

RIPRAP DESIGN FOR STANDARD APPLICATIONS SHORT COURSE

WHEN

**Thursday, February 28,
7:30 a.m. to Noon**

WHERE

**Flood Control District
of Maricopa County**

2801 W Durango St, Phoenix, AZ 85009

INSTRUCTORS:

Nate Vaughan, PE

Richard Waskowsky, PE

Rob Lyons, PE, CFM

JE Fuller

REGISTRATION

*This workshop has been pre-approved for 4 CECs by the ASFPM.
4 PDH certificates will also be available.*

REGISTRATION

\$55 ASCE Member

\$65 Non-member

REGISTRATION DEADLINE

**Wednesday, February 27th
12:00 p.m.**

LEARNING OBJECTIVES

- 1. Understand common riprap applications**
- 2. Learn how to size and design riprap**
- 3. Understand the importance of hydraulic variables**
- 4. Understand the failure mechanisms of riprap revetments**

**BREAKFAST/COFFEE
PROVIDED**



SPONSORS

FCDMC

JE FULLER

ASCE Phoenix Branch

QUESTIONS

Contact

Larry Hanson | PE

**Hanson Consulting
Engineers**

(480) 231-4023

lhanson2@msn.com

ASCE PHOENIX BRANCH

RIPRAP DESIGN FOR STANDARD APPLICATIONS

Short Course Description:

This course will cover a variety of topics associated with riprap design and construction. Through a review of the evolution of riprap design theory and practice, participants will develop a strong fundamental understanding of the variables involved in appropriately sizing riprap for a variety of conditions. Examples of design methods/standards from multiple jurisdictions will provide a composite view of the current state of riprap design practice.

Examples of common applications and failure cases will allow participants to better apply appropriate riprap revetments in their design. Specific application cases such as bank revetment, culvert outlet protection, and bridge scour countermeasures will aid participants in selecting appropriate scour and erosion protection measures for their projects. Riprap specifications including sizing conventions, quality, and placement will also be addressed.

Exercises will emphasize the fusion of hydraulic analysis and riprap design.

Instructors:

Nate Vaughan, JE Fuller, P.E. has 16 years of experience in water resources engineering. His project experience includes hydraulic and hydrologic modeling, flood control design, and roadway drainage design. His areas of expertise include riprap design, scour calculation, sediment transport, hydraulic modeling and analysis. Mr. Vaughan received both his B.S. and M.S. from the University of Alaska Fairbanks.



Richard Waskowsky, JE Fuller, P.E. has 13 years of experience practicing water resources engineering. His specialties include hydrologic/hydraulic analysis, flood control design, scour analysis, erosion protection, and sediment transport modeling.



Rob Lyons, JE Fuller, P.E., CFM has served on projects throughout Arizona and Washington since 2000. His specialties include hydrologic/hydraulic analysis, scour analysis, erosion protection, flood control design, roadway drainage design, and construction document preparation. Mr. Lyons is the current Phoenix Branch Past President.

