

# 3<sup>rd</sup> International Conference on **Hydrology & Meteorology**

September 15-16, 2014 Hyderabad International Convention Centre, India

## Regional analysis of pipe network in EPANET

Annie Maria Issac, Ajay V Joseph, Anju S Rajan, Anna Baby and Aksa Ester  
Amal Jyothi College of Engineering, India

Pipe network analysis is the analysis of the fluid flow through hydraulics network containing several or interconnected branches. The project deals with the analysis of pipe network in Nariyanganam in Thalappalam Gram Panchayat proposed by Jalanidhi Department of Kerala Rural Water Supply and Sanitation Agency. The analysis of the water distribution network is done using EPANET, software which performs extended period simulation of hydraulic behaviour within pressurized pipe networks. The head variation at nodes, flow in pipes, and height of water in tank for four different scenarios are simulated and studied. The pumping strategy decided by the Jalanidhi authority was verified in the model and was found to be satisfactory. An economic pumping strategy with less pumping duration but continuous flow of water throughout the day was also suggested. The decay and transport of the residual chlorine in the network was also modeled and studied. Suitable suggestions were given to the pipe network layout for the efficient functioning of network.

### Biography

Annie Maria Issac has completed her BTech in Civil Engineering from M.A. College of Engineering, affiliated to M.G. University Kerala, in 2008 and ME in Water Resources and Environmental Engineering from Indian Institute of Science, Bangalore in 2013. Currently, she is working as Assistant Professor in Amal Jyothi College of Engineering, Kanjirapally, Kerala. Ground water modelling, river water quality assessment and climate change studies are her general areas of interest.

[anniemissac@gmail.com](mailto:anniemissac@gmail.com); [anniemariaissac@amaljyothi.ac.in](mailto:anniemariaissac@amaljyothi.ac.in)