



## Interview with Kellie Fiala

### CBF's Maryland Oyster Restoration Coordinator

**As part of the end of the grant between Solar Oysters and the Chesapeake Bay Foundation (CBF), we interviewed Kellie to get her take on the work we have done together.**

**What is your role in CBF and how long have you been working there?**

I am the Maryland Oyster Restoration coordinator. My primary function is managing the volunteer activities and the Oyster Gardening Program. The Oyster Gardening Program consists of over 300 gardeners, people who grow oysters on private, community or public docks solely for restoration. I have been with CBF since 2015, working in various roles. I began in restoration, then moved to education, and then came back to where I am now doing restoration work.

**What has been CBF's role in this partnership with Solar Oysters?**

I believe the primary role of CBF has been providing insight, mainly on SOPS function for restoration. CBF has years of restoration work and experience as well as a good understanding of the aquaculture world.

**What was your individual role in this partnership between CBF and Solar Oysters?**

My role in this partnership is like my role at CBF. Our Oyster Gardening Program uses spat-on-shell, so my primary goal was making sure the spat-on-shell we provided Solar Oysters with was healthy and successful. We wanted to make sure the product we gave Solar Oysters was good to really test our SOPS to the best potential.

**How did the CBF first hear about Solar Oysters and what convinced you that it was a worthy partnership?**

Solar Oysters reached out to CBF early in the SOPS development. We wanted to make sure the SOPS could support restoration as well as aquaculture demands. We are happy to provide guidance.

It was easy for us to say we were interested in supporting the SOPS and Solar Oysters. CBF tries to support business and organizations that are trying to do things innovatively and this was clearly innovative, we wanted to get involved. We were happy to provide spat-on-shell and be a part of something that has never been done before.

**Did CBF provide all the spat-on-shell that have been grown on SOPS?**

Yes, all the spat-on-shell has been provided by CBF. For the first batch of spat-on-shell, we purchased larvae from Horn Point Lab (UMD) in Cambridge, MD. Oyster shells from our Shell Recycling Program were placed into 12-foot diameter tanks and then the larvae was set into the tanks. Spat-on-shell is a benefit because the oysters have something hard to set on. The Bay is currently experiencing a substrate problem, not enough hard surfaces for oysters to set on so they give them a leg, or shell, up by setting on a surface ahead of time.

The second year (batch), CBF was in a transition moving to their current center at the Smithsonian Environmental Research Center in Edgewater, MD so we directed Horn Point to set the larvae on shells themselves.

**Were oysters grown on SOPS a meaningful contribution to the oyster gardening program?**

Yes, the oysters have been a huge help. 356,600 oysters have been contributed thanks to Solar Oysters and the SOPS.

**How could this partnership have been more productive or successful?**

Overall, the partnership was successful. The benefit of working together is that we were able to gather a lot of good information on how the SOPS would work for restoration as well as aquaculture. UMBC grad-student Darryl Acker-Carter was able to study and document the growth, survival and look of the oysters over the 2 growing seasons which was an added benefit of us working together.

Solar Oysters contributed to the Baltimore oyster restoration work was also huge. It helped to exceed our expectations on how many oysters could be grown and then planted at Fort Carroll.

The number of oysters out planted in June was much larger than anticipated. The first year was a single set, 5 million oyster larvae per tank. The second year, because somebody else was setting up the tanks, they recommended 10 million. Solar Oysters was also able to work out SOPS kinks and problems with baskets.

**Do you think the SOPS is a worthwhile technology?**

Yes, I do. I believe that Solar Oyster has the most potential in aquaculture. SOPS being a self-regulating system has a lot of potential as aquaculture is a very labor-intensive industry. By using...

renewable energy and utilizing technology, SOPS is a good option. I am excited to see how the aquaculture world interprets the SOPS.

**What is the importance of CBF's oyster growing efforts? Tell us why oysters are important. Why do you use spat on shell?**

CBF's oyster restoration efforts stemmed from our goal of "save the bay." We know that saving the bay requires saving the oysters in the bay. Today it takes the oysters in the Bay over a year to filter the water, which would historically be filtered in less than a week. There aren't enough oysters out in the water, caused by overharvesting, disease, and a lack of understanding of how this keystone species repopulates. Humans have removed a lot of the substrate, meaning they removed the oyster habitat. CBF wants to get as many of the filters (oysters) as we can back into the water, as they are the best filters. They filter the water and take out what they want as well as packaging up what they don't want and providing food for the species on the reef. They are a keystone species. Spat-on-shell gives the oysters a leg up and CBF will typically plant in areas that historically do not have high oyster populations.

**Last week the oysters grown on the SOPS were out planted in the Chesapeake Bay. Why was the Fort Carroll location chosen?**

All Baltimore grown oysters are planted at Fort Carroll, on a designated sanctuary reef. Oysters are also planted near the fort because having the structure there is like a way of monitoring the oysters. In the rest of CBF's Oyster Gardening Program Reefs, we have reefs all around the state of...

Maryland. We typically plant oysters in the closest area to where they were grown or in water that has similar conditions to where they are grown. For example, oysters grown in Annapolis tend to be kept in Annapolis, as close to home as possible. This helps minimize the spread of disease and help with survival rates.

The sanctuary reef was designated through DNR as no harvest. If CBF wants to start planting in a new area, we would reach out to DNR and ask if there are any sanctuary reefs in that area. If not, then we will go through DNR for a permit for those plantings.

**Now that we are at the end of our partnership via the Abell Foundation grant, do you have any final words of wisdom for Solar Oysters? Do you see CBF working with Solar Oysters in the future?**

Getting feedback from industry partners is going to be huge. Hearing their improvement ideas. During the development of the product there was a lot of consideration about where improvements need to be made. I am excited to work with Solar Oysters in a different way. CBF and Solar Oysters are both members of the Chesapeake Oysters Alliance so I can't imagine that our working together ends here.

The feedback from industry partners is going to be huge. I also think that getting people informed and exited and Solar Oysters and SOPS will be important.

Thanks to Kellie and the CBF!