
Jennifer Stock: You're listening to Ocean Currents, a podcast brought to you by NOAA's Cordell Bank National Marine Sanctuary. This radio program was originally broadcast on KWMR in Point Reyes Station, California. Thanks for listening!

(Music)

Jennifer Stock: And welcome everyone. This is Jennifer Stock and I'm your host for Ocean Currents. On Ocean Currents we delve into the blue, watery part of our planet and highlight ocean-related topics. We talk with scientists, educators, explorers, policy folks, ocean enthusiasts, ocean adventurers and more all trying to uncover and learn about the mysterious and vital part of our planet. 2010 marks the fifth year that I've been hosting this show on the air on KWMR and my original intent was to help raise the awareness about ocean-related issues in our local national marine sanctuaries and I just want to thank those of you that tune in regularly and listen.

I've heard from some of you via email just to let some local folks know, I've heard from folks throughout California. I've heard from Ohio, Florida, New York, and Illinois. so, I want to say thank you for your continued support. I bring this show to you from NOAA's Cordell Bank National Marine Sanctuary which is one of four special areas in California waters that are part of the national marine sanctuary system. Cordell Bank Sanctuary is located just offshore of the KWMR listener radius off the Marin-Sonoma Coast. So, we're right here, part of this local network here.

So, we have a lot going on today. I have a lot to announce and I have a guest live in the studio and I have later with me, a filmmaker from San Francisco, Nancy Iverson, who is going to talk about a film that she helped put together and helped lead the program that the film is about that'll be debuting at the San Francisco Ocean Film Festival next weekend. So, stay with us towards the end for that. We'll be updating you on the film festival. So, today in the studio, I have Bill Douros, who is the West Coast Regional Director for NOAA's National Marine Sanctuary Program and we'll be talking about how we collectively manage and plan for ocean uses, specifically here in California. So, please stay with us. We'll be back in a minute.

...and we're back. You're tuning into Ocean Currents. My name is Jennifer Stock and today I'm pleased to welcome Bill Douros, who is the West Coast regional director for NOAA's National Marine

Sanctuary Program. Bill grew up in the Bay Area in the East Bay and studied marine ecology at the University of California in Santa Barbara and after working with the Santa Barbara County Planning Department in a division that regulates oil and gas in southern California, Bill worked his way up the coast to the Monterey Bay National Marine Sanctuary where he was a superintendent who oversaw all operations, regulations, programs, and protections for the largest sanctuary in California and for a long time, the largest sanctuary in the entire program.

He has 25 years of experience on coastal policy and planning issues in California and is joining us today in the KWMR studios. So, bill, welcome to West Marin.

Bill Douros: Hi, Jennifer.

Jennifer Stock: How are you?

Bill Douros: I'm doing really good, thanks.

Jennifer Stock: You had a nice drive up the coast today?

Bill Douros: Yeah. Well, it's almost always a nice drive and I timed it right so that I didn't hit any traffic. It was a beautiful day.

Jennifer Stock: It must be nice when you get to drive up here. You can reflect on all the opportunities to protect this coast since that's a large part of your role here on the west coast. So, I'd like to just start talking a little bit first about some of your earlier days before you came to the sanctuary program because I think it's kind of an interesting point of contrast for what you're doing now and you worked with the Santa Barbara County Planning and Development within the oil and gas division and what was your role there and what standpoint were you coming from as a marine ecologist trained locally there?

Bill Douros: Yeah, so, Santa Barbara County has some of the largest offshore oil and gas reserves anywhere in the United States and, in fact, outside of the Gulf of Mexico, it is the largest offshore production area in the United States and oil and gas development has been going on there for about 100 years. It started...the first offshore oil well was at the end of a pier in Summelin, which is just south of Santa Barbara.

So, there's been oil development there for a very long time and the federal government leased the offshore areas and the state of California leased the near shore waters, 30, 40, 50 years ago for development and the county made a strategic decision, the board of supervisors did, about 30 years ago that they felt like they weren't going to be able to keep all the oil development, to prevent it.

It wouldn't be able to block it. So, they made a choice that they would allow some to take place, provided that the country could regulate it in terms of the air quality emissions as well as permits for all of the on-shore facilities and so, the division I started wiring at in 1985 was that division that regulated the oil and gas projects that were there offshore and I started as an intern and eventually worked my way up and was running the division for about seven or eight years and it, by and large, in my view, worked as a strategy because it wasn't unfettered development and the development that did take place was incredibly controlled.

The oil industry might say too controlled, but there were no major oil spills, haven't been since that time, the pipelines that were built had 10 to 1 mitigation for oak trees that were cut down. The oil was shipped out, by and large, by a pipeline rather than marine tanker, which is far more risky. So, that strategy, by and large, paid off for the county.

So, I entered it, as you said, as a marine ecologist. I went to UC Santa Barbara and I was very concerned about those issues, but again, it was an opportunity for a job, which everyone faces when they're leaving college and in our case, it was a very environmentally conscientious county and the staff as well and really, frankly even most of the oil companies we worked with also had a very strong environmental conscience to them. They did not want to develop and leave sort of a scar on Santa Barbara County and that worked, collectively.

Jennifer Stock:

Oil down there, there's natural seeps that are seeping oil. I've been out there on the water and you just smell it and in a way, you just know that oil is here and how do they control that? We won't talk about oil for this entire day, but I'm just curious from the seeps, is that something they naturally try to harvest in terms of keeping it local?

Bill Douros:

Yeah, in fact, one of the companies there, it was at the time ARCO, Atlantic Ridge Company, and now I believe it's Veneco that owns a structure that ARCO designed and put in that would

capture the gas that was bubbling up as one particular spot near UC Santa Barbara in Isla Vista and that had a benefit in two ways. They could actually capture the gas and the liquids that come off of that and sell those as a product, but they were also able to get credit for reducing the air emissions that comes from the seeps in order to go and build other projects later on.

So, that's the main project that captured the seeps that were there and there are still, to my mind, an open question to whether oil development accelerates or decelerates the seeps because they do take pressure, when they develop oil, out of the reservoir and the oil and gas is coming up from roughly the same place that they're developing with a well. So, when you take the pressure away, you reduce the flow out through the rock formations.

On the other hand, there have been, I think off Santa Barbara it's been basically static. They've been developing oil for a long time. There's likely no more or no less than they would have seen otherwise. So, we have other seeps around the coast, Ano Nuevo down in Santa Cruz county, San Mateo County have seeps that are there too, not nearly as big as the ones off Santa Barbara, but it's a very interesting aspect of the formation that just happens to exist in that particular area.

Jennifer Stock:

Yeah, it affects the geology of the area. So, what brought you from the oil, gas world to the national marine sanctuary program, which is trying to keep oil away from our coasts.

Bill Douros:

Yeah, I often joke with friends that when I was in Santa Barbara, I worked for the local government trying to urge the feds offshore to do the right thing in terms of their development and since coming to NOAA, twelve years ago or so when I was the Monterey Bay superintendent, I was a fed trying to urge the locals to do the right thing because the sanctuary program, some sanctuaries, some national marine sanctuaries come to the shoreline, come to the high tide line, and they don't have... we don't have management authority over what happens on land, but we do work with local governments, cities, and counties, and state agencies, and state parks and what not, to try to get them to do the right thing in terms of how they operate activities on land that could have an effect on the ocean, but I came up here just because it was a new opportunity.

It was a new challenge. I have been working on coastal planning issues and resource management issues for a very long time in

California and I personally appreciate the diverse experience to work on purely ocean issues when that was what my years in college were all about was probably a big part of the draw too, not that I do much marine science now, but I get to dream about it and there's staff that do a lot of great marine science.

Jennifer Stock:

You support it for sure. That's wonderful. Let's talk about the whole scale of management here on the west coast because the west coast national marine sanctuaries, I should clarify, start in the Channel Islands National Marine Sanctuary, which is off the coast of Ventura and Santa Barbara and then there's the Monterey Bay, Gulf of the Farallones, and Cordell Bank sanctuaries that are contiguous here in central California and then the region jumps all the way up to the Pacific coast up off of Washington, the Olympic Coast National Marine Sanctuary and a lot of times, we use the word ecosystem-based management in terms of how we manage these areas, but I'm wondering if you can try to explain what that means?

Bill Douros:

Yeah, so, ecosystem-based management is a holistic approach to addressing broad-scale issues that happen in an ecosystem. It requires that managers consider cumulative impacts, those impacts that can take place, it might be very small individually, but when you add it up across dozens or even hundreds of activities can have an impact on an ecosystem. It also requires that we consider the human aspect, the human dimension of the ecosystem. For instance, it's a very appropriate thing that we fish in the ocean.

We try to catch sardines, for instance, something like a common fish caught here throughout central California, and yet, fishery managers need to leave behind enough sardines for the humpback whales that are here depending on them, for salmon that feed on the sardines, seabirds that feed on them, and so, that integrated management aspect of the human dimension and humans, sort of, get a cut of the ecosystem, but also what the rest of the ecosystem needs is part of, in my mind, what ecosystem-based management is all about and the third thing that I think is an integral part when you're talking about marine systems is you have to understand the connections between land and sea.

What are the pollutants that are coming in and where are they coming from? Is it agricultural operations or maybe it's city, runoff from urban areas and parking lots, or perhaps, it's harbors and marinas? And so, that integrated aspect...and that was just one aspect of the land-sea connection, right, was the pollutants. It

needs to be part of a holistic approach to assessing and managing the ecosystem.

Jennifer Stock: Do you think that collectively, amongst the agencies now, that we're doing ecosystem-based management well?

Bill Douros: Well, no. I don't think we're doing it well. I think we're doing it amongst the agencies and there's, I think we're blessed here on the west coast with an incredible level of cooperation among state agencies working with federal agencies and federal agencies working with each other on ocean management issues, in particular. The governors of Oregon, California, and Washington signed an agreement called the West Coast Governors Agreement that coordinates their activities on among 7 or 8 issues and coordinates with federal agencies on those same issues and that was an easy thing, I think, for everyone to get behind because who wasn't for lots of improved coordination and collaboration?

But that's, in some ways, has got to be one of the early steps in creating, ultimately, a truly integrated ecosystem-based approach because these regional scale problems are probably the right scale for ocean issues to be dealing with. You know, the water's been moving back and forth and maybe you could manage a national park on land by looking at just the park, but even a terrestrial park manager considers the broader regional ecosystem in making their decisions too.

Jennifer Stock: Yeah, especially with the migratory species. It's a huge deal. For those just tuning in, this is Ocean Currents and my name is Jennifer Stock and we're talking with Bill Douros, who is the west coast regional director for NOAA's National Marine Sanctuary Program talking about the big, broad application of management here on the west coast and how do we do this? And one of the key terms that's been emphasized a lot recently is this term, which is almost a spinoff of this ecosystem based management, I think, called marine spatial planning, which isn't really a new concept at all, but it really is about how we plan for specific uses in the ocean because we need the ocean for our survival here. Can you compare a little bit about some of land zoning and marine zoning and what are some of the marine spatial planning challenges that you're experiencing here on the west coast right now?

Bill Douros: So, the new NOAA administrator, Dr. Lane Luchinko, who comes from Oregon State University and she's been running NOAA now for about a year, not quite a year, this is one of her initiatives and

the Obama administration's initiatives to increase the level of marine spatial planning on the ocean and as we talked about a minute ago, as a planner in my past life, I'm really drawn to this issue in that I worked for a planning department with the local government for 13 years.

This, to me, strikes me as something that's obvious to do and yet, not nearly in the same way that we zone land, right? Zoning on land is parcel by parcel. It might be 10,000 square feet. It might be 10,000 acres. So, you have really big and really small and there's an ownership issue on land that doesn't exist offshore. The goal with marine spatial planning offshore is not to replicate the land based approach, but to pull some of the key elements from it. Community involvement in how you make decisions about what happens in the ocean, connecting science and scientists to decision-makers, to understand what's there because the ocean is quite a bit more challenging.

It's not just the blue waves or the white wind-induced white caps you see. There's a heck of a lot going on under the sea that's very difficult to observe and so, you need science information to help you make those decisions and then it's bringing in geospatial tools, GIS or other tools, that can help you visualize decisions that you have to make and visualize data that tell you what's going on in a particular area and with these brought together, the community, the science, tools that help you envision things, you can create a framework that's on a broad scale, and in my mind, relevant to where you want certain uses to take place and what are activities you think should not take place in a particular piece of the ocean.

The federal government is looking at this from a regional scale. The proposal is to create, I think, 9 regions around the country. In our case, California, Oregon and Washington would be one region. Alaska, for instance, would be another region and state governments and local officials, fishermen, other users, federal agencies would come together to start creating these sorts of broad themes as to what should be taking place in the ocean, bringing data together and starting to build this concept of a marine spatial plan.

Jennifer Stock:

Are there specific uses that are being considered as part of this bigger marine spatial planning concept here in the Bay area in terms of maybe Gulf of the Farallones, Monterey Bay, Cordell Bank area?

Bill Douros:

Yeah, so, I haven't heard yet of any special uses that are either going to be zoned in or zoned out if you want use that concept. That's premature at this point. The concept is to find out what are the big needs and opportunities in a particular area. All of us are familiar with the problem that we face in this country, everywhere with global climate change and the energy that's going to sustain us, not just a growing a economy, but just sustaining us today. Where's that going to come from?

So, as it relates to the ocean then, in terms of energy use, and that is one of the big concepts that's out there, oil and gas development is an obvious one. That's been around a long time, but are there ways and abilities to harness wave energy and wind energy, both of which are pretty common out in the ocean, common in this area, and are there area that we'd want to put off-limits to that kind of development because that kind of development has impacts as well. And so, that's certainly a big driver that's out there.

The National Marine Sanctuary Program has been, in essence, doing marine spatial planning since the day someone conceives of a national marine sanctuary in an area. Cordell Bank, for instance, was an idea that came from the community to put a national marine sanctuary there, where it would go, what are the activities that would be kept in it? What are activities we put off-limits within it? All that, in essence, was a marine spatial planning exercise 25 years ago or so...

Jennifer Stock:

20.

Bill Douros:

20 years ago. Probably the planning began 25 years ago and so, we view that that's what we do in these processes we have all gone through in the sanctuary program to update our management plans was a refinement of that kind of marine spatial plan and we've received no direction, we will have x or we will not have y inside the sanctuaries, as you know. So, we're managing those with the community, with the other users, and on a smaller scale connecting marine spatial planning everyday in the national marine sanctuary program.

Jennifer Stock:

Now, one of the key things that you were a huge part of way back when we started out joint management plan review effort was looking at the harvest of krill here on the west coast and I really think this is an amazing story to share because this is such a key success for this idea of ecosystem-based management and planning. You were instrumental in banning the harvest of krill

commercially here on the west coast. Can you tell us a little bit more about that?

Bill Douros: Yeah, I appreciate that. It's an interesting story. It's sort of a fun story. It's one that has, I think, a very positive outcome for everyone. When we begin a management plan review process, the first phase is called the scoping phase where we go to the public and get their ideas and comments on issues and at one meeting in Santa Cruz, a scientist there came up and raised the question of, "What can we do to protect krill?"

And we quickly recognized this was a major problem and that there were some limitations on the harvest of krill...let me back up to say that krill, for most people, may be aware of it, maybe not, is a very small crustacean, maybe 1-2 inches long that has, typically, an annual lifecycle, though some live 18 months or longer, a couple different species that are common here on the west coast, but they are, the term building block is probably the wrong term to use. If you think of...

Jennifer Stock: Keystone...

Bill Douros: Well, I was going to say the great cathedrals and these amazing cities built throughout Europe that are built on marble, if krill was the marble on which these giant cathedrals, these ecosystem networks, food webs, are built and krill is important to virtually everything that's out there. Anything that's bigger than a krill depends on a krill as one part of its lifecycle and that includes salmon and rockfish and whales and seabirds et. cetera.

So, the concept that we had was to, first in the Monterey Bay Sanctuary, but we quickly recognized its potential as an issue, it's true problem in Gulf of the Farallones, Cordell Bank, Channel Islands and the Olympic Coast Sanctuary here on the west coast are all ecosystems that are built upon krill and we took that to the Pacific Fisheries Management Council, which manages fisheries issues up and down the west coast and they, as well, recognized this problem and the need to find a way to ban its harvest at federal waters, but also at the same time, fisheries associations like PCFFA, the Pacific Coast Federations of Fishermen's Associations, also is a big champion of banning the harvest of krill.

They went to the state of California to close some loopholes that the state had and so, over about a five or six year process, we created this west coast-wide ban, not just in sanctuaries, but

throughout the west coast, on the harvest of krill. We felt there was no need to explore for a fishery here, even though it is fished in the Atlantic in the southern ocean in other countries off South Africa, but also in Canada and it's a fishery that we don't necessarily need.

No one's fishing for it now and any diminution of the population of krill from a human harvest standpoint would harm the ecosystem as we see it today and it's essential to the recovery of things like rockfish. It's essential to salmon, which we're all waiting for them to recover as a population and if there's any hope, they need healthy populations of krill. So, the ban was really finalized about a year ago and we're thrilled about it. We're thrilled that it became a much bigger idea than one national marine sanctuary. It's not a west coast-wide thing

Jennifer Stock: It's huge and is this in federal waters as well up to 200 miles?

Bill Douros: Yeah. It's federal waters from the state, the federal law goes from the state waters, which is about three miles out to 200 and as well as Oregon has their own ban, California and Washington have their own state water bans too.

Jennifer Stock: That's so important.

Bill Douros: Yeah, it's a complete prohibition.

Jennifer Stock: Just, we have a few minutes before we take a break here, but what would harvesting krill...who would want to harvest krill and for what?

Bill Douros: Well, krill are used for a couple things. I believe they're used predominately as a fish food for aquaculture activities.

Jennifer Stock: Like, Atlantic salmon right?

Bill Douros: Like Atlantic salmon. They're also used in aquarium food. They're broken down into sort of basic nitrogen for fertilizer and I've also recently seen them used for...

Jennifer Stock: Vitamins.

Bill Douros: ...yeah, vitamin pills for Omega-3 Fatty acids, that's right, which, you know, certainly are great to eat. All of us ought to eat more Omega-3's but you can get those from vegetables on land and you

don't need to harvest krill out of the ocean just to make vitamins for us.

Jennifer Stock: Well, it's really...it's an exciting thing because just being an educator that takes people out to see some of the wildlife here, it's all about the krill and we always are looking at the timing of upwelling, when is the krill going to com? So, we're big krill fans here in the Bay Area.

Well, we're going to take a break in just a little bit before we move on to some other topics, but if you're just tuning in, this is Jennifer Stock and you're listening to Ocean Currents and my guest today in the studio is Bill Douros, who is the west coast regional director for NOAA's National Marine Sanctuary Program. We're talking about the big west coast here and how are we best managing it and thinking about future planning for conserving the resources that we have here. So, please stay with us. We'll take a short break and we'll be back in just a little bit.

(Music)

Jennifer Stock: We've been talking about large-scale ecosystem management and now I want to kind of move into stuff that's bigger than us, global climate change...it's dominating the conversation for everything these days and I know that ocean management agencies and the state and lots of different groups are thinking how to deal with this and how to best survive what we don't know. How are national marine sanctuaries and parks and states...what can they best do to help ensure that the marine resources that we have here can continue to thrive with what we just don't know what's around the corner?

Bill Douros: Boy, that is a major issue, Jennifer, that we're all facing, we're all trying to get our arms around both what does it mean and what can you do about it? The problem about what it means is for us, a lot of the...all national marine sanctuaries are place-based, right? So, let's take the Farallon Islands, the Gulf of the Farallones sanctuary surrounds those islands and one of the things that you see if you ever make it out there are hundreds of thousands of seabirds and the question is, for instance, are those hundreds of thousands of seabirds still going to be there in 20 years, 30 years as climate change continues? Are they going to move on and there will be barren rocks?

Or will other seabirds show up and fill in the niche? If other seabirds show up, maybe it's not that big of a deal, but if nothing is there and the seabirds all move north, should we be protecting where they move to? And so, the challenge is understanding what's going to happen in the system and then, what do you do about it? Obviously, we care, NOAA cares, sanctuaries care about slowing down or halting climate change, but that's not necessarily problem that we're best able to fix ourselves.

We can educate and people like you who educate communities about what they can do, it's critical that everyone understands we are all going to have to play a role in solving this. We all unknowingly played a role in creating this problem and we're all going to have to play a role in solving it, but we're going to need bright ideas and creative solutions to problems that we frankly haven't even uncovered yet. The one that has me the most uneasy is ocean acidification where, due to climate change, there's more carbon dioxide in the air. That carbon dioxide dissolves into the ocean and when it does it makes carbonic acid, which acidified the ocean.

When the ocean's acidity goes up, things that form shells may not be able to maintain their shell or form a shell because it will get dissolved and that would be a problem if you want to eat abalone, but it's also a problem way bigger than that for the basic elements of the food chain. We were talking about krill, well, krill actually depend on smaller organisms and those smaller organisms need a shell. If they can't form a shell, the whole system basically shuts down and some people think that it's that basic element closing down that's responsible for these mass extinctions we've seen on the planet in the past, in the geologic record due to meteorites or other big changes. They think that in the end, the oceans change and that, in essence, wiped out the planet.

So, we're going to be a long ways away from getting an ocean that's that acidic, but we're going to start seeing changes and that's why getting the total amount of carbon dioxide in the atmosphere reduced is essential because we don't really quite understand how acidification is going to manifest itself and if it does, from a management standpoint, is there anything you could do about it?

Jennifer Stock: Yeah. It's pretty tough.

Bill Douros: Yeah.

Jennifer Stock: It's still quite overwhelming and I think the best thing we can do here, I know in the sanctuaries and in this local community, is just continue to work with our community in reducing our emissions as much as we can.

Bill Douros: Yeah, I mean, talking about it in these sort of dire terms, it's sort of a glum topic. Nobody really likes talking about it much, on the other hand, I think if we don't start talking about it, the problem is going to be on us and we're all going to wonder, "Hey, how come we didn't talk about this sooner?"

Jennifer Stock: One of the last things I want to talk about with you is I know something that you've really enjoyed about this West Coast region is that it is a destination foraging area for so many animals with incredible natural history stories with leatherback turtles coming over from Indonesia to feed here and pink-footed shearwaters and what not. What are some of the stories and partnerships that you're working on that are thinking about the long migration path of these animals. They're not just here, but they're spending time in other parts of the ocean?

Bill Douros: Yeah, I mean, you sort of hit on a really cool thing that may be underappreciated, but I look at the central coast here as a great big dining hall for so many animals that come here. Certainly some species come here to reproduce, but far and away, the bigger draw is the food that's here in this really, really productive ecosystem from the winds that lead to upwelling that lead to things like krill, which we talked about, bring in so many species that, you mentioned a couple: the pink-footed shearwater that fly up from South America from Chile, from Tierra del Fuego and Argentina. This is a really long way to fly for food.

Jennifer Stock: A little bit short than the city though, right?

Bill Douros: Well, you come here if you're a bird like that because you want a reliable food source and so, these birds come up here in their winter, our summer. We also get albatross, black-footed albatross, and other, lays an albatross occasionally, that fly from the northwestern Hawaiian Islands another 4,000 mile journey to fly here, again, to feed and they'll do that, the males and the females, while they're feeding chicks on the nest and it's a long way to come to feed, but you come if the food is reliable and so, I think those are some of the, very few, fascinating stories... whales that come here, you know, there's Humboldt squid, these invertebrates that make some of the longest migrations of any invertebrate as fast as

any warm-blooded mammal can make that swim up and down from Mexico to the central coast and the jellyfish that show up sort of mysteriously that draw in the leatherback turtles that you referenced.

So, there are a couple things that we're doing and frankly, if we had more resources, more time, a little more money for some of these initiatives, we'd be doing more, but we're... I've got a meeting later in February with the west coast regional director for the state of Mexico to talk about what are some of the partnerships that we should be considering where the California gray whale, some say should be called the Mexican gray whale because they are born in Mexico and they come here and they stop along the way when they go up to Alaska and white sharks, as well, certainly the ones off of the Channel Islands go down to Guadalupe Island in Mexico to feed.

We're talking with the Chilean government about some initiatives that might make sense on these shearwaters, these birds that are flying up here to this area and we're working with one of our partner protected areas, the Papahānaumokuākea marine national monument in the northwestern Hawaiian Islands to develop educational programs with schools in California and in Hawaii to educate folks, students in the schools about the reliance that these albatross have on a safe place to lay their eggs and a safe place to feed in the monument and marine sanctuaries like Cordell Bank here. So, these shared management objectives that I think are important were, we've got a resource in common. There's so much we can work on. Those are essential for us to be concentrating on and we're trying to do that through education as well as science.

Jennifer Stock:

Finally, we just in a few more minutes, Nancy Iverson should be calling in. As the director here on the west coast and the challenges we were talking about earlier about climate change, have there been any changes that you have made personally in your life to reduce your carbon footprint and what is one thing you would recommend to our listeners for a small, but meaningful change that could make a change in their lives to help benefit the ocean?

Bill Douros:

Well, I'm a big believer in using your feet to get around and I think that means walking or riding a bike. We've all got to do more of that. I walk, I live close enough, in Monterey, to my office that I can walk there quite often, not as often as I should. It's easy to find an excuse, just like exercising. It's easy to find an excuse not to do it, but I and my family, we walk to the store a lot rather than take a

car. We throw the stuff in a backpack or reusable bag and that's been probably the biggest change that I've made because...we changed light bulbs and everything else in my home, but my view is that the automobile is the biggest contributor to climate change emissions and we've got to reduce our use of automobiles.

So, getting out of the car, getting on your feet is also healthy for you and some of the time it's sort of a pain in my local community about why isn't there a sidewalk here or how come we can't park bikes in front of the movie theatre or et cetera and I think everyone needs to get involved in that regard, but Marin County is pretty darned advanced in that regard, and yet, there's probably more we all could be doing, even in Marin County, to get out of the car or walk, take a little longer to get there. I'm not suggesting that anyone needs to be perfect at that, though I recently met a woman who got rid of her car and rides her bike 20 miles to and from work and everywhere she goes, she's on a bicycle.

Jennifer Stock:

That's great. Right on.

Bill Douros:

So, that's something to aim for.

Jennifer Stock:

So, next meeting in Monterey you'll give me some time to ride my bike there?

Bill Douros:

Yeah. Take a train and ride your bike.

Jennifer Stock:

I'll work on it. Great. Well, Bill, is there any other last thoughts you'd like to share with the West Marin community and listeners here about National Marine Sanctuaries, ocean conservation, your role?

Bill Douros:

Well, I mean, oceans are a really powerful thing to so many people and there's an awful lot that we do in our program to try to help protect those oceans, but take, for instance, the staff of the Cordell Bank National Marine Sanctuary, is seven people, you know? You could barely fill out a basketball team for the Saturday night Marin County YMCA adult league. So...

Jennifer Stock:

Hey, we could play volleyball.

Bill Douros:

You could play volleyball. So, you get the same number. You get six. So, you get one sub and so, it's an awful lot of work for very few people and very few resources and we depend so much on partnerships in the community, we depend on volunteers to help

with the work, from time to time people donate money to our program and those are essential things that help make a sanctuary work, not just here in Marin, but everywhere.

Jennifer Stock: Thank you so much, Bill...

Bill Douros: Thank you, Jennifer.

Jennifer Stock: ...for a wonderful interview. Really nice to talk to you about some of these big picture things. I met Bill as soon as I started here at the sanctuary program with our first joint management plan review meeting and it's been great working with you.

Bill Douros: And we survived that.

Jennifer Stock: And we did and we're now moving on. So, once again, we've been talking with Bill Douros, the west coast regional director of NOAA's national marine sanctuary program and we're going to take a quick music break here. On the line, I'm hoping, I have Nancy Iverson who is a filmmaker and who is going to talk about a film that is going to be shown at the San Francisco Film Festival this weekend called "From the Badlands to Alcatraz." Had a chance to preview this film and it was wonderful and I'm hoping to share it with you. So, please stay with us. You're listening to Ocean Currents on KWMR.

(Music)

Jennifer Stock: On the line with me is Nancy Iverson, a filmmaker, also a doctor in San Francisco. Nancy, you're live on the air.

Nancy Iverson: Hello, Jennifer.

Jennifer Stock: Thanks for joining us today on KWMR. Your film is called "From the Badlands to Alcatraz" and I'm thrilled that you're joining us today. Nancy is a doctor who got involved with the Lakota tribe in South Dakota and created this film talking about this experience that she helped lead, bringing students and their family members here to San Francisco. So, Nancy, please give us an overview of the film. How did you come up with this story to share with a broader audience?

Nancy Iverson: Well, I came up with the story because it happened and it's a story that doesn't really translate as well in written words or just photographs as it does in a film and it's a pretty unbelievable saga

that the Lakota people would come from the Pine Ridge reservation in South Dakota and arrive in San Francisco, some of them non-swimmers and within a week be ready to swim from Alcatraz to San Francisco. So, nobody quite believed that anyway, but it helps to have it in a film so that they can see it happen.

Jennifer Stock: So, you started working with this group, the Lakota Youth, as a doctor and what did...you were noticing that people were dying at earlier ages, living unhealthy lifestyles and how did you get to work with them?

Nancy Iverson: I'm a pediatrician and I'm originally from South Dakota. So, I had gone back and traveled to the reservation in the early 90's and was invited to work some in the hospital there. So, I worked in the Indian Health Service Hospital a total of four times on Pine Ridge and just noticing the life expectancy is 20 years less than the rest of the United States.

So, that's really just staggering proportion there. The poverty is incredible. Pine Ridge is in the poorest county in the United States and there are just so many things that are relevant to any sort of healthy lifestyle, healthy way of living that are missing in a culture of poverty and limited resources and that kind of thing. So, I really wanted to look for...we can't necessarily change some of the big things, but we can change some things dramatically in very small ways so that people can learn to make good choices in a moment.

People can feel very passionate about what they're personally doing. I swim in the Bay and I love it so much I want to share it with other people and doing the Alcatraz swim, of course, is sort of a world-renowned swim feat for people.

Jennifer Stock: Wonderful. So, how was it to introduce this concept to these folks in South Dakota and invite them and attract them to San Francisco Bay?

Nancy Iverson: It's pretty crazy and it was also interesting to project the idea to people here and get them to help with it and volunteer over the years. We've done it seven times now and people have become so enthusiastic about helping out and supporting the program. It's been just wonderful. The first few people that I had were people that I had actually worked with at Pine Ridge. So, at least we had a working relationship going. So, it wasn't a completely unknown quantity to listen to what I was suggesting and follow through with it.

Jennifer Stock: So, how do you prep the students before they come to San Francisco Bay to swim? How do you prep them in their hometown in terms of preparing them for this experience? And you do more with them besides the swim. You also talk about healthy food and food sourcing. So, how do you get them ready for this big change?

Nancy Iverson: With some of them, we do have a chance to get them ready and especially Richard Ironcloud who is in the film. He was the first Lakota to participate in this project. He was a diabetes educator at Pine Ridge when I first worked out there. So, we talked a lot about ideas for the whole program and he really helped, sort of, plan the program with me. Over time we've had sort of an, almost, I'd say, a half and half mix of people that have either come before or are very familiar with the program and newcomers that literally get dropped right into it at the last moment. There might be an empty spot and a car coming out with someone's not quite grabbed off the street corner, but close to it and some people get to know about it longer and spend more time preparing.

Jennifer Stock: How was it for these Native Americans to return to a place that was originally occupied by Native Americans coming here to Alcatraz and just the symbology of that? How was their feelings about coming to this place?

Nancy Iverson: That was a really cool part of the program and it wasn't until making the film that I realized what an impactful visit that is. We get to do a tour out on Alcatraz with John Cantwell, who's a National Parks Service ranger out there and for one thing, very seldom have they been included as the privileged group and I hadn't really thought about it, but when they interviewed about what we meaningful for their mind in San Francisco, that was one very meaningful experience to be in the privileged group where they were taken into the more private parts of the island and things. Yeah, that was really good.

Jennifer Stock: Now, you said some people, this is their first time swimming ever. How in the world did they, I mean, with very little training do this? I'm so amazed by the courage of the students, but also some of the adults. You said one of the participants was their first time ever swimming.

Nancy Iverson: It was her first time ever swimming and there is a scene in the movie that shows her getting into the water. She did not do the whole Alcatraz swim this time. She was out here with her two sons

for the program, but she has come back to the reservation, learned to swim and is planning, at some point, to come back and do the Alcatraz swim.

Jennifer Stock: That's so cool.

Nancy Iverson: But even for the people who are somewhat familiar with swimming, which none of them that have come out here have been totally familiar with swimming, I still, I'm just so proud of them and I find it so courageous that they would get into the water on a Monday and the following Monday actually do the Alcatraz swim. It's a huge accomplishment.

Jennifer Stock: And it's very well portrayed in this film, "From the Badlands to Alcatraz," which you conveyed so well throughout the film. Now, the film is showing at the San Francisco Ocean Film Festival this weekend. Do you know which day and which session that the film is showing at?

Nancy Iverson: It is showing February 7th, which is Sunday, in the 10am program. Our website for our film is badlandstoalcatraz.org and if you go there, there's actually a link directly to the ticket purchase.

Jennifer Stock: Oh great.

Nancy Iverson: So, it'll take you to the ocean film festival website and again, directly to the ticket purchasing place for it.

Jennifer Stock: Wonderful. Are you going to be around and are some of the students going to be here as well?

Nancy Iverson: We are and, weather-permitting...there has been such nasty weather in South Dakota this winter, but we are expecting that Richard and Arlene Ironcloud and Lisa Waters will all be joining us for the film festival.

Jennifer Stock: That's wonderful. Well, I'm hoping we can arrange a local viewing out here in West Marin sometime, but for those that are interested, the film, "From the Badlands to Alcatraz," that Nancy is talking about here will be shown on Sunday at 10am at the San Francisco Ocean Film Festival and this is part of a longer festival that starts, actually tomorrow, or February 3rd and the films are taking place at Theater 39 at Pier 30 at the Embarcadero and Beach Streets.

So, a little bit of transportation planning is involved for that, but Nancy, I just want to thank you for coming on the air for a few minutes to talk about this. It was such an honor to be able to preview this film and I really enjoyed it and I hope you have a wonderful film fest!

Nancy Iverson: Well, thank you, and I think the whole ocean film festival is such a wonderful festival. So, I would encourage everyone to check it out and go to as much of it as possible. It's got a fascinating array of subjects and film work in it.

Jennifer Stock: Wonderful. Thank you so much.

Nancy Iverson: Well, thank you, Jennifer.

Jennifer Stock: Take care.

Nancy Iverson: Okay. Bye bye.

Jennifer Stock: So, the San Francisco Ocean Film Festival is taking place. It started Wednesday and it goes through Sunday and you can just go to www.oceanfilmfest.org and I concur, it's such an amazing film festival, incredible diversity of short films, longer films, even Rick O'barry will be there who has been very involved with turning around how we use dolphins and how we look at dolphins. He was one of the early folks that worked in the aquarium industry and has very much changed his tune about the whole tone of dolphins and he was very involved with the film, "The Cove," which will be showing at the San Francisco Film Festival, which highlights how dolphins are being used in Japan.

So, another amazing opportunity to learn about such a huge issue, but happening pretty far from here. So, I hope that some of your will come on down to the ocean film festival this weekend. Got a couple other announcements, actually, for you. You know, the big weather that we've had in the area. It's been great. Luckily, not too many disasters have happened in terms of transportation and roads and what not and I hope you keep tuning in to KWMR for the latest and greatest in information. I know I have been, which has been very helpful. It's been an incredible deluge of water, which we really need and we need more, but I thought one thing you might be interested in is tracking El Nino.

El Nino is the oceanographic system that really can change weather patterns in the United States and it is moving all the time

and there's actually a website you can go to to track it almost weekly where oceanographers put an update of what's happening with El Nino and I thought some of you might be interested in looking at that to really learn a little bit more about the oceanographic system and how it effects us up here and it's a very easy website El Nino E-L-N-I-N-O dot N-O-A-A dot G-O-V.

This is part of the National Oceanic and Atmospheric Administration. The oceanographers do lots of modeling of climate and oceanography and this is a really neat resource that gives you up to date information about El Nino, but also tied along with that is making sure to pick up your trash...seeing a lot of stuff come out on the beaches through the watershed and that's one simple thing we can all do to help prevent marine debris is by keeping it off the ground.

We are just out of time. I've got, of course, more to talk about, but we are out of time and I'll have to bring it up next show, which is next month and for those of you that tuned in in January hoping to hear Riki Ott, she will be back with us in March. Riki is the author of "Not One Drop." She is a marine ecologist and activist for the marine environment and we'll be talking about the impact of the Exxon Valdez oil spill in Alaska.

So, we're going to have her back in March. So, please stay with us, but of course you can always catch past shows of Ocean Currents on our website, the Cordell Bank National Marine Sanctuary website, cordellbank.noaa.gov, and hear past shows that have gone back the last 5 years. Bill was mentioning earlier about the Humboldt squid in the area and I have an interview there with Dr. William Gilly who was a Humboldt squid researcher, or who is a Humboldt squid researcher, a really interesting interview.

So, please go check out our podcast, cordellbank.noaa.gov. Thanks so much, again, to Bill Duoros for joining us in the studio and Nancy Iverson by phone and keep listening, first Monday of every month. We'll be talking about ocean topics.

(Music)

Child's voice:

Thanks for helping to protect the ocean!