

**NATIONAL WATER ACADEMY, PUNE**

**Training Program on  
"DIGITAL SURFACE MODELING & WATERSHED MODELING  
USING OPEN SOURCE GIS"  
(11<sup>th</sup> – 22<sup>nd</sup> September 2017)**

**REGISTRATION FORM**

Name (in capitals): \_\_\_\_\_

Designation: \_\_\_\_\_

Organization: \_\_\_\_\_

Responsibilities (in brief): \_\_\_\_\_

\_\_\_\_\_

Full Postal Address: \_\_\_\_\_

\_\_\_\_\_

Telephone Nos(with STD Code) : \_\_\_\_\_

Fax No(with STD Code): \_\_\_\_\_

Mobile: \_\_\_\_\_

E-mail: \_\_\_\_\_

**Date** (Signature of the participant)

**SPONSORING AUTHORITY**

Full Postal Address: \_\_\_\_\_

Telephone Nos:  
(with STD Code) \_\_\_\_\_

Fax No.(with STD Code): \_\_\_\_\_

Mobile: \_\_\_\_\_

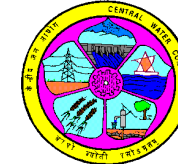
E-mail: \_\_\_\_\_

**Date** (Signature and Seal)

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

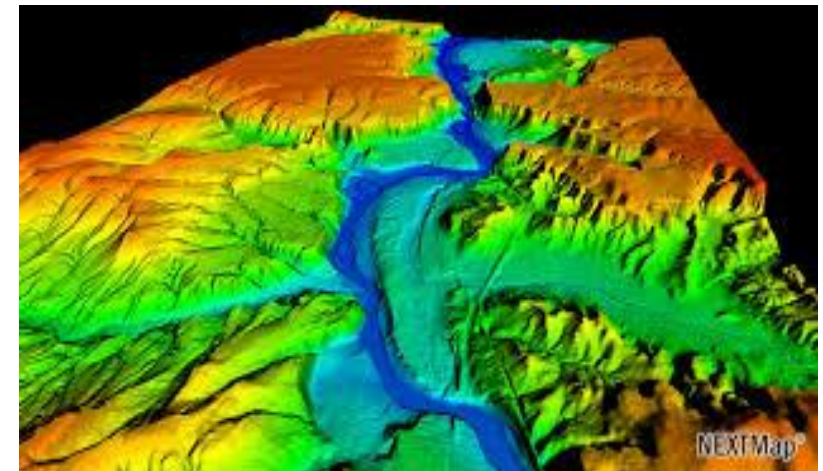


**Government of India  
Ministry of Water Resources,  
River Development and Ganga Rejuvenation  
Central Water Commission**



**Training Program On**

**DIGITAL SURFACE MODELING & WATERSHED MODELING  
Using  
OPEN SOURCE GIS  
(11<sup>th</sup> – 22<sup>nd</sup> September 2017)**



**Organised by  
NATIONAL WATER ACADEMY**

**at  
NWA Complex  
Khadakwasla, Sinhagad Road,  
Pune – 411 024**

## INTRODUCTION, BACKGROUND AND OBJECTIVE

Digital Image processing is widely used today by application users to derive a wide range of information including land use/ land cover, urban sprawl, temporal changes in watersheds, monitoring irrigation status. This provides the end users with image data sets directly in digital form, enabling the use of digital image processing techniques to extract information from the images. Encapsulating the information from images into gainful use is the need of the hour and the emphasis on Geoinformatics plays a vital role in spatial information for water resource appropriately. This programme is conceived to impart training on image processing with special emphasis on water resources.

The purpose is not only to create awareness regarding the use of the technology but also to utilize the latest technical know-how for the watershed through a series of practical hands-on. The training programme would expose the participants to watershed modelling using geospatial tools along with remote sensing, digital Surface modelling, DEM analysis with the help of Open Source GIS.

## PROGRAM CONTENTS

- Introduction to Remote sensing & GIS
- Satellites And sensors, GPS concept
- Digital Surface Modeling-Interpolation techniques, 3d viewshed
- Reservoir Bathymetry data processing using GIS
- Watershed delineation and characterization using spatial technique
- Watershed analysis using DEM
- Hydrological modeling and Hydraulic modeling
- Microwave Remote Sensing
- Digital image processing
- Practical Hands-on

## 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 not-for-profit organization / authorities / bodies of state governments, even if they have Corporation" or "Limited" in their names, only if they certify that they are "not for profit" organizations	NIL
C	Recognized Academic Institutions, NGOS	3,000/-
D	PSUs of MoWR, Govt of India	10,000/-
E	Central & State PSUs (other than Category B& D)	20,000/-
F	Private Companies, individuals	30,000/-

**Payment may be made by Demand Draft drawn in favour of "Deputy Director (A&C), NWA, Pune" prior to the commencement of the training program.**

## DURATION

**11<sup>th</sup> – 22<sup>nd</sup> September 2017 (2 Week)**

The participants are expected to reach NWA by the evening of 10<sup>th</sup> September, 2017 and should plan to leave after 1700 Hrs. on 22<sup>nd</sup> September, 2017.

## 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, (BE/B.Tech) with minimum two years of work experience in the field of water resources, of the levels of Director/ SE/ Dy. Director/ EE/ AEE/ AE from Central/State Govt organizations, PSUs, Pvt Organizations etc. with working knowledge of computers.

## PARTICIPATION

The nomination of the officers fitting the target profile may be sent to the Programme Coordinator latest by **30.08.2017**. The accepted nominations would be posted on our web site (<http://nwa.mah.nic.in>) under the link "Upcoming Events, by **01.09.2017**. **Without confirmed acceptance** from NWA website, the participants should not join the course.

## LOCAL HOSPITALITY

NWA has a self-contained residential campus, and all out-station participants would be provided with accommodation in the NWA Hostel. **Lodging and boarding charges will be borne by the participants.**

-Airport/Railway station pickup/drop will have to be arranged by the participants. The participants may avail the services of prepaid taxi/auto.

## WEATHER

During the month of September normally the weather is quite pleasant and the average temperature of Pune may be around 25°C to 30°C.

## CONTACT

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

### **Pradeep Kumar**

Director & Course Coordinator  
National Water Academy, CWC,  
Khadakwasla, Sinhagad Road,  
Pune – 411 024

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e-mail: [kumprad1979@gmail.com](mailto:kumprad1979@gmail.com)

Website: <http://nwa.mah.nic.in>