

March 10, 2026

Dear Friends,

I am grateful for your continued interest in Fear to Hope at CNU, and am pleased to share highlights of recent and ongoing activities. I especially hope that you will note the details for our upcoming symposium on April 21<sup>st</sup>, 2026.

### Summary

I am pleased to share highlights from several months of meaningful growth in expanded partnerships and new opportunities for student and community engagement. There is news to share about expanded participation in all parts of the model: middle and high school students and teachers, college students and faculty, and integration of environmental professionals. Our hands-on research collaborations, launched through a focus on Atlantic White Cedar ghost forests and restoration, continue to thrive. Now in its fifth year, Fear to Hope AWC research remains active in schools from Maine to Texas, supported by private donations and sustained by deep partnerships with teachers, students, and environmental professionals. Over the last year or so, our research has expanded into salt marsh and oyster reef restoration, allowing us to expand our reach as we stay on our theme of local research collaborations to address a global climate challenge. This new restoration effort has two CNU student-led components: field trips for hands-on research at a huge salt marsh restoration site near CNU, and an in-class research component for middle and high school students, all funded by major grant support that has tripled our number of CNU student mentors.

I hope you find something of interest in the details below. There is news regarding the new, and a newer, grant; a big push to provide curriculum integration support to schools; an expansion of the F2H conceptual model that deepens community connections concurrently with the new Strategic Compass at CNU; and sample media coverage. We warmly invite you to the 5th Annual Fear to Hope Symposium, to be held on April 21st (Earth Day Eve) in CNU's Peebles Theater from 10:00 a.m. to 2:00 p.m. The day will conclude with an informal gathering at *Traditions*, where guests can enjoy conversation, community, a Quinlan Lab tasting, and the second release of Cedar Buddy.

Our team extends heartfelt thanks to everyone for their gifts of time, talent, and treasure, and especially for the trust that makes this work possible.

Cheers,



CNU Professor of Biology  
Founder, Fear to Hope  
Past President and Fellow, Virginia Academy of Science

## Details

### Local and regional reach



*Atlantic White Cedar in pot within a pail. Teachers receive Atlantic White Cedar seedlings each fall, enabling year-long student-led research projects. Data analysis and poster making, often assisted by CNU student mentors, occurs in spring so posters are ready to be presented at the annual symposium.*

Dedicated teachers at 15 schools in Virginia and at 15 more schools from Maine to Texas are once again participating in research coordinated through Fear to Hope. The goal is to expand our understanding of the effects of salt on Atlantic White Cedar. Each September, teachers receive 20 six-inch-tall seedlings in small white pails, each to be exposed to an assigned salt concentration, and to no salt as a control. This accessible research model provides a year-long study that directly engages students, connects them to a multistate collaborative experimental design, and enriches curricula throughout the school year. Participation gives students *hope* to see how citizens and science work together to address local environmental challenges.

Our findings so far testify to the dedication of both students and teachers in carefully collecting precise measurements. Notably, their data detected a small growth subsidy at low salt concentrations that has not previously been reported, possibly due to enhanced soil nutrient release. This unexpected result has already generated new research questions and demonstrates the meaningful scientific contributions emerging from classroom-based inquiry.

### Ragged Island field trips

We are in the middle of our first full year of field trips to Ragged Island, a huge and remarkable oyster and salt marsh restoration effort so close to our campus! The grant is from the National Oceanic and Atmospheric Administration and led by the Virginia Department of Wildlife Resources, Ducks Unlimited, and CNU. We have at least 7 faculty members ensuring the authenticity of student research, which Newport News and Isle of Wight Public School high school students help conduct at stations under the leadership of CNU student mentors and volunteer environmental professionals. Depending on the day, students in teams of 5 rotate through stations where they measure groundwater depth and salinity, core trees in ghost forests, analyze plant communities, assess endangered Terrapin habitat, measure elemental composition of marsh grasses, and much more. More area students will help plant the cordgrasses this spring, and student field crews will measure cordgrass and oyster establishment over the summer. CNU student mentors play a central leadership role by guiding data collection, analysis, and poster preparation for the annual symposium hosted by CNU. Collaborative, field-based learning helps younger students connect field observations to larger ecological questions.



*Aerial view (provided by our partners Ducks Unlimited) of construction showing 2 of the more than 60 breakwaters that were installed in winter 2025-6 for oyster and salt marsh restoration at Ragged Island WMA in Isle of Wight County, just across the James River from CNU. More than 20 studies are underway and nearly all include high school students!*

### **A new practical restoration question to study**

In the last few months, we ran into a new coastal resilience question that practitioners, including those at Ragged Island and across US coastal states, want answered. We're using the Fear to Hope model of citizen

science that is stewarded by university students, faculty scholars and environmental professionals to research the cost/benefits of various fertilizer applications in planting salt marsh grasses (see sandy destination above). Growing plugs of salt marsh cordgrass in pails is a lot like growing Atlantic White Cedar seedlings in pails and requires no advanced training or sophisticated instrumentation to capture the effects of the fertilizer on growth. And, as with the Atlantic White Cedar, the pails can reside in a teacher's classroom for an entire school year. In just the last two months, we have engaged 14 teachers from Tidewater to Richmond to grow salt marsh cordgrass with assigned fertilizer treatments before the end of spring! This study exemplifies Fear to Hope's ability to respond quickly to real-world restoration needs using low-cost, classroom-based research that can scale across regions. Our partners at Mariners' Museum will keep the plants over summer, so when you visit the museum this summer you should check out the study.

### **Environmental professionals accept added responsibilities**

Dozens of environmental professionals attend the symposium every year and engage high school students over their posters. Last year we learned that several environmental professionals wanted to participate in our field trip programs to a nearby salt marsh (Ragged Island Wildlife Management Area in Isle of Wight County just 7 air miles from CNU, and described above). A dozen have now participated to the delight of teachers, high school students, and CNU student mentors. Their participation enriches student learning while strengthening professional networks that support long-term regional restoration efforts.

### **Community engagement beyond local schools and environmental professionals**

While classrooms and field sites remain central to Fear to Hope, the project's impact increasingly extends into the broader community. Fear to Hope's community engagement is intentionally expanding beyond classrooms and field sites to create lasting public value across the region. What begins as student-centered research increasingly ripples outward into workforce preparation, civic dialogue, and cultural connection. Students engage with local watermen, hunters, and fishers at Ragged Island to learn how restoration intersects with lived experience



*Northern Diamondback Terrapin at Ragged Island WMA. Fear to Hope is collaborating with VDWR which considers the species of very high conservation concern. Last year students investigated soil type effects on temperature in 3D-printed terrapin eggs. This year our GIS map of Ragged Island is being used to assess habitat suitability response to sea level rise predictions.*

and local livelihoods. Educators report measurable benefits for student confidence, science engagement, and performance, particularly among students who previously felt disconnected from STEM learning. Advanced Placement students gain access to authentic research challenges rarely available at the high school level, while other students discover a first sense of belonging in science through hands-on, place-based inquiry.

Fear to Hope also embraces creative and interdisciplinary pathways to reach broader audiences. Visual artists help translate ecological change into compelling public narratives, and collaborations, such as future performances by CNU's Kelly Rossum through his Jazz Symphony inspired by ghost forests, create powerful entry points for community members who might otherwise never attend a traditional science event. Together, these efforts transform climate research from something that happens *to* communities into something built *with* them. In this way, Fear to Hope deepens trust, broadens participation, and ensures that local environmental restoration is also a catalyst for education, inspiration, and hope.

### **New grant**

We're grateful to have been awarded a competitive internal grant at CNU, which will further amplify the impact of our work by creating mixed urban-rural student teams, starting this summer. This project will intentionally partner urban (Newport News Public Schools) and rural (Isle of Wight Public Schools) students led by CNU students and environmental professionals at Ragged Island WMA, continuing our investigation into, and public awareness of, the restoration efforts by NOAA, VDWR, and DU as referenced above.

## In closing

As Fear to Hope enters its sixth year, we remain deeply grateful for the educators, students, environmental professionals, and supporters who make this work possible. What began with Atlantic White Cedar research has grown into a collaborative model connecting classroom learning, field research, and real-world restoration across regions. We are encouraged not only by the scientific insights emerging from this work, but also by the confidence and leadership developing in the students who participate.



*Around 2010 Lonnie, and her late husband Max Mattes, hand built an 18-foot Western Red Cedar strip canoe with African Mahogany gunnels and hand-caned seats. It was constructed from plans and conserved in fiberglass. Dr. Jim Perry, VIMS Professor Emeritus, recently completed the refurbishment for Fear to Hope.*

Your partnership strengthens this network of education, research, and restoration. For those who wish to support Fear to Hope's continued growth, contributions may be directed through Keith Roots, Senior Associate Vice President at CNU ([keith.roots@cnu.edu](mailto:keith.roots@cnu.edu) and 757-594-0581). We are committed to stewarding every gift thoughtfully and transparently.

We also extend special thanks to Lonnie Mattes Wilson for the generous donation of her handmade wooden canoe, and to Dr. Jim Perry for restoring it with such care. We look forward to finding a meaningful way to share this gift with the wider community and celebrate the spirit of craftsmanship, conservation, and generosity it represents.

Thank you for your continued trust and partnership. We hope to see many of you on campus for the 5<sup>th</sup> Annual Fear to Hope Symposium from 10a-2p on April 21st as we gather once again to share student research, community progress, and the enduring power of hope.

Thanks friends,

*Rob Atkes*

P.S.: We don't have a website up but here are links to a couple of media stories.

"This Just In" videos by Newport New Public Schools

The first 2:15 seconds linked at <https://youtu.be/Io3ygh8dWPg?si=yD2xBeidcQdZzROX>

The first 2:43 seconds linked at <https://u.peg.tv/s/0m58fb>

Starting at 3:32 seconds linked at <https://u.peg.tv/s/ou5xfx>

<https://dwr.virginia.gov/media/press-release/dwr-receives-grant-to-enhance-and-restore-critical-marsh-habitat-at-ragged-island-wildlife-management-area/>

<https://cnu.edu/news/2025/11/24-cnu-cse-atlantic-white-cedar-seedling-adoption/>