

Christina Package-Ward: So, could you just start by stating your name and the city that you live in?

Benjamin Hartig: Yes. My name is Ben Hartig. I live in Hobe Sound, Florida.

CPW: What is the year of your birth and your birthplace?

BH: 8/17/50 and I was born in Bethesda, Maryland.

CPW: What were your father's and mother's names and occupations?

BH: My father's name was Ben Hartig as well. My mother was Margaret Hartig. My mom was a homemaker. She had eight children, so she was plenty busy. My father was a teaching golf pro mostly.

CPW: I hear that you have a dual history both as a fisherman and as a fisheries biologist. Is that correct?

BH: Yes. I went to school. I got it at Florida Atlantic University. I got a degree in zoology, bachelor of science degree. Then I worked on my master's degree at that university. Completed all the coursework, took my comprehensive exams, collected all my thesis data. I was working up my thesis when I just came to the realization. I asked the professors how much money they were making.

CPW: [laughter]

BH: I was part-time fishing at the time, helping me get my way through college. I made a decision that I was going to try commercial fishing. So, I followed that. I've always been a fisherman. So, it's been one of my love, my life's avocation. So, I made my avocation my vocation, and I've never looked back. It has been good.

CPW: So, you said fishing was always an interest of yours?

BH: It was, even at a young age. I remember my father taking probably two or maybe three of us when we were in Washington, D.C. I moved out of there when I was seven to Florida. But he would take us to breakfast. [laughter] It was interesting. He knew nothing about fishing.

CPW: [laughter]

BH: But he gave it a shot. He'd get a side order of bacon, uncooked, for bait. Then he would buy these little snelled leaders on monofilament. He would cut down branches of trees and take the limbs off and then tie the snell on, put a little teeny piece of bacon, and then we would go fishing.

CPW: [laughter]

BH: Most of the time, I spent chasing the animals in the creek.

CPW: [laughter]

BH: Fishing really wasn't that important until I got to Florida. Then that's where really it captured my imagination.

CPW: Do you have any brothers and sisters? Are any of them involved in fishing?

BH: I've got five brothers and two sisters, most of which spend some time fishing. All recreational. I've had one of my brothers on the boat commercially, but only for a brief [laughter] time. It's a demanding occupation, and if you're not fully into it, it can be tough.

CPW: Do you have any children?

BH: I have my son, Ben. He's, I think, twenty-six now. He's a struggling commercial fisherman, trying to do this his own way. He doesn't like to fish with dad because dad stays out in the ocean way too long.

CPW: [laughter]

BH: So, he tries to fit in part-time fishing with his love. His other love is the woods, and he spends a lot of time in the woods, but it's fine. I didn't know what I wanted to do until I was well into my thirties. He's finding his way.

CPW: How long have you been involved in fishing then?

BH: In fishing itself?

CPW: Yes.

BH: Well, when we were kids, I ran into two other kids about my same age. We went through actually, grade school and high school together. One of them actually, father owned a gas station. He was a Cuban immigrant. He started a gas station in Riviera Beach. He would sell fish that we caught out of his gas station. He would take them and freeze them and put them in bags, and he would actually sell them to his Cuban counterparts. The other thing, we fished during that time as kids around the fish houses. In fish houses, a lot of things going over as far as getting the fish and things, a lot of fish around the fish house. So, we fished there. Actually, we started working in the fish houses during the time when mackerel and blue fish, and during the winter, were being caught by the net fishery. We would actually pack the fish, and we would gut the fish as well. So, being exposed, watching fishermen unload, fishing around the fish houses, those were the seeds of things. "Yes, maybe I might want to do this in the future." I figured the education part of it was to try and do that first, so you always have something to fall back on. It served me well. I've been able to use the education in the management process, as well as a more systematic and scientific approach to my landing's histories and what drove what fishing, what lunar phases, what current conditions, what oceanic conditions. On my first years

as a commercial fisherman, I've got calendars of daily conditions. After about fifteen years, I stopped doing that because you get a feel for what drives the best fishing. But to me, I'm going fishing. If there's a day to go fishing, I go. That served me well because even on the days that a computer told you that it wasn't going to be good, you can get a catch of fish and make it work. So, if you go enough, it works. But well, your question was how long. So, my childhood took me through that. I became a part-time commercial fisherman. I got my first boat when I was in the service. I saved enough money while I was in the Army to buy my first boat. That was in '72, I think. So, still in college but really using the GI Bill and my part-time commercial fishing to get me through college. So, I used that boat to part-time commercial fish. After about '77, I made the decision to forego the educational part of it and go ahead and go fishing full-time. So, since about 1977, I've been full-time. But like I say, I've sold fish since I was ten. [laughter]

CPW: A long history. [laughter]

BH: A long history.

CPW: Did you work with any interesting people early in your fishing career?

BH: [laughter] That's a trick question.

CPW: [laughter]

BH: You can't help but work with interesting people in fishing. My goodness, no, lots and lots of them. I've learned from everyone I come in contact with and try and keep lines of communication open. Even when there's problems with people because you get some gems. I'll give you just one circumstance. His name was Steve Dunning. He had his own ideas about things, and they were pretty out there at times but you could get along with the guy. I never cut off the lines with him. But he figured out that on the full and the new moons, most of us would go out kingfishing in the morning. We'd catch a few fish right at daylight and then they'd shut down, so we'd go back. But Steve would stay. Steve figured out that on the new and the full moons, usually around noon, 11:00 a.m. or noon, the fish would come up and bite on that lunar phase until about two or three in the afternoon. Then they would shut back down again. So, I have made pretty good money from that observation that Steve figured out. He also single-handedly started the tile fishery in our area. So, he brought that fishery to light. So, those types of things, learning from other people over time, it's helped me tremendously. Do you want to know more interesting people?

CPW: Sure. [laughter]

BH: It could go on forever. The one guy [laughter] – I'm trying to think of the name of his boat, but he was way out there. But he had some interesting ways to fish that helped us. He never anchored on the reef. He always anchored on the sand. That has served me well. To catch mutton snappers in particular, when you're diving, you see that behavior. You don't put two and two together all the time that, if I fish there, that I'm actually going to be able to catch them. But you get those kinds of observations from other people and you use them. It works. But no, fish house dealers, Felix -- I can't remember his last name. I will before I'm done. But Felix is what

we used to always call him. [laughter] An old Puerto Rican gentleman that just would crack you up anytime you went into the fish house. He would always try and cut you out of what he owed you.

CPW: [laughter]

BH: I was trying to put it politely. [laughter] One of the funny things that happened with him was we had brought in a bunch of lobsters from the Keys, right? So, he paid me cash for them and he handed me this whole thing of cash. "Here it is. Now move on, go your way." Well, I started going through the stack of twenties and there's a one.

CPW: [laughter]

BH: There's another one, there's another one, there's another one. I go, "What's this Felix?" He goes, "That's what you go to college for, boy." [laughter] So, those types of people. There are numerous, numerous people that you come in contact in fishing. One of the other funny things was [laughter] he'd go, "What are you going to college for?" I'd go, "Well I need an education." He goes, "You'll be in class and the kingfish will be biting," because I used to sell him all the kingfish. The teacher will go, "What's two and two?" You'd go, "I don't know, the kings are biting." [laughter] There's those types of interactions with people who don't get the educational part of what I'm trying to do, who wanted me to go fishing and supply them fish. [laughter] But it was only on a part-time basis. But it's been a rewarding suite of people that we've come in contact with.

CPW: How did you first get involved in the fisheries management process?

BH: When it was first introduced in 1976, I was teaching a fishing course in college part-time. There was a place called Pine Jog, and it's in West Palm Beach. There was a woman – I can't think of her first name, but her last name was Gordon. At the time, Bill Gordon was her husband. He was one of the heads of NOAA at the time. He got wind of me teaching the course and actually, gave his wife some information. His wife talked to him about me and gave her some information about the initial stuff on Magnuson and asked me to review it. That's really when it started, when the seeds of the management got involved. I really didn't get much involved directly. After the council process was started, every time a council meeting would occur in my area, I always came. Every time they gave a public hearing, I wouldn't always give comments then, but I would listen to the presentations, and then I would give written comments. In 1983, there was a kingfish. It was all one stock at that time. The quota had been closed, and our fish had just gotten there. So, all of a sudden NOAA goes, "Well, no more king mackerel fishing yet. We're not going to be able to get any of the economics that we needed out of the fishery." So, state waters remained open. So, I continued to fish in state waters while some people fished the border. Then there was this big bust. I was lucky enough, at least on that day, to be in state waters. That's when I got involved in the mackerel, then got on an AP but I didn't get on the Mackerel AP. I got on the Snapper Grouper AP, then became chairman of that AP. Then there happened to be one of these reviews of the council. I forget what body was doing the review, but it was a review to see about how the representation versus commercial versus recreational. In those times, the recreational participation was heavier than commercial. So, the

suggestions that came out of that audit or whatever investigation were, "You need some more commercial people on the council." So, I was approached, "Would you like to become a member? You've gone through this process with the AP." I said, "I don't know anything about it." I said, "Well, yes. I'd like to get more involved." So, with a lot of help, I went through the applications process and with a lot of support from people who I've been involved with on the council and outside the council. I had broad support from recreational and commercial people because I had been a recreational fisherman growing up. I had been a member of the West Palm Beach Fishing Club and knew a lot of recreational fishermen. So, it was just a natural progression to get on the council. Then I became chair. During that six years I was on, I only served two terms because right before my third term, the governor appointed – well, actually didn't appoint, but the governor put forward a nominee as another commercial fisherman. Then, the then Secretary of Commerce approved two commercial fishermen on the council. I bowed out. I said, "Recreational fishing is so important in the Southeast that you have to have a recreational representation to balance out that." Even the governor called me, "Maybe we can do something." I said, "No." I said, "Listen," I said, "We can't wait any longer. This needs to be taken care of as soon as possible," because the uproar from the wrecker fishery was tremendous. Not that people wanted me to leave the council, but it was the right thing to do at the time. So, I did. Then at this juncture, I was watching the state people go away. All the institutional knowledge was leaving the council. I had seen the new environmental groups come in and misusing some of the information that had been how we had successes in the past. So, I came back on trying to bring some of that institutional knowledge back. I think I've been successful in some degree to do that, even taking that information before Congress in our last stint before them. Being able to tell them, "Listen, we have success stories and we were able to do them. Here's how we were able to do them. We phased in overfishing over three years. We didn't have to end immediately. We didn't close either fishery." We made those points that we need to manage fisheries without moratoriums. As long as you're making headway and bringing those stocks back, use the rebuilding plans to your best advantage as long as you can. As long as you're making headway, you take into consideration to social-economic considerations, which were abandoned in 2006. So, hopefully the next reauthorization will give us a little more flexibility back where we can take the fishermen back into the equation, move them back in, as well if it's fish. I think we've got a good basis for rebuilding our fisheries as we've been able to do, although some of that rebuilding was in place before 2006. [laughter] Some of the fruits that people are saying, "Well, look, we've been able to rebuild these stocks during this timeframe since the reauthorization." No, some of those were done years before in rebuilding plans that were already on the books. So, be careful about what you're talking about. I've made those points and not that annual catch limits are great. They're the way to do management. 1986, I asked for quotas on all commercial fisheries. So, some way to cap the fisheries to be able to get at that effort. The South Atlantic Council was very slow in doing that. That is one of the prices we paid in some of our own fish stocks. Not because we knew the overfishing was occurring, but because the assessments at that time were much more basic. The information we were getting out of them, our fisheries were rebuilding, and so we didn't see the need to do all that. Some of us did, but others didn't, the majority of the people. But the annual catch limits will work to bring back fishers in the future. We just need to bring the fishermen back into the equation and we'll be fine.

CPW: I am interested in what you said about not having the social and the economic since 2006.

BH: Basically, overfishing trumps anything in Magnuson. That's an interpretation that (NMFS?) has made, not Congress. Barney Frank has made it quite clear that he never thought that that was the intent of the 2006 reauthorization. A number of congressmen as well, from New England, has felt the same way and been vocal about it. But that's what we're trying to do now. I think we will accomplish some of it in this next reauthorization. We will get some of the socio-economic concerns back into the management process. I think Congress is pretty well in tune now. I'm pretty surprised at how well they understand the problems. They've put good staff on the reauthorization this time. Two marches on Washington, come on. How many times have you seen fishermen march on Washington?

CPW: [laughter]

BH: I took part in both of them. I've never been to Washington even to talk to a congressman before that. But I thought it was so important to try and get the point across that this is really impacting fishermen more than it needs to. In all retrospect, looking back on it, I see it all has had an impact. Even though it's taken six years since those fishermen rallies, that those were part that got the congressman's attention. So, after it got his attention, then they start looking, what can we do? What's wrong? So, they started looking and then they put good staff on it, and it's evolved into – the last Hastings' bill is a wish list of everything we wanted and more, which some people don't want. They really addressed our concerns without – of course, the environmental, it's complete gutting of Magnuson, but it's not. It's just a little more flexibility to be able to rebuild fisheries in a more user-friendly manner. So, we'll see what happens. I'm cautiously optimistic. [laughter]

CPW: That leads me to the next question. What are some of the significant changes in the way that fisheries are managed today compared to when you first started in this process?

BH: That's a pretty significant one. The annual catch, that's probably the most significant fisheries management. But the councils evolved over time. It was bag and size limits, and then trip limits, and then some closed seasons, and then MPAs. That's a pretty big management leap is using MPAs to try and limit your effort. I would like to say that MPAs are working really well in our jurisdiction. But from the enforcement reports we got at our last meeting, and from the research that's been done, it's just not showing some real strong benefits for Oculina reef. Oculina Bank is the longest standing MPA we have. Well, it's not really an MPA. It's called an experimental closed area. But it is in de facto MPA. It was very disappointing. I've seen the videos of when those reefs were first discovered. They went down and videoed just the biomass of all the animals. It was just phenomenal. Then you go back to those exact same spots, and they did. They went back to these exact same coral heads that are still intact, and very few animals in those areas. I'm sure if you did it seasonally, you would get a different result. I'm sure if you put the time in, you looked at during the group-responding season you may see some significant changes. But we're not looking at those times. So, it's hard to convince the public to do any more MPAs when you say, "Well, we haven't done a good job enforcing them and we haven't been able to get the science we need to show substantial benefits." Now, there are benefits, but they're spotty and not so much in Oculina that we've seen. The council has evolved, and management has gotten much more complex in recent years. We've done some stuff with

endorsements. We've limited the number of people significantly in the golden tilefish long line fishery, and the number of people who were able to fish black sea bass spots. To me, it was important to address those two gears before too many people got into those gears. As we manage all these other fisheries, people are looking for outlets and where to go. So, you really have to look at the most efficient gears first, get them controlled, and then maybe look at some other endorsement possibilities down the line. I think I mentioned one today was snowy grouper, which the hook-and-line fishery. That endorsement, I think, would help that fishery tremendously. But we'll see, we'll see what happens. Catch shares, the Southeast isn't really ready for them. I can't say I blame them with what's happened with rec fish. We've totally gutted that IFQ program. So, that's not a very good example to put out before people and say, "Well, look what happened with the rec fish." I don't know. We'll see if we get there in the future. I've been a fan of IFQs ever since Alaska with halibut initially and sablefish. Then in New Zealand and in British Columbia and Australia with the lobster and all these different places who have used these techniques. I read a lot about them in the past and became a real fan and thought it was a rational way to manage our fisheries. I even did some educational stuff with the fishermen before all this stuff came to a head with (NMFS?) actually pushing the concept. That's not the way it should have been done. I was doing things with EDF at the time, doing joint ventures with education. I told them, "We need to do more education in the southeast before you try and push." But they had their people strategically placed and thought they can do it, they could push it. It set us back probably ten years now because people have a bad taste in their mouth after it was trying to semi force upon them. So, we'll see. We may never get there in the southeast. But in the Gulf, the snapper fishermen went through it. They had the whole plan developed, and [laughter] right before the plan's going to be implemented, a key group of fishermen go to Congress and says, "Listen, we don't want this. This can't go forward." Congress scuttles the amendment, puts in a five-year moratorium against any new catch shares. So, at the end of the five years, the same fisherman who scuttled scrambled back to Congress, "We have to have IFQs. We have to have them." So, it took five years of this heinous management going through iterations of these on and off. Two weeks you had to fish in the heinous weather no matter what, not getting the economics out, always having too many fish on the market. Now, most of them are millionaires [laughter] basically, in that fishery. The fishery is worth over twice as much as it was. A number of them place themselves in the position to have enough quota to really do well. I'm envious of those guys. They've really done a good job. Now, having said that, I wouldn't design an IFQ program the way they have. I don't like sea lords. I don't like the leasing fish at that price where people who have to lease it, don't make any money on the fish, per se. That I don't like. Some way to address those, and over here, I would like to see it much more owner-operator driven. I'm grandfather of the corporate entities, and now and in the future when they leave the fishery, it would be sold to an owner-operator. I think owner-operators, just based on my experience with golden tile and this brief endorsement thing, the owner-operators want cash shares now and the corporate people don't. So, you take it away from the real fishermen, and then in the corporate world things change. Then they don't pay their crews. The people who are catching fish don't get the rewards that they should. Because then you get people vested in the process. If they're really fishing hard and reaping the rewards of the prices that are receiving from their product, they're more apt to get into the management part of it for the future of their fishery. Where were we? [laughter] You'll see me drift a bit, by the way, if you have noticed that already.

CPW: That is all very interesting though. [laughter]

BH: Well, good.

CPW: So, what do you think has been the biggest improvement in fisheries management?

BH: I think the biggest improvement has been the next generation of stock assessments. I think not getting the right answer earlier set our fisheries, our snapper-grouper fisheries in particular, back significantly. In almost every first-time assessment we get, it's either overfished, and overfishing is occurring, or both. Just like blueline tilefish now, we have to almost have a bycatch fishery to be able to bring the fishery back to some semblance. Although, having said that, blueline, I think if it was assessed differently, you would get a better answer. They didn't take into consideration the biggest part of the landings because it takes place in an isolated area off North Carolina, and they couldn't figure out how to do that in the assessment.

CPW: Because of the conditions there?

BH: I don't think they had enough data from those fish to be able to do it. They needed to use a different model for a spatially explicit portion of the stock, which is much different than the rest of it. Most of the stock is caught on a bycatch basis. This is a targeted portion of the stock. It's very, very different. It's caught in an area that's blueline tiles are isolated and everywhere else they're a bycatch of really the snowy grouper fishery. Not much real targeting goes on, but in that particular area, it was a targeted fishery. So, there are a lot of differences and they didn't quite know or have the data to deal with it. But yes, stock assessments have been tremendous. We have problems with the inputs. Well, some of us realized early on, and after the reauthorization after the SSC got the power and science was the main determinator, that the only way that you're going to have any real input into the process is to get involved with stock assessments and be able to give the analysts the information they need to make the right decisions in the process. So, a number of us have, a number of fishermen, especially after red snapper. I was kind of the lone ranger in the beginning with king mackerel and Spanish mackerel. But, after red snapper, it really awakened people that they need to get involved in this assessment process. Our assessments are better. We've changed inputs based on our information. Not that we were driving the changes, they're just based on our knowledge and answering the questions that needed to be answered in this assessment. Key part of the assessment process now is fisherman involvement. But certainly, the new assessments has been the biggest change. I tell some of the assessment scientists, I said, "I may not agree with the way you have done this or that and have problems with it." I said, "I can't argue with the success that your assessment results are having on rebuilding the stocks that I'm familiar with." So, there are some people that argue against certain parameters and things of that nature. Like David Nelson really picks on selectivity in red snapper. He's convinced that there's this cryptic biomass of big red snapper that live out in the deep water, and there are. I catch some big red snapper in the deep water. In fact, if you look at how the gulf assessments are done with red snapper, what drives their age structure and filling out their age classes is the longline fishery that fishes in areas where nobody else does. They're able to set a longline in some of these areas with sparse fish, but they're so big that they add up. For mutton snapper, red snapper, and black grouper, that information from that fishery anchors the age structure. It fills it out to those oldest animals.

That's critical in your assessment. Because if you don't know that, then you're always trying to balance your catches with trying to get the age that you need in a healthy fishery where you have that curve. But, yes, the assessments have clearly really helped bring our fisheries back. But the realization with the new assessments is, is our productivity isn't as high as we thought it was. So, that's another realization that fishermen need to know. That they're looking for the good old days and we're never going to get there because the MSYs are lower than what the good old days we would be able to produce. So, that's a key realization that people need to know. There's one thing I wanted to introduce in the visioning process is, here's what you have. This is your future. Here's the level of harvest you're going to have for all these stocks. Now, what are we doing in management to try and match the fishermen to the level of harvest that we're going to have in the future. I think the council needs to go through its own visiting process as well. I think we may actually do that in the future. Did I answer your question or not?

CPW: You did. [laughter] What do you think is still lacking and needs improvement?

BH: Data collection. One of the real problems we have is that as we put regulations in these fisheries today, as we regulate these fisheries severely, we've put trip limits in and bag limits in. You really don't ever get at abundance once you cap fisheries. You really lose that abundance. If you cap the fishery, you never know what's there because you're only allowed to go so high as far as trip limits go. That really hurts you in your assessments because it doesn't give you an abundance catch per unit effort that you can use. So, the trend is to go to fishery-independent information, and that will help us tremendously. Unfortunately, it's very expensive and it's focused only on reef fish for now, and it's only really good for a few species. The camera survey and the trap surveys, it doesn't give you the full suite of species. It doesn't give you the size ranges you need because some of the fish are too damn big, they can't even get in the trap.

CPW: [laughter]

BH: So, that's one thing. The cameras should help with that, though. The cameras should capture some of that. So, we'll see. I'm cautiously optimistic that that will work. But that's the future, is trying to get more fishery-independent data. But larval surveys for our mackerels are critically important, so we can know what the recruitment and year-class strengths we have coming up. We don't have a good measure of that now in some way to introduce the survey to do that. What I'm hoping is that NMFS or the center is going to review all of their sampling programs and see where they're getting their best bang for their buck from the assessment point of view. Is this survey giving me assessments results? So, hopefully, through that exercise, they'll be able to figure out that some of these surveys aren't giving them assessment grade results, and they'll be able to put some of that money into some areas that will. It's a long process to deal with these issues, but my focus is on fishery-dependent data. We have less people to collect that. Even though it doesn't give you good CPUE information, it gives you the ages, your sizes by years. We don't have a very good picture of that. We've asked the science center to provide that type of information, and we haven't got, to my satisfaction, the answer that we needed. But we will, we'll get that. What it has precipitated is a best-practices-data-collection workshop through the (CDR?) process. So, they're going to look at how those targets are set, are they appropriate? They've got targets for red snapper when the fisheries closed, and things of that nature. [laughter] So, you have to review all these things. What's the right

number? What's going to give you the answer? These smart assessment scientists now, they should be able to tell you how many samples I need throughout the year, and in what regions we should be sampling, getting the best bang for our buck. So, hopefully this is all underway. It's all coming to fruition. The reviews by the science center are great. The data review they had last year could have been a little better, but it wasn't. As a first-time effort, it was really good. It will go on.

CPW: Was that what Barney was talking about?

BH: Yes. Barney was talking about that tonight as well. This year, they're doing a stock assessment review. They're going to review all stock assessment, methods throughout all the science centers in the country. Then they'll come back and put all that information together and try and get a best practices stock assessment methodology out of that. We're pushing pretty hard, that this isn't just an exercise we do and then it gets put on the shelf. It's pretty easy to talk to you when you're engaged and you're interested in the discussion, even though I always go off on tangents. [laughter] That's one of my strengths. So, I try to keep it at minimum in the management room, but it doesn't really work.

CPW: So, I think that leads us to the next question. If you could change anything about the current way that we manage our fisheries, what would that be?

BH: Well, I'd reauthorize Magnuson so the council has a bit more flexibility to be able to allow the socioeconomic considerations to be concerned in management decisions. Like I said, as long as we're making progress and rebuilding stocks, we shouldn't overly penalize the fishermen based on the legal part of the law. But the pendulum swings in management at different times, and it swung in the recreational's favor this last time. Hopefully, it'll swing back a bit. We don't want to take it all away because ACLs will work. But just enough flexibility so we can allow the fishermen to be part of the management equation again. That will help tremendously. That's the biggest thing I'd change. That's what I've been fighting for since 2006 with going to Washington, talking to some of the congressional staff, trying to keep them informed when I can, about that problem. Like I said, we're cautiously optimistic based on what we've seen come out of Washington so far. The hearings have been great. The questions are right on. So, hopefully, it'll all come to something after. I think it will. I think we'll get the socioeconomic considerations put back in.

CPW: So, are there any memorable moments or periods that you remember most during your tenure as a fisheries manager here?

BH: It's all been a blur.

CPW: [laughter]

BH: But I will tell you that the first time I was on is much different than this time. The amount of work, the amount of information available right now is far beyond what we had when I was on in the [19]90s. It's changed so much. We're really doing a lot, probably too much right now, because we're trying to catch up from the three years, we had to use to do ACL implementation.

It took us three years to get through that process. Really everything was pretty much put on hold. So, we're almost getting to the point now where you can take a little bit of a breather finally. But it's been tough on the staff, and tough on council members to try and keep up with the information. I'll give you an example. I've been fishing really hard since the last council meeting, almost every day. I think we missed four days since the last council meeting, been on the ocean every day. I didn't have enough time to be as prepared as I wanted to be. I took the last day off before the meeting, and then had Sunday as well part-day, after I drove up here. But I've been trying to catch up. I've spent the last two nights, and I'll spend the night, three nights in a row, trying to catch up. I told staff today, I said, "I really appreciate what you've been able to do." Because there's stuff, particularly at this meeting, was very clear. All the information was there that I needed to make the right decisions. Although I am caught up, and it took a lot to get there, I just told them, I said, "For me to have to try and read all this, and try and comprehend it all – and I've been able to do it – but how long it took you to put this information together between the two meetings?" I said, "I can't believe that you guys have been able to do such a good job in that short period of time." We have a great staff. [laughter] They're definitely engaged. They believe in what we're trying to do, and we're moving forward at a rapid pace because of it. I'm hoping we'll get to have a break here relatively soon when we can give the fishermen a break too from all the regulatory changes that we are making. Although some of them are precipitated by them. Some of this stuff about change of seasons, align your seasons, deal with bycatch, and that's where this visioning portion came from. We've got some ideas, but what are your ideas? How do you think we should deal with these trip limits and seasons and things of that nature? Bycatch, how do we reduce the bycatch? We're getting those types of answers from them now. So, hopefully we'll be able to inform our management going forward based on what they see are the problems in the fishery. This is a really exciting time. The visioning process is a really worthwhile endeavor. I'm involved in the king mackerel assessment. I had to bow out of the assessment workshop because the visioning was scheduled at the same time in that. As important as that is to me, the visioning process is more important. Because I've got a lot invested in the process so far, and I want to be involved in all those board meetings. So, I will and it should be great.

CPW: That seems exciting.

BH: Yes. It's very cool. Our staff, they're thrilled to death. They think this is really, really cool, and that's critical. That your staff is so engaged that you can't help but be successful at the end as long as you get some people.

CPW: [laughter]

BH: You'll be able to get the right answers because they're so good at pulling that information. Although some of it, you don't have to pull.

CPW: [laughter]

BH: It comes naturally. But the interaction, that's one of the things that's missing in the process and has been missing in the public hearing process for a long, long time. My predecessor, I'm not going to mention his name, but I had to sit through his public hearings for two or three years,

and it was hard. I don't do things the way he does. I'm willing to answer people's questions. He just wanted to have the comment. If you had a question, you'd go ask staff. I'm completely opposite. When we had time, when all the people had finished commenting, he was ready to leave. I'll stay until the bitter end, too long from a staff perspective.

CPW: [laughter]

BH: But I'll entertain any questions people have about management and give them that back and forth. That has been really well received and it's helped bring some people back into the process. Some of them you'll never recapture based on red snapper. But those who have stuck through it appreciate the difference in the way that I try to do business. So, I think in the future we can do a better job in the public hearing process about being more interactive with the public, and being able to answer their questions when you can. Now, if you've got 150 people in an hour and a half to give testimony, you're not going to be able to do that every time. But when you can, you should make the effort to interact with the public because it pays big dividends in their appreciation of the process. It makes them want to come back and be involved when you listen to their problems and/or be able to talk with them. We did it at the last public hearing in St. Augustine, I think it was. Then fortunately, there were those people who had done their homework. They knew what they wanted to say. They wanted to come in and give their presentation or give their testimony and go home because they had done their homework. They listened to the webinar and they had all their stuff written out. But I didn't know that going in. So, we made them sit through all the presentations and some of them actually left before the end because they had heard it all before. [laughter] But it wasn't all bad. Because they saw the value that other people were getting from the interaction. But some way to allow people to come in and testify, and some balance between the two. Being able to talk with people more informally and being able to let people talk and get done. It's two things we have to consider. So, I think it's evolving and it'll be good. The staff really want to see a change. I think it's much more valuable to process.

CPW: What have you enjoyed the most about being involved in the fisheries management?

BH: I think the most rewarding part for me is seeing things that I have helped put forward that have made changes. I think that's probably the most rewarding thing for me. But the people you come in contact with, both at the council level and the fishermen that I'm exposed to that I would never have gotten to meet. The relationships I've made this time around, especially meeting fishermen and going to assessments with them and trying to get them to participate at a higher level. It's been a real rewarding part of it as well. To see high liners that really hadn't been engaged in the process, people who really know the fisheries and are real players. Now, to watch them give up the necessary time it takes to be involved in assessment, oh my gosh. If you're going to commit to three weeks of being off the water, that's a big, big commitment. Some of them do it. It's amazing. I do it because, one thing, I enjoy the assessment process. The other thing, I know I've been able to make changes that have helped the process. To me, I've reached in my pocket many times in management and it really doesn't bother me because in the long term, you're going to reap the benefits of being involved. If you get minor catch level recommendation changes based on your inputs, those are big in the long term. For Spanish in particular, of all the stocks that we've managed, Spanish, from my perspective – I knew it since I

was a kid. We used to catch them and off a bridge and we'd pack them inside saddle baskets on our bike and take them to the fish house and sell them. My gosh, we got eight cents a pound for them.

CPW: [laughter]

BH: But eight cents for us, with three hundred pounds of fish, it was enough to buy lunch, to buy our taco. So, at ten years, twelve years old, it was heaven. [laughter] Plus, we'd take something we caught to one of our friend's house. His mom, bless her heart, she would cook us [laughter] fish every time we brought them from a fishing trip. If we didn't catch anything, she'd make us fried baloneys. [laughter] So, we got something to eat either way, but she was great. But yes, the people, a big part, the rewarding part of the process is meeting the different managers and fishermen, and all the other people involved. The NGOs, I had a great relationship with a number of those over the years. I keep the doors open to everybody. Some people get on me occasionally, "What are you talking to them for? They're trying to put us out of business." I go, "No, no. They have a perspective and you have to respect their perspective. They're part of the process. They're part of the constituents for the fishery." So, I treat everybody pretty much the same. I'm very involved in recreational fishing. In fact, I've spent more time this time around trying to make the case for recreational fisheries because I saw them getting hammered by the reauthorization compacted at the same time by the economic downturn, or the Great Recession that occurred in the country. I made the point to Congress. Fisheries management doesn't take place in a vacuum. You have to look at the economics that are going on around you, especially in the worst recession we've had since the Great Depression. Those types of things, (NMFS?) should have right away put a hold, "Listen, we're going to ameliorate. We're going to lessen our restrictions for this time." We lost people. We lost head boats. We lost those platforms that only people can afford at a certain price point to fish in the South Atlantic. I hated to see those go. I had been a maid on a charter, on a head boat when I was younger. Part of those people who go in those days it was, I guess, ten or twelve bucks. Now, it's probably fifty or eighty to go for half day. But still, given the price of seafood, if you catch two snappers it's almost [laughter] you paid for your trip. Plus, you had the enjoyment of going fishing on a day on the ocean, or a half day, whichever. In our case, they make those half-day trips. So, everything's so close. But yes, the number of the head boats that were impacted by those two things together went out of business. That was tough to watch. But some of them have made it. Some of them are reaping benefits now based on black sea bass and vermilion in particular. Those two species, that's the bread and butter of that head boat fleet. We've been able to double the allocation for the black sea bass. Vermilion snapper, we were able to remove that four-month closure. So, all those things are helping now, but it didn't help the people who went out of business in the process. What was that question again?

CPW: [laughter] What you have enjoyed the most.

BH: I think that was covered pretty well. People and the success stories we have at management. Even today, we continue to be able to give back to fishermen and that's very rewarding. It's nice to be there for a change. That's been a tough time to get back on the council when we have ACLs and all these assessments, first-time assessments coming forward, where we really had to cut back on number fisheries. Closing red snapper was the worst thing we have

ever done. When you had the biggest year class you've had in at least twenty years come into the fishery, where your fishery had been getting better based on the management that we had, there was no reason to close that fishery. My biggest disappointment was having to do that. I told the council, I said, "It's time to draw a line of sand." I said, "I'm not willing to close this fishery." I didn't vote for it. I said, "Listen," I said, "If NOAA wants to close the fishery, let them close it." Don't you do it, because to me, something that didn't need to be done based on the success stories in Spanish and king mackerel. They were easily in worse, probably as bad a shape or worse, where we didn't have to close the fisheries. Yes, restrictive quotas, restrictive bag limits and things of that nature were able to bring back those fisheries.

CPW: Red snapper was closed because of the development of ACLs and the overfishing?

BH: Red snapper was closed because the overfishing, there wasn't enough fish to open the fishery to a directive fishery, and the bycatch of the fishery takes up the available harvest. We have had limited openings. One weekend last year, a three-day weekend, two, three-day weekends the year before. That's teasing people. I wasn't convinced that that was the right thing to do. Because I didn't think you should open the fishery until you could open it with enough catch to make people get some satisfaction. One story in particular about, I think, a twelve-year-old kid who caught the biggest snapper in the tournament. They had a tournament the first year. You read those things and that's something that that kid will never forget, catching a trophy snapper and winning the tournament. So, there were some pluses that came out of that, convinced me that it was the right thing to do. Even though it's not much fish to open the fisherman, but hopefully this new assessment will be better and we'll be able to do more. I sure hope so. I'm guardedly optimistic on that as well. With the new fishery independent information and we're using to drive most of the assessment results, it's all untried methodology. We haven't done that before. So, it's a test on that, on one of our most important species in the environment. Soon we'll find out.

CPW: So, what have you enjoyed the least about the fisheries management?

BH: Being off the water. [laughter] The time commitments, it's a lot. Because you want to be on the council, and that takes a lot more time. You want to be involved in assessments now, that takes much, much more time. Now, I want to go to the AP meetings for the species that I'm involved with, Mackerel and Snapper Grouper. I try and come to all those AP meetings. Then I want to go to the SSC meeting because I'm engaged in the SSC. So, I go to the SSC meetings. That's another rewarding change that I've seen is that's been an evolving process with the SSC since they got all the power. The council strived to get an SSC that is able to work together, and that's hasn't been easy. When I first got back on the council, it was obvious that it was not working very well. It was dominated by a few individuals and no one else participated. So, we made some changes. Over time, I think now we have the best SSC we've ever had. They work together tremendously. Everybody participates who wants to, and that's key. I never felt welcomed until the current chair, Luiz Barbieri, has been in control of the SSC. I never really felt welcome coming in and giving my two cents when it was needed in the process. But I feel welcome completely now, and it's a better process because of that. Spanish mackerel, I mentioned that earlier, is one of the successes that I've had in my career about looking at a fishery that I was involved with since a kid. I went off on a tangent about fishing on catching

Spanish. But anyway, I caught them as a kid. When I got into commercial fishing, I used to catch them. I couldn't compete in the food fishery because it was dominated by gillnets, and the price was too low. But I stayed in it because I could catch these small mackerel that I sold individually as bait to the charter fishermen as bait mackerel. They were \$2 a piece, so that added up and if you're able to catch them in volume. So, I did that. The stock got so bad that I couldn't even do that. So, I got out of that for a while. Management came in. I was involved in all the assessments since they've been done, at least talking to the assessment analyst each time. Spanish, they put in the restrictions, the council, "Hey, we need this much of a quota." The council put in restrictions. We did assessments back then for those stocks every year. We got another assessment. Each time, based on these management restrictions, we put in the stock. It was stepwise getting better every year. I started back fishing about three years before the net ban because the stock had improved enough, that all these small mackerel appeared in the population at a level that I could participate and catch bait mac again. So, I did that again. Then in '95, the stock was declared not overfished anymore. In the same year, the state puts in the restrictions on gillnetting. So, you had a stock that was primed to take off already by the restrictions the council had made, and then you had the net ban, which eliminated most of the gillnet effort. So, your stock just took off. But the questions I had had watching the stock take off back then, the fishery was still getting hammered pretty, pretty good. But it was still increasing, but not at a big level. But it was still getting hammered. So, Spanish mackerel, we found that the harder you fish them, the more recruits they put out. So, you had all this gillnet effort right before the net ban. So, what happened was they were pumping out recruits for probably three years at least before that. It looks like what that was. I would find muds of almost a mile long of these small fish. Just porpoises and birds, they were making their own mud. They actually do that when the water gets too clear. They'll make their own turbidity by stirring up the bottom, because they feel safer in that dirtier water and it helps them in predation. So, that's how they react to it. But the net ban came in. All these year classes were primed to go through the fishery. So, we saw just incredible amounts of Spanish for ten or twelve years based on these three-year classes that came in. We thought, "Well, this is how it's always going to be." In that twelve years, all these animals grew up. The ones that were left, we caught some of them, but the fishery isn't producing near the fish it was with the gillnet fishery. So, other fisheries developed, the hook and line fishery, cast net fishery. The cast net fishery took off because the volume of mackerel that came into these over wintering area off Salerno was you catch them in a fourteen-foot cast net. If you could catch 3,500 pounds of mackerel in a cast net, that's pretty significant. So, we saw these giant year classes move through the fishery. Then as the older animals matured, and they filled out the age structure and size structure of the population, the recruitment went down because there's an equilibrium effect that happens. Dispensation, I guess, is one of the terms they call it. But there's some feedback mechanism as fish just don't overpopulate themselves out of their carrying capacity. So, whatever that feedback mechanism is, recruitment dropped off and the stock is top heavy on the great big fish now. Yes, we still get some recruitment every year. In fact, we were lucky enough, two years in a row we got some pretty good recruitment, but not on the level that I saw back then. All these questions I had, back then you have selectivity, recreational fishery target smaller fish. The cast net fishery targets a relatively three- to six-year-olds. Once they are over six, they get big enough where they outrun the gear. They actually learn to hear the net hitting the water and they start moving. So, yes, you're able to catch the younger animals, but you're not able to catch the big ones. So, yes, the hook-and-line fishery can catch the biggest fish, but not that many of them. So, all these things go in. Why did

the highest recreational catch occur back when the stock was at its lowest levels? Because it was pumping out all those recruits, the recreational fisheries focus on smaller fish. So, all these questions I had over time were able to be answered by the assessment. What we were able to do is with some of the questions I had and other fishermen had, we were able to get a higher catch level. We came to the SSC and we were able to get five- or 600,000 pounds extra, which will help in that stock from the last assessment. Because the last assessment was close, but it was still just a little bit too low to keep the fishery open for the entire season. But we're close now, and I think it'll help. From the assessment point of view, that's the most rewarding assessment I've been in. Because I've been in from the beginning, saw the incremental changes, and then been able to impact results based on questions that we asked the assessment scientists. The SSC, a lot of times in the past, they wouldn't have even taken the time to address those questions. But with Luiz's leadership, they did. They bought into the questions we ask and the results that came out of those questions. So, Carmichael was great in that as well. He's a great asset as a go-between between the SSC and fishermen who have questions. Because if you can peak his interest, then it can get to the SSC. So, that's a good thing.

CPW: What do you think is the biggest concern for the future of fisheries management?

BH: Well, all the environmental impacts. To me, it amazes me how fish are so resilient. Where I live, coming to Georgia is like going to church for me. When I'm able to come here and drive through the marshlands, the estuaries, and just seeing miles and miles of marsh. Where I am, the grass beds were used as fill for the mangroves to build seawall. So, we just don't have much habitat anymore. But in spite of that loss, some fisheries are able to survive and some even thrive based on the resiliency. Management helps, absolutely. Most of our species in South Florida are very highly managed. But even those who have snook, they're exposed from freshwater. Some of the young will even go up into freshwater. They're exposed to the full gamut of pollution, and they seem to be holding their own along with the strict management regimes they have. So, it's amazing to me that any fish can survive in South Florida. Part of it is that Biscayne Bay, from Biscayne Bay South through the Keys you still have relatively healthy ecosystems, grass bed habitats for juveniles to grow up in. Then the reefs, that's an alarming situation, the problems we're having with our reefs and the degradation has occurred on them. Then the algal blooms that we see based on a number of different nutrient loads, you've got nutrients, deep water injection coming through the limestone. That's one thing. Then you've got all the fresh water affluent that comes offshore, is another, which everybody's pollution gets entrained in that. Then those nutrients go offshore and create algae blooms that then smother portions of the reef. It gets so bad sometimes that we can't even bottom fish because your line gets so fouled with algae when the current's going at a certain pace that [laughter] the fish doesn't get a chance to get your bait because it just gets covered with those different types of algae. Then we get new algae come from introductions that out compete our other algal populations. It's amazing to me that we still have healthy fisheries where we are. The climate change part of it is an interesting phenomenon because everybody talks about the temperatures getting warmer and water temperatures getting warmer in the New England area, cod moving out the area because of water temperature changes. We have the opposite effect. Our water on average is getting colder in the middle of Florida, which makes no sense. We're getting more upwellings on a regular basis now. We're getting black sea bass moving down the coast, which is more of a temperate species. Although we've always had a baseline number of black sea bass, now they've

become the dominant reef fish in the last twenty years, which is a major, major change in the area that I fished. It's not only black sea bass, it's Atlantic sharpnose sharks, which prefer a little bit cooler temperatures, Atlantic bumper, which is a bait forage fish that forms really huge, huge biomasses. They're pushing farther south and we're seeing, throughout on a yearly basis now, which we never saw before. So, there are some significant changes occurring. It's impacted our king mackerel migrations. We have an area off Jupiter with which they've always come to spawn. There's a real, hydrodynamic, hydro-oceanographic combination there that these animals like to come. The Gulf Stream is real consistent there. It's the most easterly point on the coast of Florida, and we have real consistent conditions. Those animals have come there, at least in my history, probably for long, long periods of time. That's one area that they would like to be in. Now, they don't have to be there, but they would prefer that area. But now that we have these current changes, Gulf Stream's slowing down. The animals like to stem the tide. They like to get in a current that they can swim in without moving. They don't have a swim bladder. They have some oil that gives them some buoyancy in their flesh, but they don't have a swim bladder. So, when that current starts slowing down, they're still doing this, so they're moving. When that bottom current quits on the bottom, they're already on their way to somewhere else. That's caused significant changes in our mackerel productivity. King mackerel, along with some stock changes, in addition to year class in there as well. But our age structure looks good, so it's not all horrible. But that will be a challenge for the council after this assessment is done, is to deal with Atlantic king mackerel and probably some changes in management based on the assessment.

CPW: Is there anything that you are particularly proud of regarding your accomplishments in fisheries management?

BH: Specifically? I think the mackerel stories are good. I've had a lot of input on mackerel. I've seen a lot of good changes based on some of the stuff that we've been able to put forward. I don't blow my horn very well myself, but it's been rewarding to see the changes based on some of the things that I've been able to bring forward. I like the endorsements we've been able to do for golden tile and black sea bass. Those are what I've pushed. A lot of times what's interesting is I'll mention something, and somebody else picks it up, and I'm fine with that. Somebody else pushes it, and the visioning is a great example when I came back on the council. I'm a good-idea guy, but I'm not a follow-through guy all the time. I know that. But Michelle logged onto the visioning part. She's owned it and it's great that someone has been able to take it to the next level. We talked about it. Robert Boyles and I in particular, when I got back on four or five years ago. It was right after we had gone through a catch shares exercise where we brought fishermen together a workshop, tried to see if the snapper-grouper fishery was ready for catch shares. Unfortunately, we were close, but we didn't quite get there in that exercise. Fishermen weren't quite ready for it. We have a group of fishermen that are ready now, we have a group that aren't. So, we'll see in the future how does that go. But yes, I'm pretty proud of what I've been able to accomplish on the council overall in a number of different arenas, bringing management options forward. Golden tilefish was probably another one where I went down in flames on the endorsements in the beginning. Not so much the endorsement part of it, but I think the council bought into that for the longline fishery. But I wanted the fishery separated out, banded fishery at some percentage, and then the longline fishery. The first time I did it, I felt like a barker at the carnival. [laughter] Or no, not that guy, the guy at an auction. [laughter] "Can I get twenty? Can I get ten? Can I? Can I?" [laughter] So, I went down from I guess,

twenty-five all the way to ten percent by the time I was done. But I went back, I did my research, I wrote a paper and brought all that before the council. I've done that in a number of fisheries. I've written papers about why we should do management in a certain manner. After I did that, I used scientific papers based on what was done in the past, how much hook-and-line fishery there was. It was a hundred percent back in the day when I fished golden tilefish. Then it became almost a hundred percent longline. So, somewhere in there, there's a happy medium where you can bring the historical beneficiary, because there's still some of us around that remember those days where we enjoyed golden tilefish fishing. But after that longline fishery, it really exploded way too fast. The council could never get a handle on it. They just slashed and burned the whole coast. Then after they came through a number of times, then we couldn't catch enough fish to make it work. They still could. They were still able to catch enough fish by putting out more and more gear. But from the banded perspective, you need to have a healthier population. You need to have more fish in a given area to make the banded fishery work. That's been obvious from seeing people try and fish outside. We have a long line closure. That's another thing I've been proud of. We were able to do that. I put that option forward from St. Lucie through the rest of the council jurisdiction. We have that closure. That closure helped to repopulate other areas because those animals were allowed to grow. The banded pressure wasn't strong there for a number of years because there weren't enough fisheries to support it. But over the years, fish got big, started producing more eggs. Some of that was able to be carried north to the Gulf Stream and repopulate other areas. So, that was a great thing. So, there are interactions like with the tilefish. Getting the closure was the first thing, and then come back later, then try and reintroduce the gear that was the prominent gear, the fishery, in the early days. Try and restore some of that hook and line fishery back into the mix. It looks like it's going to work so far.

CPW: Do you have any advice for a young person who might want to get involved in fisheries management?

BH: Yes, get involved. [laughter] That's my advice to all of them whenever I come in contact with them. I see some of these young guys, and I always take the opportunity to talk to them when they come to my public hearing. I said, "This is part of your business plan." I said, "Even more so now than ever." You have to be involved and stay tuned because everything we do impacts you. You need to be part of the process. You need to bring your views into the arena. They may be different than mine, but so what? Those are what you think is going to propel you, benefit you in the future. Some of these new guys are real go-getters and will be successful. How many of them? There are very few that will participate at the level that I do. There's not many me's, I can tell you that from a management and fishery perspective. I can't get a twenty-six-year-old kid who can stay on the boat as long as I do and continue fishing anymore. [laughter] It's just me. But I keep trying. We've got this good core group of fishermen and I hope that continues to grow. I keep telling fishermen to get involved in some of these organizations. We've got industry scientists that we support, and we've been able to make major changes. We don't blow our horn very well, and we don't get that out very well for other fishermen to buy into, and that needs to change. But fishermen need to be involved. If they don't want to spend the time, they need to put their money forward to an organization that will represent their interests. That's critical. I've tried to get that point across to our young guys, and I think some of it's sinking in. I see more and more of them. Once I've talked to them, they seem

to start coming to the public hearings more often. So, some of them are getting it and that's a critical thing. Be involved. It's your livelihood, you need to be involved. Some people have never gotten it. In fact, most people don't. Most people, "The council's going to do what they're going to do and I'll just sit here and suffer." I think back on my career and one man can make a difference in this process. There isn't any doubt about it. One man, with a bunch of other people who are engaged, can make a big difference in this process. So, that message needs to get out. It'll be in one of my *Chairman's Corner* that's coming up here pretty quick in the next issue or two, where I talk about that. The other thing is trying to move to get fishermen to buy into doing their own research. Get fishermen to set aside a portion of their income. Not that you'll ever see it. It's got to come out of the fish house. Some percentage of your income that you're willing to set aside to do the necessary science, to invest in the science it takes. We talk about it. We do it on a small level now, but to get everyone involved and everybody motivated to get better science. You're going to have to pony up some money to do it because the money's not going to come out of the federal budget now. So, if we can get a partnership going with Southeast Fishery Science Center, where we do all assessment grade science to answer all assessment questions that are posed at the end of the assessment. There's plenty of them for a number of species. So, we want to answer those questions using our platforms. We could do it much more cheaply. Some of the guys are willing to donate the platforms for nothing. Those types of incoming things and with some money, we could do a lot. We could change. We could answer a lot of the questions that solve the uncertainties and assessment because uncertainty means less fish. If you equate uncertainty to landings, the more uncertainty your assessment is, the less landings you're going to get from a commercial and recreational perspective. The other thing is trying to convince the recreational fisher to get on board. "Hey, this is impacting you as well." They haven't ponied up to the bar very well as far as trying to get better assessments. They don't see the value that we do in it. Hopefully, that will change sometime in the future because that's real money. A real mobilized recreational fishery could produce a lot of research. Have better fisheries and better access to some of our more restrictive species. You out of questions yet?

CPW: I am actually. Is there anything else you would like to mention or think we should talk about?

BH: Just for me, from my perspective, it's been really rewarding to match the fishery with the men. I always say that I've been able to help with in the process has been really rewarding to see the impacts on fishermen. Some of them get it. Some of them know that have watched my involvement over the years. Some of them know that it's made a real difference, and some of them really appreciate it. Others don't have a clue. I've gotten more feedback from fishermen in this go-around than I have ever before about, "You're helping. You're making a difference in a system that's very hard to do especially this time around." It's been great. [laughter] You good?

CPW: I am good. Thank you so much for doing this.

BH: Yes. Well, thank you. These kinds of things don't come around very often. These types of histories are valuable for people to actually sit down and listen to different perspectives of different people through the management process. So, I don't know how this is all going to be used, but if someone wants to go back and look at it, it's there.

[end of transcript]