



Engineering Staff College of India

Autonomous Organ of The Institution of Engineers (India)
Old Bombay Road, Gachi Bowli, Hyderabad – 500 032. Telangana, India



Environment Management Division

Three Days Continuing Professional Development Program on “Water Audit and Software-Urban Water Management”



20 - 22 December 2023

Interactive Sessions | Digital Learning | Assessments | 24/7 Experts Online/Offline Support

Introduction

A **water audit** is a “Systematic approach of **Identifying, Measuring, Monitoring** and **Reducing** the Water Consumption by various activities in an Industry”.

Water demand has reached scarcity proportions in some areas while others are severely water stressed. Newer sources of fresh water are difficult to come by forcing us to relook at our existing water sources, water supply systems and current water use efficiencies in various sectors. Increasing industrial production especially in water intensive industries (like thermal power plants, pulp & paper, textiles, fertilisers, etc.) is already putting pressure on the limited freshwater resources in India and worldwide. This coupled with increased water demand from other sectors like infrastructure development, agriculture, domestic, etc. is leading to major conflicts over water availability. Water sourcing and managing wastewater is becoming increasingly difficult & expensive and hence is an important aspect for sustainability for any industry. Industries which are heavily dependent on water for their production have to cut down on their production at times due to scarcity of water mainly during summer season. Such scenarios have become more frequent in the past few years due to increasing water stress. Therefore, it is very critical that industries use water judiciously and reduce its water footprint as much as possible in order to be sustainable in future.

As a Professional body our objective is to facilitate the industries in their endeavor to achieve water efficiency through comprehensive water audits across different sectors. Water audits act as an instrument to identify areas of higher specific water use, assess wastewater pollutant load and determine techniques for mitigation through the application of 3R (Reduce, Reuse, and Recycle) principle. Sustainable water use demands that we look at treated waste water as a resource. This means that strategies for water audit and assessment of water demand is accurate. This course has been designed with the aim of providing a wider

understanding on the aspects of water audit, wastewater management and recycling.

Objectives

- To upgrade the knowledge and skills of professionals and working people at recent water audit initiatives and guidelines from governing bodies
- Introducing water demand management concepts including techniques to assess water demand for various sectors
- To understand that water audit leads to water conservation
- To identify challenges in implementation of water audit in various sectors
- Participants will be introduced to latest water audit methods in various sectors.
- Participants will be able to assess water demands and water loss quantification
- To provide the short-term and long-term sustainable water management solutions
- Case Study & Group Discussion

Course Coverage

This programme is designed to cover broadly the following topics.

1. Water audit – Introduction, Basic Concepts, Scope and Methodology
 - Water audit instrumentation, metering and accounting.
 - Understanding water utilities basics - pumps and cooling towers
 - Advanced water & wastewater treatment technologies
 - Industry specific case studies on opportunities identified for water savings through water audits;
 - Water and wastewater costing and cost benefit analysis of water saving schemes
2. Urban Water Management

(An ISO 9001:2015 Certified, AICTE & CEA Recognized Institution)

Centre for Promotion of Professional Excellence

3. Water conservation
4. IT Enabled Applications in Water Audit- Introduction to water audit softwares like PODIUMSim, AWWA, IWMI softwares, SCADA etc.
5. Water audit process across various sectors- Overview
6. Water audit for domestic sector
 - Generation and estimation of waste water at various processes like domestic, industries etc.-
 - Concept of zero liquid discharge
7. Water pricing, policies- incentives, policies, implementation etc.
8. Interactive sessions, presentations, documentary films , case studies, group exercises, virtual site visit etc.
9. Hands-on training on water audit methodology; water management best practices; advanced technologies for water & wastewater treatment; benchmarking & water footprinting; cost benefit analysis etc.

Methodology

Methodology of the programme includes classroom sessions with Lectures/discussions, with audio visual aid; bench - marked video shows, Chalk & Talk sessions, group discussions, case studies, debates, sharing of experiences, etc. All the sessions will be interactive, demanding active participation from all the participants.

Target Participants

Industry professionals, environmental consultants, environment regulators, environmental laboratories, academic institutions and other interested participants. The focus group for the training programme includes Business persons/Professionals from the organizations engaged in the area of Water Management like Government Organizations; Regulatory Authorities; Industries including SMEs; Water Treatment & Distribution Companies; Commercial Buildings/Institutions, Hospitality; Technology suppliers, NGOs, R&D, Associations, Academicians etc.

Programme Dates, Code & Timings

Dates: 20 - 22 December 2023, (EM6086) & **Timings:** 10:00 AM onwards.

Course Director

Ms. Anita Aggarwal

Faculty & Head I/c.

Environment Management Division,

Engineering Staff College of India,

Old Bombay Road, Gachi Bowli, Hyderabad 500 032

Phone: 040 6630 4120, 4122 / Fax: 040-66304163

Email: em@escihyd.org

Faculty/Speaker Details

Apart from the core internal faculty, Experienced Professionals/Faculties/Sector experts will be delivering the lively lecture with practical knowledge & case study.

Course Fee

- **Residential Fee** – Rs. 16,000/- (Rupees Sixteen Thousand only) per participant. Fee includes course material, course kit, twin-sharing/single AC accommodation as per availability, breakfast, lunch, dinner, tea / coffee and snacks during the actual days of training programme. ESCI provides complimentary accommodation and boarding to the participants one day before commencement (Check-in 1200 h) and one day after conclusion (Check-out 1200 h) of the programme duration. Overstay charges will be applicable as per ESCI rules (subject to availability of accommodation)
- **Non-Residential Fee:** 10% discount on course fee is allowed for non-residential participants.
- **Group Incentive:** 10% discount for five or more participants, if sponsored by the same Organization.

GST @18% is to be paid extra over and above the training fee. **PAN Card No.** AAATT3439Q. **GST No:** 36AAATT3439Q1ZV, **HS No.:** 999293 (under commercial training or coaching services – clause 65(105) (ZZC) of Finance act – 1994).

Programme fee is to be paid in in favour of “**THE INSTITUTION OF ENGINEERS (INDIA) – ENGINEERING STAFF COLLEGE OF INDIA**” in the form of demand draft payable at Hyderabad. Alternatively the payment may be made by **Electronic Fund Transfer (EFT)** to ESCI – **SB A/c No. 10007111201 with The SBI, PBB, Rajbhavan Road Branch, Khairatabad, Hyderabad-500004 by NEFT/ RTGS. IFSC Code No. SBIN 0004159 – MICR No.500002075. PAN Card No AAATT3439Q; GSTIN No. 36AAATT3439Q1ZV.** While using EFT method of payment, please ensure to communicate us your company name, Contact details, our invoice reference and programme title.

Registration

Online registration shall be available on ESCI web portal : www.escihyd.org

To register manually please send your nominations giving details of name, designation, contact address, email address, mobile no, telephone and fax number of the participant along with the details of mode of payment of fee, addressed to: **Course Director**

(or) Contact us at : Mr. GNM. Rao (Prog. Manager) – 9866431555

A Certificate of participation will be awarded to each participant on conclusion of the programme.

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