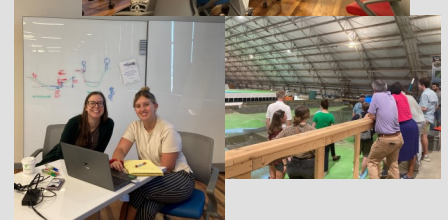




# Team EcoMod News

## Next Generation (NextGen) Modeling Collaboration Meeting

The first week in August brought 50 scientists and engineers together for a three day symposium to discuss current and future work for the NextGen effort. This is a unique collaboration for the EcoMod team. There are dozens of individual projects as part of NextGen, some led by ERDC researchers and others by our academic partners. This gives students a chance to work on real-world environmental issues and learn how their studies can be used for developing new modeling tools. The meeting was held at ERDCWERX in downtown Vicksburg, a beautiful new collaboration space that brings together ERDC and the community. Visitors also toured ERDC labs, including CHL's physical models and EL's fish flume.



August 2023

### NextGen Webinar Dates

- Sept 20  
Annette Engel  
University of Tennessee
- Oct 18  
Safra Altman ERDC

**Candice Piercy**  
Co-Lead of  
Team EcoMod



After discovering the need for EcoMod, Candice and Todd assembled a strong, multidisciplinary team that could work at the nexus of engineering and ecology. New teammates brought different perspectives from ecology, engineering, physical science, ecosystem restoration, and planning to broaden the team's R&D. Over time, collaboration became the focus; partnerships with other ERDC labs, USACE districts, and academia became a driving force. Candice thinks the NextGen project brought new clarity to team EcoMod, resulting in our first ever mission statement: *To provide integrated ecological modeling support for all levels of USACE by innovating new modeling science and forecasting site-specific needs.*



### FQA R Packages

Iris Foxfoot has been working for the last year on two Floristic Quality Assessment (FQA) R packages. These programs provide a standardized method to rapidly assess the condition of a vegetated area by calculating metrics data. The packages, *fqadata* and *fqacalc*, can be found on CRAN and can be installed locally. There is even a tutorial available on our website <https://ecomod.erdcdren.mil/>. Iris is also finishing up a public, user-friendly web application which should be online soon!

### Working with LAERF

As part of her investigation into submerged aquatic vegetation (SAV), Emily Russ decided the best place to collect data was the Lewisville Aquatic Ecosystem Research Facility (LAERF), an ERDC testing facility in Texas. A new ORISE participant, Sarah Anderson, will be stationed at the facility and perform daily testing in order to capture vegetation dynamics information that will inform new SAV modeling efforts.



### Model Spotlight: Remote Sensing: GIS-Based Landscape Model

This relatively simple model utilizes a statistical approach (multinomial logistic regression) to predict vegetation habitat type in a barrier island system from DEM-derived metrics. This model is an effective tool to rapidly assess coastal vegetation zones and can aid practitioners making managements decisions with respect to storm response planning and conservation management.

Publication available at <https://doi.org/10.3390/rs14061377>; Model code available upon request. Email [ecomodteam@usace.army.mil](mailto:ecomodteam@usace.army.mil)

