

November 6, 2017, oc110617.mp3
California Marine Protected Areas-5 years after implementation
Jennifer Stock, Cyndi Dawson

- Jennifer Stock: You're listening to Ocean Currents. A podcast brought to you by NOAA's Cordell Bank National Marine Sanctuary. This show was originally broadcast on KWMR in Point Reyes Station, California. Thanks for listening.
- Jennifer Stock: And welcome to another edition of Ocean Currents. I'm your host, Jennifer Stock! On this show, we talk with scientists, educators, fishermen, explorers, policy-makers, ocean enthusiasts, authors, and more. All uncovering and learning about the mysterious and vital part of our blue planet the blue ocean. We bring this show to you monthly from NOAA's Cordell Bank National Marine Sanctuary, one of four national marine sanctuaries in California while working to protect unique and biologically diverse ecosystems. Just off shore of the KWMR listening area on the West Marine coast of the Greater Farallones in Cordell Bank National Marine sanctuaries which protect 4,581 square miles! In addition to the four federal national marine sanctuaries in California, that are managed by NOAA, , that we have habitat protection such as "No oil and gas exploration for drilling," the state of California has a system of marine protected areas within the zero to three mile off shore mark of California. In 2012, California completed a science-based state holder-driven process to designate 124 marine protected areas. Also, you may have heard their term, "MPA"s, that cover 16% of state waters. And the network consists of areas that have various levels of protection and include some reserves that prohibit all take. Just as our nation's parks and wilderness areas protect special places on land, California's MPAs protect a wide variety— a wide array of habitats, species, and special places underwater in the state of California! So today, we are going to check in and find out how these MPAs are doing. , since five years after the final implementation of this network up and down the coast, my guest Cyndi Dawson works as the marine protected areas' lead policy advisor at the California Ocean Protection Council, part of the California Natural Resources Agency. So, I'm thrilled to welcome Cyndi to KWMR. Welcome, Cyndi, you're live on KWMR!
- Cyndi Dawson: Thanks Jenny, it's great to be here today and thanks for having this topic on your show!
- Jennifer Stock: Because you're with the state of California, and I'm not sure many people are very familiar with the California Ocean Protection Council, can you just give us some background? What the role of this council is for the state of California?
- Cyndi Dawson: Sure. So the California Ocean Protection Council was formed in 2004 with a piece of legislation called the California Ocean Protection Act. And really, what that comes down to is legislators were really looking out onto the rise and then thinking about ocean management and California's role in being a leader in coast and ocean protection and coordinated ocean management. And what the act basically said is, they were looking to the rise and understanding that, making coordinated decisions about our coast and oceans were getting increasingly more complex. And so they formed the California Protection Council in order to make sure that we have coordinated decision-making among state and our federal partners, for coast and ocean decisions. So, making sure that the department of fish and wildlife and state lands and coastal commissions and some of the other agencies that have jurisdictions or mandates that , overlap on the coast, that we were all making coordinated

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decisions. So the Ocean Protection Council itself, is made up of some designated members that were in the legislation, so we have the chair, which is the secretary for natural resources, which is John Laird, currently. we also have an assembly member in a senate, senator, we have two public members . And then we also have the secretary for the California Environmental Protection Agency and then we have a rotating seat that rotates between the controller and Lieutenant Governor. And we at the Ocean Protection Council, we staff the council itself. And then our executive director, of the Ocean Protection Council Deborah Halberstadt also has a dual role as the deputy secretary for Coast and Ocean policy in California. So, that's a direct line, through the secretary of natural resources to the governor to make sure that we're having coordinated decisions both inside the council and then that those policy decisions cascade across agencies.

Jennifer Stock: Fantastic, I love that role of collaboration and integration in making sure everybody is well informed of what's going on. Do you know if other states — especially here on the West coast have protection councils like, modeled after California's?

Cyndi Dawson: So, Oregon actually does have an Ocean Protection Council but they actually serve a little bit of a different role. They were created certainly in a coordination collaboration role. But they also had more of a focus on trying to leverage resources to bring resources, , into government to help them with coast and ocean management. Oregon actually has a system which is different than a network. A network is usually designed to be ecologically connected. In Oregon they have five marine-protected areas that were, spread across their coastline and they're actually on a similar trajectory than we are. But their Ocean Protection Council plays a little bit of a different role.

Jennifer Stock: Got it. So speaking of eco-connected, it's been a long haul to complete the implementation of the MPAs throughout the state of California and it's been five years since the Final ones went into effect on the North coast. What have been the priority activities post-implementation by the state of California in terms of the steps after the final implementation?

Cyndi Dawson: Well I would say that, you know the— the primary focus has been to create a transparent and very robust marine-protected area management program so there was a long process to designate and design that was rooted in science and state-holder driven. And then, if you look at the literature, in order for any MPA to be successful, but certainly a network of the scale and scope that we have in California, you have to have a robust management system. So this focus has been to form a management system and we have one in California that has four focal areas. , we have a outreach in education, enforcement and compliance, research and monitoring, and policy and permitting. And I would say, out the gate, a lot of focus went into the outreach in education and research and monitoring. And I can talk a little bit about what we did in each of those areas. , so, for outreach in education, you know, we needed to get the word out in ocean users and the Ocean community, that these marine-protected areas were going in, and they were being implemented. And then also telling the public about why you would choose to use this marine

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management tool and some of the ecosystem-based goals of the Marine Life Protection Act which was the legislation that was a bit the reason that we had a network— a redesigned network. So, ... in the— in the research and monitoring space, we, upon implementation, we invested over \$60 million coastwide to collect baseline information so that we were able, we're gonna be able to track change over time. So across the ecosystems, different habitats, say, on beaches, intertidals, subtidal, deeper reefs, we actually put \$4 million in each region, the North, the North central, central and South, to do very comprehensive study to determine what was happening at the time this management tool went into effect. And that's gonna allow us— we did that both inside MPAs, and outside in similar reference areas. So what that's gonna allow us to do over time, is see if the MPA, if the systems inside MPAs act any differently than the systems outside of MPAs.

Jennifer Stock: Can I ask a quick question about that? So I understand during the time of starting this baseline monitoring we were experiencing some pretty weird events that were pretty out of the ordinary with this extreme warm water event. How do you establish baseline during a pretty odd situation in terms of the conditions in the water at the time?

Cyndi Dawson: So that's a great question, and actually we were just up on the North coast, like week sharing with the community the results of the baseline monitoring up there since the North coast was the last region to go into implementation. And, when we use the baseline it seems like it would be a really strange thing to call baseline when we know we had anomalous conditions that hadn't been seen in a lot of places ever, both in the ration and amplitude— how, how extreme they were and how long they lasted. But what's really interesting about trying to determine the effectiveness of MPAs is that, the, around the globe how people do that is they monitor inside an MPA and outside an MPA and they track change over time. So even if that first dot on your graph, that you're going to track through time, happened in a year that wasn't like other years, both inside the MPA and outside the MPA experienced those conditions. And what we're trying to determine in the state and really around the world, people are trying to determine the effectiveness of MPAs. Is this: you remove or reduce fishing in a certain area, how does that chance the ecosystem? So because both inside and outside the MPA experience those anomalous conditions, we're still gonna be able to hopefully disentangle if the MPA is acting differently as they recover or they move into maybe this different state of being. we're gonna be able to see if the MPA does that in the same way that the areas outside the MPA does. So, although it seems like it's not a great plan, I think we're actually set up in really good shape to try to figure out what these things are doing moving—moving into the future.

Jennifer Stock: So more of a long-term thing.

Cyndi Dawson: Well, absolutely. You know, in temperate ecosystems we know from the data that we have from around the world, but also from our own marine-protected areas, that it takes a while. A lot of temperate species live quite a long time and so we do have some data from the Northern channel islands that actually went into effect in 2003. And from the reserves there, Dr. Gene Cassel, part of UC

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Santa Barbara and the partnership for interdisciplinary studies of coastal oceans or PISCO, they did some work in the Northern Channel Islands, and after 10 years, they actually saw just in that amount of time, that, the species, especially the fish species inside the marine-protected areas were, , there were much more of them, as well as they were larger. And so we also have data— similar data from Rick Stars work out from Point Lobos. And that MPA has actually been in effect since the 70s, and so we know as the water, as you move up the state, the water gets colder, and the species are a little bit more long-lived, it's probably gonna take us a while to see an MPA effect either way.

Jennifer Stock: Right. So you talked about education outreach, baseline monitoring, enforcement. What were, what's some of the ways the MPAs are enforced?

Cyndi Dawson: Well the Department of Fish and Wildlife , has the main management authority and enforcement authority for the marine-protected areas. State parks also does play a role in that. And so , again if you go to the literature, a big part of having successful enforcement is having actually very robust outreach. And so we've had some projects that, we're in the process of actually having a second round of signs put out statewide. letting people know the regulations, "You are here" signs, , brochures, that people can pick up at bait shops to know when, what they can and can't do where. , as far as the only round enforcement that— that's wildlife officers from the Department of Fish and Wildlife. And we work with them pretty regularly , to look for , all kinds of ways to maximize the resources that we have, which includes , a records management system so things are computerized so that they can identify hotspots and deploy resources accordingly. , we also work , to, , with the wardens to help ensure that the boats are good work— in good working order, so they can get out on the water. Then we're also in the process of working with parks to figure out how we can support , their rangers in enforcing marine-protected area , regulations throughout the state. So, , again for the MPAs to be successful on the ecological side we have to have this robust management o-on the enforcement and the outreach and all these other components to, to make sure we can be successful on the ecological side.

Jennifer Stock: So the MPAs are— that's a very broad term, there's so many different types of marine-protected areas, including sanctuaries. The, the network that's been set up have four different types. There's State Marine Reserve, State Marine Conservation Areas, State Marine Recreational Management Area, and Special Closures. Is there any difference in terms of how these are monitored over time, or how different, , priority area— priority management goes towards each of these and can maybe, can you just briefly describe the difference between each of these designations?

Cyndi Dawson: Yes. So the Marine Managed Area Improvement Act is sort of what kicked all of this off in 1999 and that was before the Marine Life Protection Act and what that Marine Managed Area Improvement Act did is in the state, at the time, I can't remember the exact number, but there were well over 30 different kinds of protection designations in the marine environment. And obviously that was very confusing to ocean users and very confusing to agencies and so what that act did is basically cut it down to the list that you just, , went over. And, really,

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when you talk about state marine-protected areas, , the easiest one to pull out is a State Marine Reserve. And that is known and colloquially as a no-take reserve. Meaning that , you can dive and swim and boat, but you can't take any resources. So you can't take any shells, any geological, any cultural or living resource out of that area. So that's a no-take reserve. , we also have State Marine Conservation Areas, and it's, those are the easiest way to think about those is , they allow some types of fishing, , but they are location specific. So each State Marine Conservation Area can have different regulations. So for instance, the process, you know, state holder said it was really important for us to be able to fish Salmon here and Salmon are kind of a transient species that move in and out of MPAs, they don't really spend a lot of their time in MPAs. So, a State Marine Conservation Area could maybe allow for Salmon fishing, but would preclude fishing on the bottom or something like that.

- Cyndi Dawson: So I think the easiest way to think about California's network, is really we kind of have two types, we have one where you're— which is a reserve which is a no-take, and then we have these conservation areas, with rules, different rules about take and that's based on the location and it was— and part of the sign recommendations. And the SMRAs, the State Marine Recreational Areas. State Marine Parks. They really are just kind of a type of state marine conservation area, so for simplicity I would just think of two— California's network having two really main types: is that reserve, and then that location specific , take of a conservation area.
- Jennifer Stock: So, like a recreational management area may not have regulations regarding take in them?
- Cyndi Dawson: No, they do absolutely, a lot of them actually have waterfowl hunting. So they have rec— , regulations specifically for that type of take, but they actually may preclude all type of, sort of "marine", under the water, marine-life take. , it's very MPA specific as far as those go.
- Jennifer Stock: Got it. Basically, four types of reserves. Which one of these are— do you think are the hardest for people to understand in terms of getting what they can and can't do? Or what's been the hardest on the enforcement angle so far?
- Cyndi Dawson: Well I think that certainly the conservation areas are more of a challenge , well I—I speak just across the board to, scientifically to enforce and also for just for the public. But they play an incredibly important role within the network and so there—there's certainly a reason why they are there. One of the directives from the Marine Life Protection Act is that , this network is to be used as a living laboratory to help us better understand how the ocean works. Not just for adaptive management for the marine protected areas, but also to help us in the state understand other priorities like sustainable fisheries, climate impact. And so having different levels of protection, which is what the State Marine Conservation Areas do, sprinkled in with reserves, which are no-take, , is really important scientifically to help us understand just how ecosystems respond to different management actions. so they're—they're a really important part of the network, but they're also a little bit apart that people, you know we've

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had to work harder to make sure that people understand what they can and can't do where.

Jennifer Stock: For folks tuning in, this is Ocean Currents and my guest today is Cyndi Dawson. And she is the lead policy advisor at the California Ocean Protection Council regarding marine-protected areas. So, there was a lot of mixed emotions by ocean users about the MPAs during the process that was very transparent and very open. There were a lot of meetings. What do you think the perception of them is now?

Cyndi Dawson: Well you know I think that its variable. Certainly we are huge state we have over 1100 miles of coastline you know one of those things that the baseline monitoring did which were just wrapping up now is that we went on listening tours and had community meetings in each region and we really reached out to consumptive users or fishermen who were most affected by the marine protected areas to make sure they understand that the state was doing what we said we were going to do. We were going to put these in and we were going to monitor them to see what the effects of the MPA network are and you know I would say just generally speaking it's kind of new on site. I there are a lot of fishermen both on the recreational and commercial side that certainly have really big fears about these really affecting their ability to fish and I think some of those fears over time have been sued by the science because one of the key components is each of the reasons for the baseline was socioeconomic studies. So there were socio economic studies of the fisherman revenue streams and how they run their business, also on recreational fishermen about how many trips a year they do, and those kind of things and you know, generally speaking we haven't really seen any negative impacts from the MPA's. That said it's still early days and the state is committed to continuing that socioeconomic work. In fact, we just closed a call for proposals on the 3rd of November to have scientists help design ongoing monitoring for socioeconomics across the state. So it's something we're committed to doing and I think it's a huge component of continuing to communicate with the ocean users, especially consumptive users, to make sure it's really transparent and they can see what these are doing and they can make their minds up for themselves.

Jennifer Stock: Along those lines, the state acknowledges the role of traditional knowledge quite a bit throughout the MPA network. How does the state work with Native American tribes in California through this process?

Cyndi Dawson: Yeah that's a great question. Again I just got back from the north coast at the end of last week and the north coast was actually the first region in the base line where the states funded a traditional ecological knowledge project. It was actually, not sure the exact number, but it was over 15 different tribes took part. They did archival research and research with elders to identify spices of importance for them and then also their perceptions of how the health of the species has changed over time so really exciting project and something that the state is obviously very much committed too. So we have participation from tribes in the local marine protected area collaborative and those are groups that are roughly associated, there are roughly 14 groups, that are associated with

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coastal counties that bring together city government, tribal government, local state and federal agency staff that are on the ground locally and community members, to help the state make sure we're not missing anything and that we have local priorities funneled up as we're making these statewide plans and so we have tribal participation on those and we're also in the process of getting tribes nominated to the MPA statewide leadership team which is coordinated body up in Sacramento that has 12 state federal agencies on that to make sure, again, were making coordinated decisions about MPA management. So, you know, it's something we've definitely put some energy into and we're committed for the long haul because of the scale and scope of the MPA's, you know, for us to be successful and for them to meet their ecological goals we have to have partners and, you know, the tribes have been here longer than anybody, so their a key partner for us to be successful.

Jennifer Stock: What are some of the projects these MPA collaboratives are doing? I've heard about the one based out of Bodega Bay and maybe that's the north central one? I'm not so sure, but what are some of the activities these MPA collaboratives are doing? Because it seems like their real link to the local community, in terms of people who live there, but also people who work with people that come here and use these waters.

Cyndi Dawson: Yeah absolutely they really are critical to the MPA management program so they're roughly county based, the Bodega one is probably the Sonoma collaborative and they've had a lot of focus on the outreach and education, again, you know we have over 1100 miles of coastline and so they've been on the ground and they were the first one to really help us identify the need for signs, the need for brochures and certain kinds of signs and certain kinds of brochures, right?

Cyndi Dawson: The state from the very beginning had been putting out educational material but what the collaboratives bring that's really invaluable to the state is that local perspective of how the local community wants to receive information and also to make sure that the local community priorities are part of the discussion that the statewide planning level so that we're not missing those on the ground knowledge voices and expertise and we're making sure to leverage that knowledge and make sure that we're, the resource that we have, that we're investing them very wisely and meeting the needs of the community that are right alongside these MPA's. So they have, I've mentioned signs and brochures, they've also made videos educational videos that some groups, like San Luis Obispo, have got on sort of on the hotel TV's that run loop when you walk into the hotel. They have MPA videos on down there the Golden Gate collaborative has done this MPA ambassador program, where people, taking people out on the bay go through a little bit of a training so they can talk about MPA's to their customers or kayak groups that rent kayaks those kinds of things. So, they really are a huge part of us getting the word out and helping people understand why these MPA's are out there and what they can, and how they are part of the ecosystem and our management in California.

Jennifer Stock: That's great. It's great to hear all these different levels of leadership collaborations and community collaborations and bringing in all groups of

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people into the ongoing conversation, this is an ongoing network for the future, so the more people involved the better. We just have a couple minutes left and because there are so many different tools and publications out, what tools or resources would you recommend people checking out to, to find out- suppose they're fishing, what's the number one place you should absolutely check to make sure they know what's going on before they head out to a certain place?

Cyndi Dawson: So the best place, and the department has done some work to make this really accessible, the department of fish and wildlife webpage, which is wildlife.ca.gov and you should be able, I think one of the main tabs on there says Marine Protected Areas, so that is going to have the latest regulatory information. They also have an app, that has a California MPA map that has those regulations but I would say that the department of fish and wildlife website is the first stop to go to, too make sure you have the latest regulations because, the part of the MPA network was adaptive management and you know although it's going to take us a little while to figure out exactly what these MPA's are doing ecologically, even in the short period the network has been established we've made small changes to the regulations to make it clear for boaters when your inside and outside (the MPA's) making the GPS markers clear. So that's one place, I would also go to oceanspaces.org and that is a place you can check out all the latest and greatest science in some really accessible formats and those are some great places to go check out what's happening with your MPA network.

Jennifer Stock: That's great, Thank you so much Cyndi this is awesome. I feel like I'm a little bit more aware of what's going on in terms of the intricacy of continuing this network and monitoring it and making sure that the ecological outcomes are the best that possibly can be. It's such a dynamic time in the ocean right now and it's kind of cool to realize there's this opportunity to study these areas too to see when we take off some pressure of certain areas, how well they respond to these big changes that were seeing with warming and acidification and all these odd harmful algal-blooms and what not so, thank you for your good work and thanks for all this information today about the state MPA's!

Cyndi Dawson: All right well thank you so much for having me and make sure you and your listeners check out those web resources because we've got a lot of information coming in everyday about your MPA's and we need you to be informed and active so we can see what these things do in the future.

Jennifer Stock: Thank you Cyndi, have a great afternoon!

Cyndi Dawson: Okay, you as well thank you, bye.

Jennifer Stock: We've been talking with Cyndi Dawson from the California ocean policy council, and she's the lead policy advisor for everything about the state MPA's and it's great to hear kind of an overview. It's been five years since the last one (Marine Protection policy) was put into place and this network up and down the coast of northern and southern California and a lot of different types of monitoring are happening, socioeconomic studies are happening and it's a really good opportunity to learn about how communities evolve as we try to protect some of these really important, special habitats and species, along the coast in state

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waters. So check out wildlife.ca.gov for more information online and oceanspaces.org and there is an app about the California MPA's too, if you happen to be wanting to go out fishing. It's important to know these things before you head out. We're going to take a short break this is KWMR in Point Ray's Station, you're listening to Ocean Currents.

MUSIC PLAYS

Jennifer Stock: Alright last but not least, we always have a very full episode here on Ocean Currents where every minute counts and I would just like to say thank you too Liz Fox for producing Positively Ocean, she's a volunteer and she works out of Berkley producing a story each month about featuring a positive story about the ocean. So stay tuned here for Positively Ocean produced by Liz Fox.

Positively Ocean Episode- How the ocean helps heal and calm/Blue Mind Produced by Liz Fox

Liz Fox: Hi, this is Positively Ocean where we celebrate the ocean and look at what's working well, I'm Liz Fox. Typically this segment is all about the people who work to improve the ocean but this story is different. It's about how the ocean can help us. Last month wildfires devastated families, incinerated neighborhood and rocked communities to their core across Northern California. The devastation in many cases was complete, lives lost, houses leveled and businesses burned. While firefighters squelches the last flames a few weeks ago, first responders took their first breaks, park rangers coordinated social services and families whose lives were on hold made their way to Doran beach on the Sonoma coast. They all knew inherently that the ocean could help them reset and as people pick the fractured pieces of their lives and begin their after the fire chapter the ocean can tend to them, wave after wave after wave. Tara Carpenter works at Cal Fire air base where she spend the previous eleven day's mixing water and powdered flame retardant and then filling the air tankers that dispersed it. This was the first thing I was looking forward too when I got a day off, this is my first day off so this is exactly what I wanted to do.

Liz Fox: Carpenter grew up in Bodega Bay where her family works in commercial fishing, recently she's taken up poke polling as a hobby. With a long bamboo garden stick she prodded Cabazon from tide pools in crevasses with a very zen goal.

Carpenter: Sometimes I just come out here to, not even the hoax of catching, but just relax, it's very relaxing.

Liz Fox: And science backs up what carpenter and her family know from generations of ocean experience. In his book, Blue Mind, Marine Scientist and writer Wallace J Nichols dissects the combination of the oceans elements and the impact on our brains and bodies. The full sensory experience of being in, near, or on water calms and resets people's abilities to cope with stress.

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- Wallace J Nichols: The ocean really is medicine, it makes our bodies and our minds work better. There's an important role, not just in immediate urgency and sort of aftermath of trauma and disaster, there's that role of the ocean and our water but it should have a long tail. I think there's also a roll in returning regularly and hitting that rest button because the work that comes after any kind of loss and trauma is hard, it's relentless, it requires creativity and a lot of attention.
- Liz Fox: During the crisis, Sonoma county and California State parks recognized peoples need to be near the ocean. They waived fees connected, evacuees with in town services and shuffled non emergency reservations. Chris Troutner, a park aid at both park systems, was stationed at the Douran Beach kiosk.
- Chris Troutner: They can just be twenty cars deep of a line you know. If I see kids in the back with masks on I just wave them through immediately and just tell them, Hey we're just going to do what we can to get you in there and get you somewhere that's a little easier to breath.
- Liz Fox: Troutner said the ocean was a safe, familiar place for people who are able to escape the flames or smoke in their RV's or campers.
- Chris Troutner: I think when you have to go to a shelter it kind of adds to the harshness of the reality of your situation, like to stay in an auditorium on cots. Coming out to a campground, especially if you have young kids, it can just like going on a vacation. Especially if they've come here before it's so familiar.
- Liz Fox: The parks offered temporary places to stay, the ocean will continue to calm those who seek it in the long run, and surprising transformations can continue to happen at the ocean. Nicholas describes in his book when groups of struggling veterans participated in group therapy sessions they learned about ocean conservation. Many found new meaning in life by becoming ocean advocates. Nichols said that people in northern California can apply the same concepts to their recovery.
- Wallace J Nichols: That may seem unusual in the face of such loss to say well, you should give back, but getting out of yourself and your own loss and putting yourself in a position of service and purpose is one of the best ways to get through this kind of trauma. So the ocean needs us, and we need it and making that connection it's been a while and this is a really good idea and then taking somebody with you is a really good idea.
- Liz Fox: And that's an example of the ocean doing right by us. Until next time, I'll be searching for all things positively ocean. For Ocean Currents Radio and KWMR, this is Liz Fox reporting from Bodega Bay, California.

MUSIC PLAYS

- Jennifer Stock: Thank you Liz Fox for producing another highly relevant topic of Positively Ocean and still very raw in our hearts up here in the north bay. I can definitely account for the role of the ocean for calming us quite a bit, I was out here in West Marin during those fires and meeting a lot of people that were fleeing to

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the ocean that specific day and it was really interesting interacting with people and really important to be near water, so thank you again Liz for producing Positively Ocean. Well we're at the end of the show and Ocean Currents is always the first Monday of every month, one to two and you can hear past episodes through the podcast which is available at cordellbank.noaa.gov and Ocean Currents has a twitter feed you can follow at (@OceanKWMMR) to get info about this program and supporting links on the web about each episode and topics we cover on this show. I love hearing from listeners so if you have any ideas for topics, questions, comments please email me at cordellbank@noaa.gov or Tweet @OceanKWMMR. Thanks so much for listening enjoy the ocean, bay or whatever body of water you can get into safely, this has been Ocean Currents here on community radio for West Marin KWMMR.

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