Training Program on
Development of Rating Curve using HEC-RAS
(24th-28th Nov 2025)
Registration Form

Name (in capitals):	
Designation:	
Organization:	
Responsibilities (in brief):	
Full Postal Address	
Tel Nos (with STD Code):	
Email:	
Mobile	
Whether require accommodation?	YES / NO
Date:	**(Signature of the Participant)**
SPONSORING AUTHORITY	
Full Postal Address	
Tel Nos (with STD Code):	
Email :	
Mobile	
Date	**(Signature and Seal)**
Completed Registration Form may be sent by email: nwa.pune@gmail.com	

Government of India
Ministry of Jal Shakthi
Department of Water Resources,
River Development & Ganga Rejuvenation
Central Water Commission

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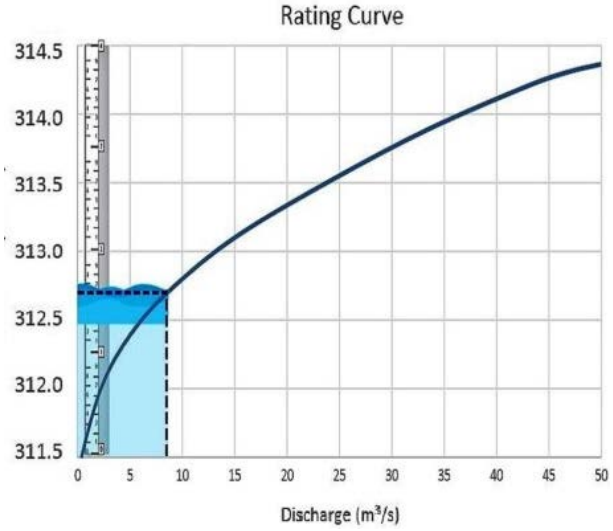
Development of Rating Curve using HEC-RAS
(24th-28th Nov 2025)



Organized by
National Water Academy, CWC, Pune

INTRODUCTION AND OBJECTIVE

Hydrometry is a field of applied science and engineering for observing/ monitoring components of Hydrological Cycle. Discharge/ Flow in a river is an important parameter for planning, development and management of water resources in any basin/ river system. Discharge at a station is generally observed by measuring flow velocity and cross-section of the river at the station or by deploying other sophisticated instruments in water. Measurement of flow velocity is not always possible and is time-consuming, expensive, and dangerous, especially during high flows and more often than less, engineers are dependent on indirect method of Discharge Estimation. Estimating of Discharge for known stage using Stage Discharge rating Curve is one of the oldest and most widely used techniques for converting a continuous record of water level into a continuous flow record. The reliability and accuracy of the estimated discharge is solely governed by the quality of Rating curve developed for the site.

Though the Stage Discharge is a highly important and essential tool for any Hydrological Observation Site, its development is often not given the importance it deserves leading to incorporation of various sought of errors.

One-week Training Program cum workshop on "**Development of Rating Curve using HEC-RAS**" has been conceptualized to provide an insight, necessary expertise and develop knowledge for preparing a Rating Curve using advanced Tools available in Public Domain.

PROGRAM CONTENTS

- **Rating Curves**: Types & it's Importance in Water Resources Planning, Development and Management
- **Hydrometry**: Better practices for observation of Stage & Discharge at HO Sites maintained within CWC
- Challenges in Discharge Observation, Correction of Errors during Observation and Pre-Processing of Data
- Basics of Hydro-Dynamic Modelling; Data Required & its pre-processing
- Working with HEC-RAS and setting up the Model for generating SD Curve
- Validation and Checking of the Developed Rating Curve

The program shall be conducted in workshop mode with each officer working out the rating curve for HO site(s) maintained under their jurisdiction.

Though National Water Academy has sufficient Desktop Computer Systems, however, considering the fact that the program shall be conducted in Workshop mode with individual assignment(s), it is advised that nominated officers may also carry their laptops along (if possible) along with pre-requisite site data

PRE-REQUISITE DATA REQUIREMENT

Nominated Officers are required to be survey and get the following site specific data/ information for development of rating curve using HEC-RAS during the program:

1. Identify 2-3 prominent HO sites under jurisdiction having stable banks for preparation of Stage Discharge Curves
2. Survey and collect at least 5 Cross-Section of the river at HO site i.e. (i) center (SG) line; (ii) 500 m u/s; (iii) 1000 m u/s; (iv) 500 m d/s and (v) 1000 m d/s. Each cross-section may be surveyed and extended upto 5 m above HFL. (In case cross sections cannot be taken at 500m and 1000m u/s and d/s of SGL due to site constraints, distance(s) may be varied however river reach of 1600m to 2400m must be considered)
3. Site photographs clearly showing the river bed and banks along with the vegetation. At least 3 photographs should be taken showing river reach at SGL, u/s & d/s of SGL. These photographs preferably should be of monsoon months to visualize the banks vegetation.
4. Water surface slope during high flood discharge and low flood discharge measurements.
5. Concurrent Daily Gauge & Discharge data of last 4 years along with observed historical peaks with corresponding water levels since commissioning of site.
6. Hard/ soft copy of the latest published water year book
7. Exact Location (latitude and longitude) of SGL of GD site in degree, minute and second.

TARGET GROUP & RESOURCE PERSONS

This training course is intended for the Technical Officers of Central Water Commission in the rank of JE/ AE/AEE/EE/SE involved in Hydro-Meteorological Observation activities at HO sites of CWC. The resource persons for the program would be subject experts from MTBO, CWC.

DURATION

The program is of five days duration scheduled during 24th-28th November 2025. The participants are expected to reach NWA by the evening of 23rd November 2025 and should plan to leave only after 2000 hrs on 28th November 2025. VENUE National Water Academy, CWC, Pune-Sinhagad Road, Khadakwasla, Pune – 411024

PARTICIPATION

The approved nomination of the officers fitting the target profile may be sent to the Course Director latest by 01st November 2025 by email (nwa.pune@gmail.com). The nominated officers are requested to start for the program only after confirmation of their accepted nomination. The accepted nominations will be displayed on NWA's website on the evening of 07th November 2025. Also nominated officers may kindly fill in the google form through the link https://forms.gle/kWFoA46AE4zYAcxG7.

PROGRAM FEE & ACCOMODATION

There is no program fee for participants. The trainee officers would be accommodated in NWA hostel. **Lodging & boarding will be provided by NWA FREE of cost.** Airport/ Railway station pickup/drop will also have to be arranged by the trainee officers themselves.

WEATHER

In November, Pune is expected to experience temperatures ranging from 15°C to 25°C.

CONTACT

For sending nominations or for any information about this program, please contact:

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