BSCES
Boston Society of Civil Engineers Section
American Society of Civil Engineers

Program Committee

Culvert Design for Peak Flow and Aquatic Organism Passage

Rollin Hotchkiss, PhD, PE

Professor/Department Chair, Hydraulics & Water Resources
Brigham Young University
President, ASCE Environmental & Water Resources Institute

Tuesday and Wednesday, December 5&6, 2017

Simpson, Gumpertz and Heger
41 Seyon Street, Building 1, Suite 500, Waltham, MA
8:30 AM – 4:30 PM

Overview:

Have you been asked to design a culvert for a new road crossing or to replace an existing culvert? Perhaps it's been a long time since you've done that and you feel a rising sense of panic. Or even if you're comfortable with culvert design, what about "aquatic organism passage" criteria that keeps popping up in your state or agency? And how can that be incorporated with the latest software?

The two-day seminar will begin with a review of peak discharge methods and open channel flow. We will then discuss culvert basics and the unique world of culvert hydraulics.

Attendees will be asked to complete two case studies, each developed to illustrate common issues encountered when designing a culvert. A discussion of energy dissipation will follow with a workshop featuring the broken back culvert feature found in HY-8. The second day will conclude with a detailed discussion of aquatic organism passage including the basics, popular design procedures, and a workshop on the topic.

Upon completing the short course, participants will have a solid understanding of the policies and procedures involved in culvert design, and will be able to design a culvert including determining peak discharge and any Aquatic Organism Passage requirements.

A representative from the MA Division of Ecological Restoration will also be present to give a statewide perspective on the challenges road managers face and the resources available for replacing culverts for aquatic organism passage and storm resilience.

Learning Outcomes:

- Review methods of determining peak discharge for culvert design
- Understand the principles of open channel flow
- Design a standard culvert
- Design a culvert to reduce outlet velocity
- Design a culvert considering aquatic organism passage

ASCE
AMERICAN SOCIETY OF CIVIL ENGINEERS

This program provides 1.4 Continuing Education Units (CEUs)

Supported by the staff of The Engineering Center Education Trust

Speaker:

Rollin Hotchkiss, PhD, PE

Dr. Hotchkiss is a professor of civil and environmental engineering at Brigham Young University and holds the Ira A. Fulton College of Engineering and Technology professor- ship in leadership. Dr. Hotchkiss has authored more than 150 papers and reports dealing with topics ranging from determining peak flows in watersheds to turbulence in natural channels and culverts. His current research areas include designing culverts that allow upstream fish passage and using high quality datasets to compare current methods for predicting sediment transport in rivers. He has taught short courses in culvert design in more than 25 states to hundreds of practicing engineers and is the author or co-author of the most recent Federal Highway Administration design manuals on fish passage through culverts. Dr. Hotchkiss currently serves as the President of ASCE's Environmental and Water Resources Institute.

Registration Deadline: Friday, November 17, 2017

Registration Fees: $1,200 ASCE and BSCES Members; $1,425 Non-Members

Registration fee includes course materials, continental breakfast, breaks, and lunch.

Registration Information:

For a detailed program description and to register to attend this seminar and pay by credit card online, click here. To register online for an event at the BSCES member rate you must login using your BSCES assigned username and password. If you do not know your BSCES member login information call 617/227-5551. ASCE Members who are not members of BSCES may register and pay to attend online using their ASCE ID Number as their password. You can also register for this event by completing the registration form below and mailing, emailing or faxing it to BSCES, The Engineering Center, One Walnut Street, Boston, MA 02108, bscesreg@engineers.org, or 617/227-6783, respectively. Cancellations received after November 17, 2017 and no-shows will be billed.

Registration Form

Culvert Design for Peak Flow and Aquatic Organism Passage

Tuesday and Wednesday, December 5&6, 2017
41 Seyon Street, Building 1, Suite 500, Waltham, MA

Registrant Information

Name: _____

Company (if applicable): _____

Address: _____

City: _____ State: _____ Zip Code: _____

Phone _____ Fax: _____ Email: _____

Dietary Restrictions: _____

Registration Fees

☐ $1,200 BSCES Member

☐ $1,200 ASCE Member

ASCE Section/Branch Membership _____ ASCE Member ID _____

☐ $1,425 Non-Member

Total Amount Enclosed **$** _____

Make checks payable to "BSCES" and mail with completed form to: BSCES, The Engineering Center, One Walnut Street, Boston, MA 02108-3616

Or Pay with (Check one): ☐ Visa ☐ Master Card ☐ American Express

Card Name: _____

Card Number: _____ Expiration Date: _____

Billing Address: _____

City: _____ State: _____ Zip: _____

Signature: _____

- Registration deadline is Friday, November 17, 2017
- Attendance is limited to 40. Registration is processed on a first-come, first-served basis.
- This seminar is worth 1.4 Continuing Education Units (CEUs) (subject to state approval).
- Attendees are advised to bring a calculator.
- A refund will be given for cancellations made by November 17; no refunds will be given after this date. No-shows will be billed.
- Questions? Call 617/227-5551