



**TWO DAYS SHORT TERM  
TRAINING COURSE  
ON**



**Overview  
of  
Planning Considerations & Design Norms  
24 x 7 for Urban & Rural Water Supply  
As per Central Public Health Engineering Organization  
(CPHEEO) Manual - March 2024  
(Drink From Tap) - Vision 2047**



**Date: 22– 23 June2024,  
Course Developed & Organized by:  
Institute of Public Health Engineers, (Bhopal Chapter) - India  
In Joint Venture with  
WatsanCAD Solution (Training Management Consultant),  
Bhopal, Madhya Pradesh (INDIA)  
Email: [trg.wcs@gmail.com](mailto:trg.wcs@gmail.com)**

**Course Conducted At: RCVP Narohona  
Academy of Administration, Opp. Shahpura Lake,  
Apex Training Institute  
Government of Madhya Pradesh, Bhopal – 462016 , India**

**Last Date for Nomination: 15th May2024**

**Sponsored By:**

## BACKGROUND

- National goal is to provide every person with adequate safe and potable water on sustainable basis. This basic requirement should meet minimum water quality standards i.e. Drink from Tap (DFT) and be readily & conveniently accessible at household level at all times and in all situations at affordable service delivery charges. It is of utmost importance to develop drinking water supply infrastructure to ensure effective service delivery in sustainable manner.
- Central Public Health and Environment Engineering Organization (CPHEEO), Ministry of Housing & Urban Affairs (MoHUA), GoI is responsible for developing national norms & guidelines for planning, design & implementation of urban as well as rural water supply schemes. Earlier versions of CPHEEO manuals were published respectively in March 1991 & May 1999 as per time specific needs.
- To meet the aforesaid objective, Central Public Health and Engineering Organization (CPHEEO), Ministry of Housing & Urban Affairs, Government of India considering the present time needs new upcoming technologies in drinking water sector, CPHEEO Manual on water supply & treatment systems has been revised and updated in March 2024. In the revised CPHEEO manual norms & guidelines have been conceived for implementation 24 x 7 water supply across the country. The aforesaid manual will serve as a useful guide for state governments & nodal agencies, urban local bodies, field practitioners, parastatal agencies & other stake holders involved in planning, design & implementation of water supply schemes.
- Techno-economic feasibility of water supply system is governed by an appropriate planning & designing of the water supply project. Planning of water supply system is a complex job which includes survey, planning, designing, implementation, & its management. Hence designers involved in planning of water supply systems should be well versed with latest norms and guidelines.
- It is a felt need that professionals involved in drinking water sector should be aware of new norms & guidelines now introduced in revised manual of water supply & treatment systems (DFT) published by CPHEEO, MoHUA, GoI in March 2024, which can be helpful in planning & designing of future water supply systems.
- The proposed 2 days training on Overview of Planning Considerations & Design Norms for 24 x 7 Urban (AMRUT 2.0 mission) & Rural Water Supply as per revised CPHEEO manual on water supply & treatment systems(DFT) which intends to build the capacity of professionals(technical skills & know-how) involved in planning & design of drinking water supply systems.
- In-house engineers from Public Health Engineering Department / Jal Nigam / Urban Development / Local bodies / State ministry personnel's / consultants / NGO's etc.
- Eminent Experts & academicians (renowned institutions like IIT's) as well as knowledgeable Senior officials being a sector specialist from Ministry of Drinking Water and Sanitation, water supply departments / Industry etc.

### Introduction

- Objective of Revision of CPHEEO manual.
- Major technical challenges in water supply systems
- Performance Indicators & service level benchmarks for planning
- Need of 24 x 7 water supply system

### Planning Consideration

- Data Collection
- Study & Analysis of existing water supply systems
- Design Period of various component of water supply systems
- Demographic study
- Water Supply Level & assessment of water demand
- Feasible Source Identification – Quantity & Quality
- Digital Survey
- GIS planning – formation of pressure zones, operational zone (OZ) & district meter areas (DMA)
- Fixing up locations of Intake, WTP & alignment of conveyance mains

### Design Norms & Guidelines

- Locating Intake well site & sizing of Intake
- Design of Economical size of conveyance main & selection of appropriate pipe material
- Key components required for WTP : Changes in design norms of various parameters new versus old manual
- Use of roughening filters as a pretreatment for slow sand filters
- Parameters required for pumps & substation (with dedicated feeder) designs
- Hydraulic sizing of Master Balancing Reservoir & operational zones storage tanks
- Key design considerations for water distribution network
- Adoption of low cost solution for water supply using Shaft & manifold system

### Water Security Action Plan

- Role of HGM maps in Planning of water security action plan.
- Planning framework for development of water security action plan – Climate resilient solution for ground water recharge.
- Identification of location/s for ground water based sources using HGP Maps
- Need of recycle & reuse of water to adapt the climate change – A case study.

## Use of solar energy

- Need of solar energy in drinking water sector
- Planning guidelines & design norms for solar drinking water pumping systems
- IoT enabled – Sensor based measurement & monitoring system to ensure water service delivery.
- Presentation of Innovative New technologies & Products by industries experts
- Discussion & Feedback from participants
- Valedictory Function

**The course is designed in conjunction with revised CPHEEO manual – March 2024**

- Methodology includes class room lectures with audio visuals, interactive sessions through group discussions, case studies etc. Emphasis would be laid on sharing of experiences of participants. Active participation is desired from participants. Medium of training will be English.
- Participants after this training can plan, design and evaluate 24 x 7 water supply projects.

## WATSANCAD SOLUTION, BHOPAL- (TRAINING MANAGEMENT CONSULTANT)

WatsanCAD Solution premier consultancy organization for, planning and management in the WaSH, Integrated Water resource management, Green Energy Solutions sectors & trainings headed by Harish Hingorani. M/s WatsanCAD Solution is Empaneled as Channel partner for Grid Connected Rooftop and Small Solar Power Plants Programme of Ministry of New and Renewable Energy. WatsanCAD Solution is accredited by rating agency as 3D. WatsanCAD Solution function in following key areas, being having specialization in Development of Feasibility & DPR's Report (WaSH, Watershed & Solar Powered Based Drinking Water Supply), Appraisal & Evaluation (Engineering Projects - WaSH) for National & International funding agencies, Capacity Building Trainings - WaSH, Drinking Water Security, Planning of Solar Drinking Water Pumping System, Planning Designing, Computer Aided Modeling of Water Supply, Sewerage & Solar Powered Water Supply Projects & Sensor based Measurement & Monitoring System, Preparation of Tender Specifications - WaSH and Solar Powered Water Supply Schemes, Quality Control & Monitoring - WaSH and Solar Powered Water Supply Schemes, MIS Development, IWRM - RS / GIS, WQM&S - RS / GIS, Water Security & Sustainability, Sensor based IoT solution.

WatsanCAD Solution is registered organization with IPHE India.

**WatsanCAD Solution & IPHE in joint venture has successfully conducted such type of training courses earlier (Sept 2014, Oct 2015, Sept 2016, Jan 2018, Aug 2022, Nov 2022, Jan 2023, April 2023. Participation has taken place Nepal & various states of the country**

## Programme Dates and Venue

- Date : 22<sup>nd</sup> & 23<sup>rd</sup> June 2024
- Timings : On the first day, registration will commence at 0930 Hrs. On all other days the programme timings will be from 9:00 to 17:00 hrs with breaks in between for tea & lunch.
- Venue : RCVP Noronha Academy of Administration & Management, Bhopal which is apex national training institute run by Govt. of MP.
- Location : Opp. Rcvp Noronha Rd, Shahpura Lake, Aera Colony, Bhopal, Madhya Pradesh 462016



PS: 01. Training will be concluded on 23rd June 2024 at 17:00 hrs. Participants are requested to ensure their return journey accordingly.

## Course Manager

Harish Kumar  
Executive Director (Technical)  
WatsanCAD Solution, Bhopal  
trg.wcs@gmail.com

## Course Coordinator

Deepak  
Director  
WatsanCAD Solution, Bhopal  
<http://www.watsancadsolution.in>  
Mobile No. 7828664331

## Nomination of Participants:

Public Health Engineering Department / Jal Nigam / Urban Development / Local bodies / State ministry personnel's / consultants / NGO's etc.

Level of Participants: - Level 1 & 2 as per JJM guidelines (Chief Engineer, Superintending Engineer, Executive Engineer, Assistant Engineers

Minimum Desirable Training Batch : 40 Participants

Course Fee : Residential course fee is

SN	Category	Amount Per Participant
01	Government / Academic institutions sponsored	Rs. 20000/- i/c GST @18.00%
02	Industry / NGO/ consulting firm sponsored	Rs. 25000/- i/c GST @18.00%
03	In-case of per participant other than India	@ \$500 i/c i/c GST @18.00%

Note: Early bird nomination till 30th April 2024: 3% discount shall be allowed to minimum sponsorship of 3 participants.

Accommodation is included in the course fee i.e. AC rooms will be available on twin-sharing basis as per availability. Fees includes accommodation to participants a day prior evening to the commencement of the course and day after the conclusion of the programme till 12:00 hrs. Overstay in the hostel will not be allowed.

Residential course fee includes course material, course kit, Breakfast, Lunch, Dinner, Tea / Coffee and snacks during the actual days of training programme. Taxes if subject any change shall be charged as applicable from time to time.

Force Majeure: In case of unavoidable circumstances like administrative reasons (riots, strike, bandh, agitation, curfew, etc.) natural calamities (flood, earthquake, bad whether etc.), unavoidable emergency or circumstances with trainer or training place or insufficient enrolments, M/s WatsanCAD Solution holds the rights to reschedule its training sessions. All participants will be intimated as early as possible & they can join the reschedules sessions. WatsanCAD Solution will not be liable to pay an expenses incurred by the participants to attend the training program in case if the training is cancelled or rescheduled due to the above circumstances.

**Please find below Bank Account details are as follows:**

Account Name	WATSANCAD SOLUTION, BHOPAL
Account Type	Current
Bank Name	State Bank of India
Branch	Chunnabhatti, Bhopal
Account Number	51032940551
IFSC Code No	SBIN0030513
MICR No	462005021
Swift Code	SBININBB268
Course fee inclusive of GST @18%. If any changes occur at the time of training, difference shall be payable accordingly. Alternatively, payment can be in the form of demand draft payable in favor of WATSANCAD SOLUTION, BHOPAL	
PAN Card No. AAGPH6340A; GST Registration No 23AAGPH6340A2ZE.	

### Registration

Please download the application form from [www.watsancadsolution.in/traings.htm](http://www.watsancadsolution.in/traings.htm) & same is attached herewith for ready reference. May be sent duly filled form to the e-mail address given: [trg.wcs@gmail.com](mailto:trg.wcs@gmail.com)

Please send details by post to below mentioned address.

**To, WATSANCAD SOLUTION, 68, Amrapali Enclave Chunnabhatti, Kolar Road, Bhopal - 462016**

Note: On receipt of the nominations acceptance will be notified by e-mail & mobile not later than 31st May 2024 and thereafter participants are requested to send their residential course fees in accordance with following categories.

Note: Please ensure the registration at earliest, seats are limited to 40. Acceptance will be issued on first-cum-first serve basis. If participation exceeds the desired limit then 2nd batch may be taken up in the month of July 2024 on convenient dates.

**Nomination deadline will be accepted 15th May 2024**

**In Association With**