

Agenda

Presented by Chris Naidu

Understanding Open Channel Flow and Pipe Flow

- Understanding pipe flow
- Understanding open channel hydraulics
 - Examining types of open channel flows
 - Looking at examples of open channels

Making Open Channel Calculations

- Channel shapes and varying flow
- Manning's equation and open channels
- Uniform flow calculations
- Critical flow calculations
- Varied flow

Evaluating Channel Shapes

- Evaluating the effect of channel shapes:
 - Trapezoidal, parabolic

Evaluating Channel Linings

- Smooth surfaces
- Uneven or rough surfaces
- Vegetated surfaces

Designing Open Channels

- Low slope
- Steep slope
- Transitions

Applications for Open Channels and Case Studies

- Stormwater management
- Drainage
- Stream flow

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Open Channel Hydraulics and Design

Live, Interactive Webinar - Friday, August 25, 2023

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Altoona, WI 54720-0278



Learning Objectives

You'll be able to:

Apply the physics of pipe flow and open channel flow to stormwater, drainage and stream flow applications.

Get tips on making open channel flow calculations, and consider uniform and varied flow.

Take into account the effect of different channel shapes and linings.

Explore the effect of vegetated surfaces in channels.

Design open channels for low and steep slopes.

Discuss considerations for making transitions between different types of open channels.



HalfMoon Education Live Webinars

Open Channel Hydraulics and Design

Live, Interactive Webinar - Friday, August 25, 2023



Study channel shapes and varying flow

Learn about making open channel calculations

Evaluate channel linings, including smooth, uneven, rough and vegetated surfaces

Explore open channels with low and steep slopes

Review applications for open channels including stormwater management, drainage and stream flow

Continuing Education Credits

Professional Engineers
6.5 PDHs

Practicing Institute of Engineering
6.5 PDHs

Landscape Architects
6.5 HSW CE Hours
6.5 LA CES HSW PDHs

Floodplain Managers
6.5 ASFPM CECs

Certified Planners
CM|6.5



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Faculty

Chris Naidu *Water Resources Civil Engineer, Senior Project Manager at RESPEC*
Mr. Naidu has more than 10 years of experience in drainage and flood control projects throughout New Mexico. His experience includes preparation of drainage management plans (DMP), hydrologic analysis, hydraulic analysis of flood control structures, sediment transport, and scour analysis for unlined arroyos and bridge structures. Using modeling/analysis software, Mr. Naidu produces high quality hydrologic and hydraulic models. He has a proven record of preparing easy-to-understand reports and corresponding maps and figures. He has prepared hydrographs and analyzed storm drains, weirs, pump stations, and detention/surge ponds. Additional skills include preparation of plan specifications, bidding and construction plans, cost estimates, and bidding services. He is familiar with Arc Geographic Information System (ArcGIS); Hydrologic Engineering Center (HEC) Hydrologic Modeling System, HEC Geospatial Hydrologic Modeling Extension (geoHMS), HEC River Analysis System (HEC-RAS, US Environmental Protection Agency Storm Water Management Model (EPA SWMM), StormCad, and CulvertMaster.

Webinar Information

Log into Webinar 8:30 - 9:00 am CDT	Break 12:30 - 1:00 pm CDT
Morning Session 9:00 am - 12:30 pm CDT	Afternoon Session 1:00 - 4:30 pm CDT

Tuition
\$319 for individual registration
\$289 for two or more registrants from the same company at the same time.
Included with your registration: PDF seminar manual.

How to Register

- Visit us online at www.halfmoonseminars.org
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Credit Information

This webinar is open to the public and is designed to qualify for 6.5 PDHs for professional engineers in all states that allow this learning method. Please refer to specific state rules to determine eligibility.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida (Provider No. 0004647), Indiana (License No. CE21700059), Maryland, New Jersey (Approval No. 24GP00000700) and North Carolina (S-0130).

This webinar has been evaluated for compliance with the NYS Mandatory Continuing Education requirements by the Practicing Institute of Engineering and has been approved for 6.5 PDHs in the fields of professional engineering, landscape architecture, and geology.

The Landscape Architecture Continuing Education System has approved this course for 6.5 HSW PDHs. Only full participation is reportable to the LA CES.

This webinar has been approved by the Association of State Floodplain Managers for 6.5 CECs for floodplain managers.

Attendance will be monitored, and attendance certificates will be available after the webinar for those who attend the entire course and score a minimum 80% on the quiz that follows the course (multiple attempts allowed).

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6.5 HSW PDHs (LA CES)
6.5 ASFPM CECs

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- Avoiding, Identifying and Resolving Ethical Issues in Land and Water Transactions**
- Friday, July 21, 2023 | 2:00 - 3:00 pm CDT
- How to Analyze Common Construction Defects and Failures**
- Monday, July 24, 2023 | 2:00 - 4:00 pm CDT
- 2023 National Electrical Code Update**
- Tuesday, July 25, 2023 | 8:00 am - 5:00 pm CDT
- Soil-Structure Interaction (SSI)**
- Tuesday, July 25, 2023 | 9:00 am - 4:00 pm CDT
- International Residential Code 2021**
- Wednesday, July 26, 2023 | 8:30 am - 4:30 pm CDT
- Seismic Design and Construction**
- Thursday, July 27, 2023 | 8:30 am - 5:00 pm CDT
- The Usefulness of Drones for Civil Engineers and Land Surveyors**
- Thursday, July 27, 2023 | 9:00 am - 4:00 pm CDT
- Managing Construction Projects**
- Monday, July 31, 2023 | 9:00 am - 5:00 pm CDT
- Concrete Pavement Design, Construction and Maintenance**
- Tuesday, August 1, 2023 | 9:00 am - 4:30 pm CDT
- Complying with NPDES Industrial Stormwater Requirements**
- Wednesday, August 2, 2023 | 8:30 - 11:45 am CDT
- Thursday, August 3, 2023 | 8:30 - 11:45 am CDT
- PFAS Remediation in City Water Supplies**
- Wednesday, August 2, 2023 | 1:00 - 4:00 pm CDT
- How to Estimate Construction Costs for Commercial Buildings**
- Thursday, August 3, 2023 | 10:30 am - 12:30 pm CDT
- Introduction to Groundwater Hydrology**
- Tuesday, August 8, 2023 | 9:00 am - 12:15 pm CDT
- Wednesday, August 9, 2023 | 9:00 am - 12:15 pm CDT
- Decarbonizing Existing Buildings**
- Thursday, August 10, 2023 | 10:00 am - 1:15 pm CDT
- Technical Writing Workshop for Design Professionals**
- Friday, August 11, 2023 | 7:30 am - 4:00 pm CDT
- Pump Station Design, Construction and Rehabilitation**
- Friday, August 11, 2023 | 9:00 am - 4:00 pm CDT
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