Female Speaker: [0:00:00] Okay. It's April 16th and we're with Capital Van Hubbard. And I guess, what is this area? We're just...

Van Hubbard: [indiscernible] [00:00:09] it's between Englewood and [indiscernible] [0:00:13]

Female Speaker: Yeah. So, first I would like to ask if you could tell us a little bit about your role in the fishing industry and how long you've been fishing and what your target species are and just little bit of background on that?

Van Hubbard: I grew up in the Tampa Bay area fishing professionally since I got out of the navy in 1970, started off fishing off piers and shores up there around Mullet Key and Tampa Bay, selling fish, selling excess and, you know, eating fresh fish and selling fish. Then, I started commercial net fishing. And 76, I got my captain's license and started guiding. I started off fishing the big boats offshore and saw that there was no living in that and so I started fishing inside and near shore, you know, king mackerel or the biggest things, king and Spanish mackerel, the big things, spring and fall before 86 when they shut everything off.

When – if it was windy, I fished inside for trout and redfish. It was – there were mackerel or king fish who grouper around and go outside and fish – just fish whatever was available that you could – that you people want to do that we can safely do. Moved down here in 81 and I fished back and forth so probably about 86 when they shut down the king fish. [0:02:00] I still did some net fishing up until 95 with a net ban but it had gotten to be such a mess that it wasn't really worthwhile most of the time. My preferred net fishing was trammel net fishing for trout and redfish instead mullet stuff. I mean, I did that and the money was there but I preferred trammel net fishing – trammel net fishing.

And I would work the same fish net and then I would on my charters, the - I just didn't beat him up and, you know, the way I totally stayed on top of what was going on. I had the biggest bunch of fish every two weeks. You know I had about six or eight spots and get two, three, four, five hundred pound fish and then do charters in between. And if I had a charter that was guaranteed money, I took that. And I took the, like commercial fishing so I was on the water all the time. I was on the water a good 300 days a year from early 70s through days and nights, sometimes through the late 90s probably. And then not as much since the last 20 years and almost totally charters and I still have some – still have a commercial RS license but pompano was the only thing you can ever catch any of them. That's hook in line and it's just, you know, the fish with the net ban, everything, the fish houses are gone and everything. So, it's just a mess.

So thank God for charters but this – the water quality, you know – and I have been writing also since the last 80s outdoor water-related starting with Boca Beacon, Boca Grande and I've [0:04:00] written for the Sarasota and Englewood and papers, as well as some magazines. I had a TV show for about 10 years on saltwater fishing back in the late 80s or late 90s. I was founder and second president of Florida Guides Association and

active in marine fisheries since the 80s. I used to help Mike Murphy with fMRI with the redfish captures, traveling that redfish captures and stuff.

I screwed up the last time. We wanted 300 and I can only get 292 in one stride but I did the best I could. That was the last strike I ever got. So, I made on hard sand too where we could wait around with no problem tagging them and everything. I worked with the stock enhancement advisory board that can adapt set up. We did the aquaculture criteria. I've worked with Mote. I've worked with [indiscernible] [0:05:20], Aaron Adams pretty well. Most of the people that have been involved one way or another, one time or another, I've worked with them. I'm not personal friends or anything but – Guy Harvey even knows who I am, you know, so we've had a chance to talk several times. He did that a couple of symposiums up in St. Louis and I got to speak with him and everything up there. And my friend went to introduce and he said, you know, I know Van and I know of his work.

I do the best I can and it's really [0:06:00] depressing because the water quality has gone to hell. And in my opinion, one of the biggest problems is Swiss spills and infrastructure failures, Phillippi Creek up in Sarasota is one of the worst ones that affect us locally and you look at the way the water flows down from, out Venice past and it's not rocket science. You know, they literally have to shut down Venice beaches. You'll welcome to do the homework and check out the things, you know, you got the way to do that but there are three, four or five times a year shut down [indiscernible] [0:06:41]. And then every time we have a serious rain event and then they always are having spills.

Phillippi Creek has a treatment plan up there that, I forget all the figures but I found an article that I posted on Facebook recently that, you know, it's just thousands of gallons, millions of gallons over time, it just constantly still. It's semi-treated now but it's still 10 times what it's supposed to be. And I understand that red tide is a natural thing. I've dealt with it forever. Social media made a bad problem and worse with the publicity. But, you know, it's the only way anything is going to get done. So, you know, the Tampa Bay is a contributor, a huge contributor to our problems. And the bizarre part is Tampa Bay itself has improved since I left up there. And the money that started pass – some of the initial seed money that started Tampa Bay Watch for sea-grass planting up there were paid for by those damn commercial net fish ran [0:08:00] by a net license that I helped put together.

And, they got it long before we did and Tampa Bay Watch came along and it's done a good job of keeping them aware of it and things are really improving up there from everybody I understand. Down here, I don't know what the deal is but it is not getting better. It is definitely getting worse. We have water quality issues. King mackerel, for example, don't come ashore here anymore. They haven't for at least four years. The pompano don't come through here anymore. The macro moves through but – you know, bait schools move through but much faster than they used to, just whole last through instead of hanging out.

Today I fished hard before people and we've got two bluefish, two pinfish, a lizard fish and a catfish in four hours of fishing from [indiscernible] [0:09:03] right out front here. I finally end up coming to the Marina and showing them manatees and dolphins to bail a trip out because I couldn't catch any fish. That's depressing.

Female Speaker: Yeah.

Van Hubbard: And I know that there's a few fish around the docks and stuff but very few of the areas even [indiscernible] [0:09:25] the most of the bay is covered in rolling moss, the good grasses. The weather's too stirred up show you anything for us, but the good grasses are all stirred up and coming up with red algae rolling moss, whatever you want to call it. The same stuff is coming up on Fort Myers beach. As soon as this water gets just a little bit warmer here and what is the value of temperature on that, probably about 80? When that stuff starts dying?

Female Speaker: The red...

Van Hubbard: Red algae.

Female Speaker: That might be.

Van Hubbard: Well they start to die some now and when it really starts to die, then it starts coming up [0:10:00] down there when it – when it hits that [indiscernible] [0:10:02] temperature, it dies, get so sweet like they're running into down there right now. And it's just a question of time before it starts coming out here. The storm is going to blow stuff around and it makes it hard to fish in areas when it dies off up in the areas that don't get as much tied up in North in the Lemon Bay. You idle over a spot on a calm day and you can't stop and fish there because it stinks too bad. And this is right off shore so hard. You know, this is not often houses and stuff. It's a park up there, you know, which should be between [indiscernible] [0:10:38] water up there.

Female Speaker: When did that start? Like when did you notice?

Van Hubbard: It's – well we used to have a lot more sea lettuce, the big green Ulva, I think they called it. And that hasn't been as bad recently. The red algae and the green snot grass we call it, you know, when it dies it turns black and stinks and gets gross.

Female Speaker: Yeah.

Van Hubbard: Those two seems to have taken over more the last 15-20 years. You paid – you really had to be careful over when you were net fishing because, you know, especially the snot grass, the green algae, they role on marshy. If it roll out of the net, the Ulva, you could pretty well roll out but boy that's not grass got tangled up in your net and you're just – you literally had to wash it off with fabric software and stuff, you know, to dry it out. It just – it was a nightmare.

Female Speaker: And I know that feeling.

Van Hubbard: And it's nightmare now, we [indiscernible] [0:11:44] a real nightmare. So, I've got a fair understanding of most of what's going on. I follow a thing called ecovoice. I got [0:12:00] an email from them every day. The eco-voice moderator, you're familiar with it?

Female Speaker: Uh-uh.

Van Hubbard: You should be and...

Female Speaker: Yeah, that's something I definitely – oh it's an app?

Van Hubbard: It's...

Female Speaker: Where they send you an email?

Van Hubbard: Sent me an email every day.

Female Speaker: Very cool.

Van Hubbard: And it's supposed to be impartial and I try to be - but, and it includes a little of everything [indiscernible] [0:12:34] and whatever. But it's just one of those things that I can scan through and pick up a lot of articles.

Female Speaker: Eco-voice...

Van Hubbard: Yeah. There's another thing that I get a lot of information from that I use some in here, was the Chesapeake Bay Program and it's about bay restoration and everything and the stuff that you went – gone through up there. The problems they've had up there. One other thing that you might be interested in following is called the fishing wire. It's the fishing industry daily newsletter and it covers a lot of what's what and there's a lot of stuff, you know, interest to you on there but the track, what's going on, who's who in the industry and stuff. There's a lot of great information there and it can help you with finding contacts and stuff.

And if you want to write something or something there would, being with the school and everything and with known on everything, you can publish your own little thing in there. If you need to, looking for information about this, that or the other, just...

Female Speaker: That might be a great source.

Female Speaker: Yeah, that's a great idea. I think we're [0:14:00] definitely going to check that out.

Van Hubbard: And then there's one more. It's Coastal News and it's about the dredging fill projects, the beach renourishment projects, etcetera and all kinds of coastal stuff there. So I try to scan through them every day if I can and I share it on social media and stuff and raise hand where I can.

Female Speaker: Yeah, try...

Van Hubbard: ...trying to be constructive, not educating.

Female Speaker: Yeah, I know. It's really important that...

Van Hubbard: Yeah, but I just want to emphasize that, you know?

Female Speaker: Yeah. You know it's important that people are organized around this and are talking to each other...

Van Hubbard: ...and trying to use factual information instead of emotional babbling, yes.

Female Speaker: Yeah.

Van Hubbard: And I'm about to throw in the towel because – between paperwork and the regulations and the weather just for fishing with the red tide and everything, I'm not as young as I used to be and it's getting to be that the effort is starting to exceed the rewards. Most of the trips I'm pushing now are just kids trips, you know, and with normal conditions even if I have to catch a little junk fish, I can catch them a good time and stuff but like right now, I can't even find ladyfish all the time right now unless I can get outside.

Female Speaker: Uh-hmm. When you say junk fish that's like the catfish, pinfish ...

Van Hubbard: Not, not – well not food eating fish.

Female Speaker: Yeah, such as...

Van Hubbard: When I say junk fish in like in a nice way, I mean, you know, the [overlapping conversation] ladyfish and Jackson stuff that [0:16:00] are fun to catch, but not food bait, yeah.

Female Speaker: Yeah, right.

Female Speaker: Yeah. So, all of these newsletters and articles and websites, I'm going to check all these out. Also, if there's anything you come across or anything that you forgot to mention, you have my email so you can send them to me. Because, yeah, I know this project is hopefully going to turn into some future studies. And, you know, it enables us to kind of have – and create a database retroactively, create, you know, figure

out how red tides have affected areas over time and so that's a big, big part of what we're doing with this project.

Van Hubbard: Let's see. I'm just trying to find something but I don't really know how to do it. I guess I just get lucky.

Female Speaker: So back in 81 and if we talk just about the 80s, do you remember was there a significant red tide and what was kind of the first red tide you experienced in this area?

Van Hubbard: I don't remember exactly when it was but through the early 80s, we had phenomenal fishing. The – historically they report when we had red tides and stuff but even when we had red tides, they didn't hurt as big of areas. They didn't stick around. They didn't – usually they didn't stick around as long. My experience leads me to believe that we've had our worst red tides after [0:18:00] big storm, hurricane type events where we had a big flushing that didn't normally happen. And I understand clearly that red tide is a natural occurring thing but it doesn't seem to be rocket science, not a stretch for me to figure out that the more nutrient it gets, the worse it is. And I'm really disappointed that they finally are pointing out that leaving the dead fish there just contributes more nutrients to more red tide like the...

Female Speaker: So these red tides that you saw, the natural occurrence, how long did those usually last?

Van Hubbard: You know, that's – there's things I can help you with and things that I can't. You know, you can look that up in the record books. I have no idea. I've been chasing my tail making a living all my life and figuring out when – when I disaster, I figure a way to work around it and survive it.

Female Speaker: Yeah. So let's talk about that. So, what do you do when you're fishing and you know there's red tide in the area, how do you work around that?

Van Hubbard: Well it depends on how strong it is, what I'm fishing for. This last year, when I could, I would just ride through a few dead fish to get offshore to fish, when it was near shore. Then they got offshore too and so there was nothing you could do. So I starved for about eight months. In the past, there was usually an area, you know, we had a network of fishermen. We didn't have the all – the cellphones back in the day and stuff that we do now and everything but we still had a network of people where you could pretty well track where it was, where it was going, how fast it was moving, and how to work around it.

[0:20:00] And even though the fishing around red tide is nothing you want to do, but if you know what you're doing, there can't be some phenomenal catching around where fish are bunched up outside of the red tide water. If it gets too close and they're starting to sense it, they won't feed but, you know, I've had phenomenal fishing of all kinds of fish or most kinds of fish. I've never caught king fish or mackerel around it very, very

close to it but the last push of king mackerel we did have, we're moving five miles south every day we had a red tide.

Female Speaker: So, what are the fish that can sunset and move away with species?

Van Hubbard: Snapper seemed to be better than most and it's not definitely or better than most at it. They can get caught, big time they can get caught but most of them, they seem to be smarter at it. We've had two or three major kills of the breeding red fish out here in the last 15 or 20 years. And as example of the frustration you deal with, I call fMRI and tell them the fish killed, reporting line and stuff and tell them about it that they need to get out and check it out. And the wind is blowing 15 to 25 from East for several days. They're about eight or 10 miles offshore. I had a friend that flew from Egmont Channel to Boca Grande Channel because [he] was October and he said well, do we go duck shooting or do we go fishing on Saturday. And I said well get your ass in the airplane and fly back and forth. If there's dead fish, we'll go duck shooting. If there's no dead fish, we'll go fishing. And he said there was dead redfish, you know, a mile or two wide for 50-60 miles there. So I [0:22:00] called and reported and, you know, I called to check a week later...

Female Speaker: This was this past year?

Van Hubbard: No, this was probably 15 maybe – good 15 years ago.

Female Speaker: Okay. Do you remember [overlapping conversation] [0:22:11]

Van Hubbard: We had a couple of bad fish kills in the Gulf. Two of them a few years apart, 10 to 15 years ago that really wiped out the redfish, the breeding redfish. And by the 10th of thousands and I think that I'd report and I called them and they said oh, we couldn't get out for about four or five days and when we did get out, we didn't see anything. And I'm going well, you know, why should I bother to call, you know? It's just like, I remember in 10 when we had the snout killed, they'd called me, you know, how bad is this snout killed, what [0:22:58]. I said get your ass in your airplane, get in the helicopter and fly around and find out how bad the fish kill is, you know? Oh, we can't. They're tied up with manatees, you know. When they can't – they can't use them for fish. They're tied up with the Manatee County.

Well and just one more quick thing here that you'll love this one too, you know, and -I mean, you know, these are supposed to be the experts, okay? Well, you know, how come we don't find any little fish with these snout kills and stuff like that, you know? And I said well, did you notice that when you pulled up there, there were birds sitting all over the place and I'm like this is stuff like that. Do you think maybe they swallowed everything that would fit in their mouth? Oh yeah, I never thought about that. You know, like, people, come on.

Female Speaker: Yeah.

Van Hubbard: And so, you know, I used to have - I used to be in [indiscernible] [0:23:53] used to run to other people and I tried working with and try helping out and the people that are there now are [0:24:00] concerned, like too many of them with but they're more concerned with their job and their retirement than they are with anything changing or doing anything.

Female Speaker: Yeah. So with the two big redfish kills that you mentioned, were those related to red tide?

Van Hubbard: Absolutely red tide, no doubt about...

Female Speaker: Okay. So those were both red tide?

Van Hubbard: Absolutely.

Female Speaker: So there is one, you said 15 years ago. So maybe like...

Van Hubbard: About, you know, again that's not my forte, you know?

Female Speaker: Uh-hmm.

Van Hubbard: But 10-15 years ago there was two of them. I have a friend that might be able to check with you, might know but we had two big - two major spawning in October, fish kills that were killed the spawning offshore, breed stock of redfish and we haven't had a worth a damn redfish around here since.

Female Speaker: So can you give me some more examples? You talk about how we can change your fishing, to work around the red tide and it depends really what you're fishing for? I'm really interested in knowing, you know, if you're targeting a certain species, you know...

Van Hubbard: We used to could do that. Now, between – well like for right now, it's hard to adjust when you got speckled trout which are wiped out to target for food fish. Pompano which are migrational and Spanish mackerel which are migrational to fish around the passes and near shore and in and out and sheepshead which you only catch when they're spawning in February and March pretty much. So [0:26:00] with trout and with snook and redfish both closed, it's not like you got a lot of different places you can go and do. The snook are usually smart enough to stay around. If they do, definitely get caught but they're – most of them seem to stay around and I have some showed up already on the offshore reefs, on the artificial reefs out in 30-40 feet of water this year which was a good thing to hear.

Female Speaker: How long did it take them to come back?

Van Hubbard: I don't know how many have come back but there are some fish showing up there because there are some being caught. The water hasn't been clear enough for

people to be diving to really see because every time the water tries to clear up right now, we get another storm, you know, like we got the [indiscernible] [0:26:47] we get hammered again. Get out for a few days and get ready to get hammered again.

Female Speaker: So was red tides in the past, did they cause any health impacts for you or?

Van Hubbard: You know, when I was younger, excuse me, it wasn't so bad. I can work around the more but this last year if I had to ride through any actual red tide where it got me coughing and stuff like that, I'd have a headache at the end of the day. And so I wouldn't feel like going back out for a few days. So, I'm pretty well I have to quit, you know. If it wasn't clean water, there's nothing I can do.

Female Speaker: Yeah. Has it stopped you – so it will...

Van Hubbard: It shut me down for seven months, from May of last year until after the first of the year.

Female Speaker: Uh-hmm. And part of that is just because you know if you're going to go out, you're going to get a headache and then be coughing, not be able to find fish.

Van Hubbard: Well I know it's going to be hard to find fish. I know I've got to ride through dead fish. And I know that I have to worry about getting me and my people sick for a start, you know, and I'm not going to be able to get my people the quality of an experience that, you know, they're going to want to come back here and talk [0:28:00] about the area, so, you know, it's just a lose, lose.

Female Speaker: Do you think that red tide in the past has affected spawning aggregations?

Van Hubbard: Absolutely.

Female Speaker: So which one in specific?

Van Hubbard: Biggest ones will be redfish.

Female Speaker: The redfish?

Van Hubbard: Yeah, but it definitely has – trout are very delicate so it affected them. Flounder are very delicate, it affected them. I don't know what's affected, why they seem to be pretty well wiped out. We used to have whining all the time but we don't have whining anymore either. Let's see, snook of course because they're very delicate. And they congregate around the passes and do their spawning and, up and down the beaches and all. Several times that red tide here was pouring right out there during their spawning times. And so – and our snook populations are way down. It's a combination of things.

Female Speaker: Are there any species that are affected?

Van Hubbard: Not that I'm aware of.

Female Speaker: Uh-hmm. So even with the fish that move away and their [desegregation] change, right?

Van Hubbard: The – when the red tide is strong enough to where it kills the bottom, the natural bottom, the corals and the sponges and stuff like that, it takes it longer to recuperate and my area up here was dead. It's just trying to come back right now. We'll see what happened. It was trying to come back right now but it's been dead most of the last 10 years. And two reasons, one is definitely the red tide and the other one definitely is beach renourishment. Because every time you put sand [0:30:00] north, then it washes down on it. The sand they use is the offshore sand that's dredged up, which has a little tiny salty particle in it that every time we get any little bit of sea breeze on the beach, it turns it up and turns the water 20 or 30 feet off the beach silky, no milky. And sunlight can't penetrate through it and fish don't hang in and it clogs up their gills and stuff like that. So, it's the combination of those things.

Female Speaker: Uh-hmm. So, in the past, how many other large events, so you're saying there were two, besides these two redfish kills from red tide that were 10 years apart?

Van Hubbard: No, they weren't 10 years apart...

Female Speaker: They were a couple of years apart, 10-15 years ago, right?

Van Hubbard: Yes.

Female Speaker: Okay [overlapping conversation] [0:30:53] besides these two that were a couple years apart...

Van Hubbard: Those were just the ones that were bad on redfish.

Female Speaker: On redfish.

Van Hubbard: We've had – other ones we – oh, here's a major thing that, my letter definitely stressed because of red tide, because the last three or four years around here every time the fish [indiscernible] [0:31:20] they get together to spawn in the fall, November, December, January here. We had at least one or two bad molecules up in Broward County, Florida and Charlotte Harbor in the last few years. We've had three or four years of everything that got offshore to spawn, was killed out there with the red tide. So we haven't had a good model at spawn for three, four, maybe five years. And it shows me, you know, you go riding around, there's very [indiscernible] [0:31:56] it's something special to see [indiscernible] [0:32:00]

Female Speaker: So it sounds like there's kind of this regular or like a typical red tide that's patching, you can get around and then there's some that are worse in cause massive fish kills and so...

Van Hubbard: And there's no typical red tide. Everyone is unique. And some of them we can work around, some of them we cannot.

Female Speaker: So as far as duration, like how long they last in your experience?

Van Hubbard: I've seen them around for a week and I've seen them around for years.

Female Speaker: You've seen a red time that's lasted over a year?

Van Hubbard: Over a year.

Female Speaker: Do you remember how many times you saw red tide that lasted for over a year?

Van Hubbard: I think three different times. This last time being, you know, the one that just recently broke up being the last, but about three times.

Female Speaker: So with the other two times...

Van Hubbard: We had one, I'm trying to remember how many years back and, you know, it would seem to clear up for a while and it would come back but we had it all through all different times of the year because I remember we were thinking oh my God, it started in the warmer water. We thought we're going to get rid of it in the cold water, we didn't. And then when it started getting warm again, we go oh my God, you know we're really chopped liver now and end up and died off and left us alone. So it's my experience is everyone is unique. There must be different sub-streams and some of them are more cold tolerant. Thank God none of them are brackish water tolerant that they have to have a high salinity. So that's the only saving grace I know of in some areas **because a lot of fish do get up into the rivers [indiscernible] [0:34:00] and st**uff and avoid it.

Female Speaker: Yeah. So the other two red tides that you said lasted over a year, was that in the 2000s or was one in the 90s?

Van Hubbard: I remember one real bad one back in the 70s. That was in the Tampa Bay area when I was up there. We had one down here. I can't remember exactly how long ago, but we've had several long duration ones down here. And it almost seems sometimes that we haven't had any time and haven't had much time in the last 10 to 15 years so we didn't have some around somewhere.

Female Speaker: So, pretty much seeing red tide to some extent, every year?

Van Hubbard: Pretty much recently.

Female Speaker: Yeah. When you say recently...

Van Hubbard: For the last decade.

Female Speaker: Last 10 years?

Van Hubbard: Yeah.

Female Speaker: So, do you remember approximately when the last red tide that lasted over a year when you got cold and then it got warm again?

Van Hubbard: I wish I could but I remember a lot of different things with numbers and stuff like that day, that's not me, you know?

Female Speaker: Uh-huh, yeah, no, absolutely.

Van Hubbard: I can tell you where to look for what when the water temperature is this or the wind is that but, you know, the dates that's just not me.

Female Speaker: Yeah.

Van Hubbard: And I've tried keeping a log book and stuff but it just never worked out.

Female Speaker: Uh-huh. Yeah for sure, I know. I'm actually on the same way. I have to write everything down there. So, yeah I know dates are useful because, you know, they help us kind of compare [0:36:00] them to other stuff especially with the mapping stuff. So if you do remember that a bad one happen around somebody's birthday or something like that.

Van Hubbard: They all work with Florida Sea Grant from US at all or anything?

Female Speaker: I don't think so.

Female Speaker: I'm working with one of the researchers, University of Florida. It's on lot of red tide modeling with...

Van Hubbard: Who's that?

Female Speaker: [indiscernible] [0:36:23]

Van Hubbard: Florida Sea Grant is through the University of Florida. Our local agent is Betty Staugler. She has all the red tide dates compiled and together and, you know, that's somebody that can save you of all the homework there.

Female Speaker: What's her name?

Van Hubbard: Betty Staugler.

Female Speaker: She's at UF?

Van Hubbard: No, she's our – she's Charlotte County, Florida Sea Grant agent. And it's an excellent bunch of people and as long as you don't run into the usual bullshit of my school can help your school [indiscernible] [0:37:16]

Female Speaker: Yeah.

Van Hubbard: We'll see what happens with it all. I'm trying to find their phone number for you, 941-979-6328, STAUGLER, I believe.

Female Speaker: ST...

Van Hubbard: ...AUGLER, I believe.

Female Speaker: Okay. Great. I'm definitely going to give her a call [0:38:00].

Van Hubbard: And tell her I'm the troublemaker that threw under the bus.

Female Speaker: Okay I will. So you mentioned Philippi Creek.

Van Hubbard: Yeah.

Female Speaker: Is that on this chart?

Van Hubbard: You know, I can't really see it. I'm – I would think it would be easier to do this kind of stuff off Google Earth on a laptop, touchscreen laptop or something but that would seem like the easiest way to do this stuff but I can't see through your thing very well, Philippi Creeks up here in Sarasota.

Female Speaker: Okay.

Van Hubbard: Let's see where we are. There it is right there. What did that say? Did it say Philippi?

Female Speaker: Yeah.

Van Hubbard: Okay.

Female Speaker: So that's an area...

Van Hubbard: All right. You see and that is just south of the next open pass, okay? There used to be a pass – midnight in here somewhere that's closed up. And so now everything from here down comes out [indiscernible] [0:39:06] Sarasota Bay by the way is dead too right now. From here North there are some fish but Sarasota Bay is pretty well dead too according to the guy friends I have up there.

Female Speaker: Yeah. Yeah, I know we're definitely going to talk. We've been moving up north from the Everglades, interviewing people and I think Sarasota in this area is where we're going to go next.

Van Hubbard: There's a place called Mr. CB's up there, Aledia Tush that has a bunch of guides that you can talk to...

Female Speaker: Aledia Tush?

Van Hubbard: Aledia Tush. Mr. CB's is the name of the bait shop. She's the one that owns it. I don't know how much she's in there anymore. And then there's Scott Moore. Scotty works with Mote a lot but, he's also a past president of Florida Guides Association.

Female Speaker: He's a fisherman?

Van Hubbard: Yes and fishing guy and has been forever. Very active with CCA and stuff. Scott's number is 941-713-1921. And evenings is the best time to catch him or during bad weather.

Female Speaker: And then you said, Aledia Tush and that's...

Van Hubbard: Aledia Tush. Mr. CB'S bait shop. The bait shop has a bunch of guides that work out of there and somebody there should be able to give you some names to some of the ones that you can talk to there. And are you going to go up as far as Tampa Bay?

Female Speaker: Yeah. We have, I think Mike Jackson and some of the guys at the Sierra office, starting to go further north like Tampa [overlapping conversation]

Van Hubbard: All right. You should be talking to Dylan Hubbard up there.

Female Speaker: Yeah.

Van Hubbard: Yeah.

Female Speaker: Yeah. We're in touch with Dylan and [Assad] and everyone, yeah.

Van Hubbard: Yeah, yeah, they're good friends. And there's a guy Bill Miller, 813-363-9926, that he's not as active anymore but his son still fishes and he [0:42:00] fished all of his life, Carter Springs down here.

Female Speaker: And he's in Tampa?

Van Hubbard: Tampa, yeah.

Female Speaker: Okay.

Van Hubbard: And he's fishing mostly Anna Maria now.

Female Speaker: So far as this past red tide, I'd love to have you kind of map out areas where you saw it or areas that you think are hot spots or anything that you think...

Van Hubbard: Well, again, everything from Venice Island [indiscernible] [0:42:40]

Female Speaker: And you can just go ahead and draw right on the paper.

Van Hubbard: Well what – why don't we use the red one for red tie?

Female Speaker: Okay.

Van Hubbard: Anywhere from just north to the Pass, south and down the hallway and definitely toward the middle is the hotspots where it seems to start.

Female Speaker: Uh-hmm. Why do you think this is the area that where it starts? Is there any reason or theory you have?

Van Hubbard: Yeah. I explained to you from Phillippi Creek down, everything comes out there. You have a continuous flow out of nutrients out of there. You have, there's one or two different areas including a – one off somewhere right along here. There's a pipe comes out, a runoff pipe and there's [0:44:00] also a big boiling [indiscernible] [0:44:08] there's a boil of some kind of treatment plan right there by that bridge at Venice there.

Female Speaker: By the bridge?

Van Hubbard: Yeah, across the Venice Island, the bridge there. There's an outflow from water treatment plant there. Again, it's all public record, I know but as the – just looked up how many times and Betty wouldn't have this because this is Sarasota County, but several times a year, Venice public beach is shutdown from shift in the water. And there are frequent closures from spills. And all of this stuff from here down, you know, we catch the brunt of it. Pinellas County in the Tampa Bay area create part of it but in my opinion, my guess is that because everything from Tarpon Springs north is just a few little rivers. Each little river is a problem for that little river and southwest swift mud is

dealing with all that and trying to do away with the septic tanks up there and everything. But the - you've got all like clean water coming down from the Big Bend all the way down and, you know, just hundreds of miles of grass flats and everything to give you a lot of good water. So it doesn't really - as it gets down here and [0:46:00] starts mixing with our –with the other passes and Sarasota Bay and everything, it get caught up and we pay for – we catch their shit. That's the best way I can put it.

Female Speaker: Uh-huh. How far, usually like off the beach?

Van Hubbard: I've seen it way offshore but when it's around, I'm not going offshore. So, you know, I don't know but I have seen it way out. I can remember having red tide bloom when I would be out fishing, some of the artificial reefs here and stuff and I'd be out fishing artificial reef in the morning and it'd be beautiful. We're catching big redfish and come back in the afternoon. And everything's gone. The waters turned red. The fish have died literally in a matter of two hours while we ran in with one crew, had lunch and came back with another.

Female Speaker: Yeah. So this area then is the inshore area?

Van Hubbard: Yes. It's the worst area for us in my opinion here. And it usually starts on the end and it starts – always start on the outside. Once you get down the middle of [indiscernible] [0:47:11] is another area that we run into problem and my guess is that, you know, you got the stuff coming out but you've got [indiscernible] [0:47:21] circulation furthers from the passes. So, you know, stuff accumulates there and the sunlight gets on it, it blooms. And once it gets started, it's feeding itself but it kills.

Female Speaker: So is this the same area – is this descript of kind of like the 2018, the past red tide area that you saw?

Van Hubbard: I can comfortably say that most of the red tides in our area have started there...

Female Speaker: [0:48:00] It started kind of in this middle area and then they spread out...

Van Hubbard: Further last, yeah. They spread out depending on the winds and currents in for the last 20 some years anyway.

Female Speaker: So this is the usual way where you...

Van Hubbard: That's ground zero.

Female Speaker: Here first and then it spreads out either way?

Van Hubbard: Yeah.

Female Speaker: And then you see it offshore but when you see offshore, it's kind of like patches?

Van Hubbard: I've seen it, patches and I've seen it everywhere.

Female Speaker: Yeah.

Female Speaker: When you were offshore, did you ever see big blooms or like dead fish?

Van Hubbard: Oh yeah.

Female Speaker: Dead – what kind of species were you seeing?

Van Hubbard: Everything.

Female Speaker: Everything.

Van Hubbard: I've seen everything. And you see a lot of stuff that you didn't know it was there, eels and stuff like that, about everything.

Female Speaker: So is there any other information specific...

Van Hubbard: Are we in your way?

Male Speaker: No. I think it'd be all right.

Van Hubbard: All right, thank you.

Female Speaker: ...specific about red tide especially or is there anything else that you would like to add or any other weird environmental things that you've seen such as other algae blooms?

Van Hubbard: I have seen other algae's blooms. I'm not sure if – actually I think algae's and plankton is the same thing or they're two separate things, right or what?

Female Speaker: They're separate. I think algae is...

Van Hubbard: Okay. I've seen some serious plankton blooms on the surface out there. That and I've seen them inside too and I've seen brown plankton blooms that take over and just go crazy.

Female Speaker: Did those impact your fishing also [0:50:00] so you just...

Van Hubbard: They look weird but they haven't affected the fish.

Female Speaker: Uh-hmm. So you'll just see. What does it look like in the water?

Van Hubbard: It looks like a brown cloud, you know, but you see a little tiny organism and I mean it's just brown cloud.

Female Speaker: Uh-hmm. And then where do you usually see those?

Van Hubbard: I've seen them a little bit of everywhere at different times, you know, inshore and offshore, around currencies in particular.

Female Speaker: Around where?

Van Hubbard: Currencies, where when your outgoing tide goes offshore and stuff, there seems a different places and different currents or [indiscernible] [0:50:40] meeting, convergences.

Female Speaker: Uh-hmm. When did you start noticing those?

Van Hubbard: I'm not sure on that. I just remember that I've definitely encountered them. They're usually late the summer, the hotter water.

Female Speaker: So, do you have any suggestions for management changes that can help other fishermen or yourself, something that can be done to help people survive for the time?

Van Hubbard: Yeah, the simple and obvious one, water quality. Protect water quality and – because it's either sustain our environment or nobody has a reason to live here and the number one cooperate that I've seen, there's no excuse for letting them get by which is the governments and [indiscernible] [0:51:39] and stuff, continuing to allow these things, not to be prepared for these rain events. St. Pete got sued and is in the process of supposed to be fixing their stuff. And [0:52:00] the lawsuit was, they weren't convicted. They said, you know, take the money to fix the stuff and off course oversee it but I know that there was a judgment in the last year that ends pretty, I think \$160 million.

Female Speaker: Yeah.

Van Hubbard: But I know Brandon Schuler was guy that was behind all that, Dr. Brandon Shuler, who's involved with that. If you're not familiar with, you want to talk to him because he's on top and he's the science guy and the numbers guy.

Female Speaker: So, was – where's he affiliated?

Van Hubbard: He's affiliate, I think they called it water keepers. I'm not sure but he's affiliated with the group that did that last year.

Female Speaker: Yeah. And that might be water keeper.

Van Hubbard: He did that – they did that video up there too about the spills and all that. He's affiliated with all of that. He's one of the people who put that together.

Female Speaker: What about forecasting? So is any of that, are you able to use forecast for anything? Do you have any suggestions for how it could be improved or what could be done better?

Van Hubbard: Again, don't feed them. The only thing – the most effective [0:54:00] tool I see us having is reducing the food load, you know, starve it. That's all I see that, you know, really, we have a very serious control over [overlapping conversation] and emphasizing in that particular thing, be prepared to harvest and utilize the dead fish and when I say utilize instead of just wasting the dead fish, it is phenomenal fertilizer and you're not going to put it in our yard, I get that, okay. But there got to be citrus grows and other stuff like that, that can utilize a lot of this and cross effect and get it over there to them and that might even pay to have it brought up or and it's better than putting it in landfills.

Female Speaker: Yeah, that makes sense. That's a good solution too.

Van Hubbard: And there may even be, you know, I like to think of this, we're going to have this problem, you know, it is not going away. We'll also have this problem with the red algae. We have this problem with the high – water heights and stuff and the freshwater algae. And that one is that blue green algae is [indiscernible] [0:55:25] so that's harder to handle more around and stuff here but this stuff can be harvested and dried out and turned into fertilizer and some of the other stuff [indiscernible] [0:55:40] stuff like that. So instead of just oh my god, it's a nightmare I've got to deal with, you know, you're going to pay to get rid of it. You can't figure out a way to where you can get paid to get better. And prefer the cost so that you're going to be more prepared because getting people to go out and [0:56:00] harvest that stuff is not, you know, you and I don't want to do that.

Female Speaker: Yeah.

Van Hubbard: I'm not going to do that even at \$190 a day or whatever they were paying them.

Female Speaker: Yeah, I know it's not...

Van Hubbard: It's not me.

Female Speaker: If I'm very glamorous.

Van Hubbard: Yeah.

Female Speaker: What do you think about, you know, is there any way that the fishers can adjust their fishing practices or anything that would make it easier?

Van Hubbard: Not that I can say. I mean the forecasting can help you have a chance of getting around it but the currents and the weather and everything are so erratic and unpredictable that I just – I'm not saying it's a bad idea to try but, you know, I just don't – I really don't see it being particularly effective.

Female Speaker: Does it start, you know, you said like, a lot of the issues start further north and then come down and you guys have to deal with them there. So with those, are there something that if you knew there was red tide farther north that you would know what's coming down...

Van Hubbard: Well for example, when Hurricane Irma went through and they dumped millions of gallons of sewage and they had all the problems up there in Tampa Bay. It was – it started out, the patches, red tide up there and it worked its way south and we took – that's the one that took us pretty well, 18 months to get rid of.

Female Speaker: Uh-hmm, this past one?

Van Hubbard: Yeah.

Female Speaker: Yeah.

Van Hubbard: It started right after our – after this bill up there. They had all kinds of trouble and it just worked its way down and again, the farther down here, it got the more food, it got – when this one bounce back up to safety and Anna Maria, well it bounced up. [0:58:00] It got worse down here and started bouncing back up and migrate north this fall and If you'll notice, starting at Manatee County and Sarasota and Manatee County, they started harvesting the dead fish And they didn't have this long of a red tide on the beaches outside. Same thing in St. Pete Clearwater as soon as any of it got up there, they harvested it immediately.

They were right on top of it and so they were smart enough to keep number one from feeding the red tide [overlapping conversation] [0:58:34] social media circus that killed our area economically. And they bounced right back and did, you know, they took a licking briefly but, you know, they had two or three a month – two or three weeks to a month of reduced occupancy and we had our ass kick from Brighton Beach [indiscernible] [0:59:00]. We had like Venice here, Sarasota, I mean, Fort Myers Beach, we had our ass kick. We got shutdown. And that's in my opinion, the reason the government and everybody got their attention when they – we cut it on a sales tax money and their red tax money. They said oops, you know, we get a problem, deal with now.

Female Speaker: Yeah, definitely. You know, hopefully that leads to something good because I know, the governor and everyone's talking a lot about water quality now, at least a lot more than they were before. So hopefully, it gets up to better plans.

Van Hubbard: All right.

Female Speaker: Is there anything else that you wanted to add?

Van Hubbard: I'm pretty burnt out and I can't think of anything right now. It's been a long day and I got to get ready for tomorrow.

Female Speaker: Uh-huh. Scarlett, do you have any questions?

Scarlett: No. You went through a lot of stuff [indiscernible] [1:00:00]

Van Hubbard: some stuff to work with, I care about what's going on here and I don't know what's going to happen but I'm going to try to help while I can so you got my contact information.

Female Speaker: Yeah. I know you've been a really huge help with us and, you know, thank you so much again for putting us in touch with people and we're going to reach out to these guys in Tampa because we are – after a Sarasota Bay, we're going out to Tampa Bay and...

Van Hubbard: Get Betty and Brenda, the two in particular, you want to get with as soon as you can. And these guys are about to wrap up their day so you need to get out of there.

Female Speaker: Okay.

Van Hubbard: So we have a consent form. We have an online website that we're keeping up. That's called histories of the fisheries, voices of the fishery. So, if you consent to having shared with people and...