

**COURSE NUMBER**

FHWA-NHI-142048

COURSE TITLE**Managing Road Impacts on Stream Ecosystems: An Interdisciplinary Approach**

Managing Road Impacts on Stream Ecosystems: An Interdisciplinary Approach is a three-day course that is intended to introduce and discuss the basic concepts related to the impacts that roadways have on streams and stream ecosystems. The course will be structured to first address the ecological and physical characteristics of stream ecosystems, discuss the impacts that roadways can have on those ecosystems, and then turn to tools that the practitioner can use to help avoid and mitigate those effects. Through the use of Case Examples, discussion, and other application techniques, the participants will be afforded an opportunity to use critical thinking to identify solutions and preventative measures related to the impacts of roads on streams and their riparian communities.

OUTCOMES

Upon completion of the course, participants will be able to:

- Evaluate how roads interact with and impact stream ecosystems
- List major State and Federal Requirements that apply to roadway impacts on stream ecosystems:
- Identify relevant stakeholders
- Involve stakeholders in an environmental review process
- Describe the benefits of collaboration among disciplines in assessing and mitigating road impacts to stream ecosystems
- Describe the characteristics and functions of a stream ecosystem
- Identify stream restoration tools and techniques
- Develop monitoring protocols
- Identify risk and uncertainty associated with treatment approaches in fluvial environments

TARGET AUDIENCE

This course has been developed for FHWA, State Department of Transportation (DOTs), Federal and State environmental resource agency staff and consultants involved in the design, construction, operation, and maintenance of roadway facilities. The course is intended to address the issues of and be of benefit to both the engineers and the environmental specialists involved in highway design, planning, and maintenance. Participants should have some general knowledge of stream dynamics and ecological considerations. However, an extensive background is neither required nor assumed.

TRAINING LEVEL: Intermediate

FEE: 2019: \$1100 Per Person; 2020: N/A

LENGTH: 3 DAYS (CEU: 1.8 UNITS)

CLASS SIZE: MINIMUM: 20; MAXIMUM: 30

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