



Team EcoMod News

April 2023

NextGen Webinar Dates

- June 21
Christina Saltus ERDC
- July 19
Madison Yawn ERDC

Homecoming at Environmental Lab, ERDC

The entire workforce of the Environmental Lab (EL) descended upon Vicksburg, MS in March for a 'Homecoming' event. Remote federal employees and contractors met up to discuss EL goals and learn about collaborative opportunities.



Emily Russ and Todd Swannack shared their research regarding next generation modeling and aquatic vegetation. The team was able to meet with current and prospective collaborators, including EL partners in New York and research facilities in Texas. We also welcomed new contractor Thomas Huff, who works out of College Station, TX.



Mussel Journal Article

Carra Carrillo has completed an important milestone for any researcher: first-authorship! Her journal article titled 'Patterns of dreissenid mussel invasions in western US lakes within an integrated



Research article
Patterns of dreissenid mussel invasions in western US lakes within an integrated gravity model framework

Carra C. Carrillo^{1,*}, Bianca R. Charbonneau², Safra Altman³, Jacque A. Keele⁴, Sherri F. Pucherelli⁵, Yale J. Passanunck⁶, Aaron C. Murphy⁷, Todd M. Swannack^{1,4}

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gravity model framework'. Carra developed a model to forecast invasive species movement, in order to highlight at-risk waterbodies and boater movement. She hopes that this will lead to further research into management decision-making regarding mussel spread. See the Model Spotlight below. The model is available upon request at ecomodteam@usace.army.mil.

Todd Swannack Co-Lead of Team EcoMod



When Todd started with the Wetlands & Coastal Ecology branch in 2010, he, along with his co-lead Candice Piercy, noticed a need within USACE for more quantitative ecological models. They realized this knowledge gap could best be filled by integrating ecological and engineering models. Coupling physics-based engineering models with ecological processes allows them to have more refined and accurate predictions of environmental response.

New Logo

Our friends at the Information Technology Lab (ITL) created new logos for Team EcoMod. Our land and sea image now has a professional makeover, with an array of color combinations and formats. We are currently working on a branding guide to best utilize the variety of designs.



Model Spotlight: Invasive Mussel Dispersal Model

Carra Carrillo explains: "Since this invasive species has been able to spread across the United States as quickly and relatively quietly as it has, it is even more important to ensure that lakes that could be potential targets for future exposure are aware so the managers can get a head start on testing and management strategies".

