Meandering and babbling natural streams and springs through hills offer a beautiful scenery. But the same could also be a source of despair for the tribal farmers in the neighborhoods, if their crops wither due to lack of life-saving irrigation water.

Tapping and diverting those steams and springs for providing drinking water and irrigations through 'Gravity Pipe Networks (GPNs)' has been attempted by many development workers in recent years. Such pipe networks, if arbitrarily sized, results in undue capital costs; operational difficulties to tribal farmers and huge maintenance costs during later years.

Water and Livelihoods Foundation (WLF) offers this training course to develop optimal plans of GPNs using EPANET, a software that does analysis of complex pipe networks in a jiffy.

This training course is designed for those technical staff of NGOs and other development agencies to orient themselves on the basic principles of gravity-based pressurized water flow in pipes and to design simple but efficient GPNs in hilly areas using EPANET.

Mail any query related to this training course to wlfoundation@outlook.com (or) call Ramamohan-9440194866

### **Details of the Event** Mode of Training Event **ONI INF Duration and Date(s)** 22-24 Mar 2022 (3 days) (daily 14.30-17.00 hrs IST) Medium : English Source Stream **Registration link:** https://forms.gle/DtrWhcBFbE7JJLZF6 (Web meeting link will be shared to -2.00 registered participants later) 0.00 2.00 5.00 Last date for registration 10 Mar 2022 (or) 40 participant registrations, whichever is earlier Registration Contribution per participant: INR 300 (Indian Rupees Three Hundred only) Bank details for payment are provided in the registration link above

### World Water Day (22 March) Special

## Gravity Pipe Networks (GPNs) using EPANET

# Conceptual and hands-on training on the software

# (For NGO technical staff & water sector professionals)



Water and Livelihoods Foundation 12-13-451, Street no.1, Tarnaka Secunderabad - 500017, India Web: www.wlfoundation.in, Ph: +91 40 27014467

#### About WLF

Water and Livelihoods Foundation (WLF) is an NGO based in Hyderabad, India. WLF strives towards achieving water security and livelihoods enhancement of poor through community development initiatives; action research; and capacity & skill development.

Contributing to the skill building of NGOs, development workers and researchers is one of the major objectives of WLF. Apart from themes such as, water quality, GIS applications, ground water recharge etc., WLF offers skill building modules on data analysis and interpretation; and design of impact monitoring systems for NGOs.

Through its skill-building efforts, WLF aims to improve the quality of service-delivery by the participants and make positive impact on the life of poor and deserving communities at large.

#### **RESOURCE PERSON**

R.V. Ramamohan has got 25 years of experience in the NGO sector. Ramamohan holds an M.E. in Water Resources Engineering and carries vast professional experience in diverse areas of water resource conservation and groundwater management. He had earlier designed gravitybased closed pipe irrigation networks in hilly areas and has sound insights into the operations of pressurized irrigation systems.

Ramamohan's writings and publications may be accessed on Google Scholar at: <u>https://scholar.google.co.in/citations?user=sDLtZrw</u> .AAAAJ&hl=en.

#### **OBJECTIVES OF THE COURSE**

1) To introduce the basics of pressurized flow in pipes and their networks

2) To familiarize the participants in using EPANET to analyze pipe networks

#### **COURSE CONTENT**

The training content covers broadly the following aspects:

- Introducing the concepts of pressure, flow, velocity and pressure-loss when water flows through pipes
- 2. Types of pipes, fittings and devices normally used in building water carrying pipe networks
- 3. Bureau of Indian Standards (BIS) recommended pipe specifications and standards
- 4. Uniqueness of gravity-based pipe flows and challenges in tapping natural springs / streams
- 5. Preparing and analysis of simple pipe networks in EPANET
- 6. Closed networks and their merits
- 7. Optimizing pipe lengths and sizes for least-cost and most efficient designs.

#### **METHODOLOGY**

Both conceptual and practical skills are provided. As the EPANET is a freeware, all the participants will be practicing on the software during the course of training.

## EXPECTED BACKGROUND OF PARTICIPANTS

NGO technical staff, research scholars, students and development professionals working or have plans to work on spring / stream diversion for water supply and irrigation.

Training course will be in English medium.

## COURSE CONTRIBUTION & METHOD OF APPLICATION

A small contribution of INR 300 is expected from the participants. Candidates interested to participate may register using the following Google Form link:

#### https://forms.gle/DtrWhcBFbE7JJLZF6 Last date: 10 Mar 2022 (or) 40 participant registrations, whichever is earlier.

Bank details of WLF for course fee payment are also included in this registration form. Payment through UPI applications (such as, GPay or PhonePe) may also be done to the bank account of WLF, using the 'payment to account' option.

Participation certificates will be sent by post after completion of the training course. It is suggested to provide complete postal address with PIN code and correct mobile number in the registration form for this purpose.

Mail any query related to this training course to wlfoundation@outlook.com (or) call Ramamohan-9440194866