



The Stone Soup Leadership Institute's Blue Economy Initiative

August 13 was a sunny blustery day when our Blue Economy group ventured to the Estuary & Ocean Science Center (EOS) in Tiburon. At our June 9 meeting at the College of Marin, business, education, community and government leaders like Stephanie Moulton-Peters, Dirk Rosen, Terry Sawyer expressed interest in this tour. Following the Stone Soup Leadership Institute's [Blue Job Shadow Day](#) at the College in February, they are eager to explore how we might develop possible public-private partnerships that respond to the need for Blue Economy workforce development training opportunities. [Report Blue Economy Community Leaders](#)

As we began the tour, they were pleased to receive College's response to [Report for College of Marin President](#) "Thank you for the report and your work to jumpstart the blue economy conversation in the Bay Area. I truly appreciate it. I have had initial conversations with my fellow presidents. The consensus is that we will take the lead on convening our workforce deans for a Bay Area consortium and have them report back on what the logical next steps might be for a (Blue Economy Climate Action Program) BECAP-like endeavor."

Dr. Jonathan Eldridge, President College of Marin

Estuary & Ocean Science Center Tour Highlights

Dr. Katharyn Boyer, Estuary & Ocean Science Center, Romberg Tiburon Campus

There's a lot of space here. We have a lot of beach front, we have deep water, and we have shallow shoreline, so the educational opportunities are huge. You could have educational events here. We have funding for a new restoration aquaculture research and educational facility. The old theater building could be a place where you could do history tours and marine biology tours. The stage and everything is still there, and we have ideas for how it could be earthquake retrofitted.

The barracks buildings were built as housing, and so to retrofit them for housing would be a relatively easy thing to do because it's keeping with the same use. It could be a place where people could stay for extended periods to work together and collaborate on Blue Tech projects.

People could depart off the rebuilt pier from the ferry. Once you have access from the water, there's all kinds of things that can happen here. We could have water taxis coming right in, ideally with an electric ferry. But there's a possibility for pretty large ships, since it's about a 30-foot depth out there. Once we have that, that opens the doors for many other things.

Public-Private Partnerships

- We partner with Cal Maritime, so having a waterfront like this could provide opportunities for training people to work with boats and in marine industry commerce.
- We have a stealth startup involved in marine transportation that is interested in leasing some space on our waterfront. They could be an anchor of this blue tech hub that we see starting here.
- We have funding to develop a pilot program recycling oyster shells from Hog Island Oyster's restaurants. We're starting an oyster recycling program: we need shells to build reefs for shoreline protection project.

- We work with youth from the San Rafael Canal, who will be involved in shell recycling programs with Hog Island. They would be trained to understand things like how recycled shell would be used in climate resilience projects, why we are collecting the shell, and why it matters. They will learn what coastal resiliency is all about and what jobs exist in that field. This population is mostly immigrant, non-English-speaking youths. They're mostly looking for jobs immediately, not necessarily looking to go on in school. In addition, we have a nature-based solutions educational pathways program working with 10 community college instructors to develop curricula and give hands on experiences that can help students get jobs in the blue economy.
- It would cost roughly \$15-20M to rebuild this pier. The existing pier is very good vertically, though probably not as good horizontally because it was built at a time when the technology didn't exist to go down through bedrock. They're four feet in diameter, go about 25 or 30 feet down there just into bedrock, and they're pretty strong. The idea would be to create a floating breakwater where you actually create habitats. It would create enough of a protected area to do small marine operations and some in situ aquaculture. We have to think about sea level rise. If we're going to rebuild, they're going to have to be raised to accommodate higher tides. We have to carefully think about what is built here and how to adapt to sea level rise.
- We have a \$5.8M grant from NOAA to build a new restoration aquaculture facility. It's on hold now, but I hope that we can still build that, because there's so much work to do in San Francisco Bay to restore native oysters and do living shoreline projects to create reefs for the purposes of habitat and shoreline protection. To restore native oysters, we can grow the adults so that they spawn, putting the seed oysters on the reefs to start the colonization of oysters on the reefs, instead of letting them just come in on their own. Oysters are a big focus, but it could be for abalone or bull kelp, too. It may be for an outer coast project, but we do see aquaculture being here in our future - a restoration aquaculture facility with classrooms, tanks for growing things, and lots of educational opportunities. There is a shell midden here, so we know that the Miwok did camp here. For oyster restoration and shell collection, I would hope that we can draw the interest of the local tribes.

In terms of opportunities at this site, the pier offers not only access to and from the water, but it can also provide a potential location for mooring nursery systems for shellfish, like the one we (and others in the shellfish industry) are using. This can provide direct access for students to learn the different stages of aquaculture species as they make transitions from land based growing systems (hatchery level) to the Bay (nursery and adult stages). The site would offer the ability for teaching students not only how to understand aquaculture, and help connect them to marine ecosystems, helping them to understand their roles in being a part of the ecosystem. **Re:** internships, Hog Island Oyster Co. has hosted successful internships despite the challenges of travel to our more remote regions.

Terry Sawyer, Founding Partner & VP, Hog Island Oyster Co.

Galilee Harbor, home to captains, divers, riggers and artists of Sausalito's working waterfront, benefits from the work done by Dr. Boyer and her team at this extraordinary living laboratory. We're hopeful the EOS Center can remain in the SF Bay and continue their research, which helps our community - and countless others - as well as offer workforce development training for our local business to thrive.

Brad Cornelius, Harbor Manager Galilee Harbor Community Association

Marine electrification, a zero-emission boatyard and a zero-emission marina for electric boats, could add revenue streams to the EOS Center that make it financially sustainable and establish the facility as a leader in zero-emission in the marine sector. One problem with the way humans colonized is 'this is my house and that's your house. You don't come into my house, and I don't go into your house.' Businesses work the same way. It isn't just about creating businesses that address the climate - it's how do we *not* silo ourselves? What if aquaculture had this area, and marine electrification had that area, and we share the field with clean water training. We don't have to do the same thing to identify the synergies. We just have to play in the sandbox together. They're completely interrelated.

Graham Balch, ZeroMar

The Blue Economy makes so much sense for Marin - and the Bay Area. As a business leader, we have an exciting opportunity to embrace our economic options; expand our offerings and provide jobs for local youth. It's a win-win-win!

Jack Sherwood, Sausalito