JOINT COMMITTEE ON FISHERIES ENGINEERING AND SCIENCE

2017 Webinar Series

PRESENTER BIOGRAPHY

Matt Collins is a hydrologist and geomorphologist for the NOAA Restoration Center's Northeast region. He manages a monitoring program that evaluates habitat restoration project outcomes. Matt also provides technical support for fish passage and wetland restoration projects throughout the Northeast United States and elsewhere, specializing in fluvial sediment dynamics and flood hydroclimatology. Recent work explores climatic changes in the flood regimes of Northeast U.S. rivers and associated implications for fisheries resources and restoration project design.

WEBINAR INFORMATION

Date: Tuesday, April 25, 2017
Time: 12:00p ET |9:00a PT
Duration: 60 Minutes
Webinar Platform: Microsoft Lync (call in number will be provided to registrants)

Please RSVP and direct any questions or comments to Erin McCombs at fisheriesengineeringscience@gmail.com

CHANNEL RESPONSE TO DAM-REMOVAL SEDIMENT RELEASE: INSIGHTS FROM TWO NORTHEAST U.S. SITES AND APPLICABILITY FOR PROJECT PLANNING

Matt Collins
Restoration Center, National Marine Fisheries Service
National Oceanic and Atmospheric Administration
Gloucester, MA

Releasing sediments downstream is a cost effective management technique for dam removal projects if the sediments are not contaminated. Yet some projects do not pursue this option, or move forward at all, because of concerns about how, and over what time scales, the upstream and downstream floodplain environments will respond. In this presentation, I will compare channel form and sediment data from two of the longest-running dam-removal monitoring studies in the country: Simkins Dam in Maryland and Merrimack Village Dam in New Hampshire. The sites had important similarities—e.g., dam height, watershed size class, stored sediment volume and caliber—and had similar erosion responses upstream that we can describe functionally. Downstream channel responses were naturally linked to upstream processes and also depended on channel gradient and base flow magnitude. I will show how differences in valley widths between the two sites modulated the erosion rates but did not affect the functional form of the erosion response, and review similarities between our findings and erosion responses observed at dam-removal sites across a range of size classes, climate types, and physiographic settings. This information can be used to plan future dam removals and inform stakeholders about the changes they can anticipate.

The Joint Committee on Fisheries Engineering and Science is hosting a free webinar series as part of its mission to engage scientists and engineers on topics related to fish passage. The Committee consists of members of the American Fisheries Society Bioengineering Section (AFS-BES) and the American Society of Civil Engineers Environmental and Water Resources Institute (ASCE-EWRI). It was established in January 2011 to foster communication between the two groups, provide opportunities for engineers and biologists to share relevant knowledge and learn from one another, and to collaborate on projects related to fish passage.