projects were developed in a similar conventional manner. However, post project evaluation studies reveal abysmally low water use efficiency and water productivity, apart from huge cost of construction of such water resources projects. Due to increasing demographic pressure, competing and conflicting demands, urbanization process, degrading water quality and erratic rainfall pattern we now have to focus on efficiency, effectiveness and productivity of both land and water resources.

Since, irrigated agriculture consumes around 70-80% of total water utilized in India, much attention need to be given to irrigation sector. This is also because majority of the population is dependent on this primary sector for livelihood, while on the contrary the share of this sector in country's GDP is not up to the mark. The much more bigger and essential goals of water security and food security has to be addressed by reforms in water sector. Under such circumstances, there is an urgent and emergent requirement of large scale adoption of closed conduit or pipe irrigation network and application of micro irrigation in the farm fields. The pipe irrigation distribution system has to be underground to minimize acquisition of valuable land and reduced O&M expenditure. Micro irrigation on the other hand would result in enhanced crop yield, high on-farm water application efficiency, reduced fertilizer cost and no water logging or leaching.

This requires careful and scientific planning, analysis and design. Even the Government Policies like National Water Policy, Missions like National Water Mission and Schemes like Pradhan Mantri Krishi Sinchai Yojana are advocating and promoting use of such technology which of course is site specific and depends on agro-climatic conditions, soil type, topography, crop type, energy sufficiency (for pressurized irrigation) and so on. Pipe Distribution Network and Micro-Irrigation (PDN-MI) has the potential to bridge the Irrigation Potential Created (IPC) and Irrigation Potential Utilized (IPU) gap and also simultaneously have a quality control on Irrigation Water, apart from the advantage of reliable volumetric measurement. The irrigation engineers and farmers must be well versed and confident in the operation of such irrigation systems to harness the full benefit of available technology.

This course will focus on the planning considerations and detailed design aspects of PDN-MI, apart from touching concomitant subject matter of conservation agriculture practices, estimation of crop water requirement, optimization of distribution network, conjunctive use and crop planning. Project specific hands on sessions, case study and group discussions will be the various modes of learning in this training program. Comparison with existing system will also be carried out by the participants themselves at the end in terms of cost, water use efficiency, equitability, reliability, productivity & optimal use of natural resources.

Program Content

This program will cover following aspects:

- Crop Water Requirement, Net Irrigation Requirement
- Planning, Design of Drip Irrigation System – Hands on
- Planning, Design of Sprinkler Irrigation System – Hands on
- Introduction to Pipe Distribution Network (PDN)
- Planning and Design of PDN (by gravity) in command of an irrigation project (chaks/sub chaks).

- Estimation of Design Discharge for PDN : Components and layout of PDN
- Planning and Design of Pressurized Piped Irrigation System (by pumping)
- Integration of PDN and Micro-Irrigation System
- Advantages of PDN over Canal Irrigation Network and Case Study
- Field Visit

Program Fee

There is no program fee for participants from Central and State Govt. Departments. Charges for participants from other agencies are :

| Category | Description | Fee in Rs. (per Participant) |
|----------|---|------------------------------|
| A | Central/State Government/Departments including their autonomous bodies: | Nil |
| B | PSUs/SPVs of State governments which are <i>Not-for-profit</i> organizations/ authorities/ bodies of state governments, even if they have "Corporation" or "Limited" in their name, only if they certify that they are "not for profit" organizations. | Nil |
| C | Recognized academic institutions, NGOs | 1500 |
| D | PSUs of MoWR, Govt of India | 5,000 |
| E | Central and State PSUs (<i>other than Category B & D</i>) | 10,000 |
| F | Private Companies, Individuals | 15,000 |

Duration

One week (02 - 06 December 2019)

Venue

National Water Academy, Khadakwasla, Sinhagad Road, Pune-411 024. (For more info on NWA, visit <http://nwa.mah.nic.in>)

Target Group

Graduate Engineers, professionals with preferably two years of experience in the related field, who are involved in irrigation planning, design and operation; working in Water Resources Departments, of the levels of Director/SE/ Deputy Director/ EE/AEE/AE or equivalent.

Participation

Nomination of officers fitting the target profile may be sent to the Program Coordinator latest by 15th November 2019. The accepted nominations would be posted on our website (<http://nwa.mah.nic.in>) under the link "Upcoming Events" by 18th November 2019.

Local Hospitality

NWA has a self-contained residential campus where all out-station participants would be provided with lodging and boarding. **Charges for lodging and boarding are to be borne by participants themselves. Local pickup/drop will have to be arranged by the participants.**

Contact

For sending nominations or for any information with regard to this Program, please contact:

Shri Sidhartha Mitra

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e-mail: nwa.mah@nic.in, Website: <http://nwa.mah.nic.in>