[00:00:00]

Male Interviewer: So Mark, what we usually do is start with basically have you talk a little bit about how you got into fishing, what kind of fishing you do and just a little bit of a history of your family in fishing. So how did you get started in the beginning of fishing?

Mark: That on?

Female Interviewer: Yes, yeah. We're okay.

Interviewee: Born and raised into it and my father, grandfather started back in the late 1920s and down here in Pass-a-Grill, and we're there till 1976. I was 13 years old when we moved up here up here in John's Pass, and continued party boats and charter boats and I net fished and then I charter boat fished and then I party boat fished, and that's where I am today.

Male Interviewer: Oh really. So you net fish for what fish?

Interviewee: I gill netted for mullet in the fall.

Male Interviewer: Okay.

Interviewee: And then a little bit of gill netting for the macro in early fall.

Male Interviewer: Okay. But your father -- your grandfather, were they always in the Charter Business when they started?

Interviewee: Yes. Well, they started just catching shrimp and they were more in bait fish.

Male Interviewer: Bait fish, okay.

Interviewee: Back in the late depression, early depression, no one had anything. There was a few people from St. Petersburg that would come out Pass-a-Grill and get to bait from the 8000 pier, which they would be up all-night catching bait.

Male Interviewer: Okay, okay. And then how young were you when you first started working in on boats and stuff?

Interviewee: I remember, probably catch pinfish when I was 8-10 years old.

Male Interviewer: 8-10 years old.

Interviewee: They give me a nickel a piece for them.

Male Interviewer: When did you first get your own boat and go out and start then?

Interviewee: I started net fishing, a buddy of mine and I built a boat [00:02:00] 1982.

Male Interviewer: 1982?

Interviewee: Yeah.

Male Interviewer: And then when did you start charter or head boat?

Interviewee: First charter boat was in 1986 and for first party boat was in 1992.

Male Interviewer: Okay. And so your whole family's been in this business for all this time and your son Diller was on this business. Do you have other children?

Interviewee: Yes, three others, daughters. Hey Gavin?

Gavin: What's going on? How are you?

Male Interviewer: Three daughters?

Interviewee: Yes.

Male Interviewer: And they also work in the business?

Interviewee: On and off. Not as much as Diller. He's the main guy in the fishing business.

Male Interviewer: Well, the focus of these interviews are about red tide and what we would like to do is kind of go back in history and kind of the first red tide that you really remember maybe when you were on the water and kind of talk a little bit about that. Then when we say red tide, people have this idea of what red tide is, but we know that there's a lot of other stuff. It's different colors and things like that. So, when I say red tide, just don't confine it to that whatever you think water, different changes in water color you seen on the water. But if you go back, what was the first red tide that you really remember?

Interviewee: Like 48 years ago and it was a severe red tide. I was living down in this area, right in this space in here, Dunns river basin and this whole area was crimson red and you could walk across the water on the fish, dead fish.

Male Interviewer: One thing that we would like you to do is if you could take one of the markers and just kind of trace out those areas that you remember.

Interviewee: Date?

Female Interviewer: Yeah, if you put the year, I supposed you remember.

Interviewee: 48 years from now.

Female Interviewer: 48 years ago, so.

Interviewee: Could be what?

Female Interviewer: 70, 1970s?

Interviewee: That was [00:04:00] 70, eight years old. 68, I was five, probably seven or eight, so yeah, 1970, 1972.

Male Interviewer: Okay. And what do you remember about that red tide? What's species did you see?

Interviewee: Everything and it was deep red. Red tide, I mean, the water was crimson.

Male Interviewer: Okay.

Interviewee: I was just a little kid and I was just would messed up.

Male Interviewer: Yeah.

Gavin: And that was the offshore as well.

Interviewee: I don't have any idea. I was eight years old. I used to remember because I played it the day, day in and day out, and you could see a dead fish.

Male Interviewer: And then what else do you remember about it? How did it affect your health or anything like that? Do you remember anything about that?

Interviewee: It was just, yeah, irritant, nasty smell of dead fish and couldn't play, couldn't go out and hang out on the water. That was the first one. And then I think around 1982, there was another one.

Female Interviewer: Okay. Oh, sorry. Can you talk about, how long do you remember that one last then? Do you know how many months? Was it summer time?

Interviewee: Whole summer. It was like warm, I remember so it must have been late summer.

Female Interviewer: Okay. So, it was like three to four months or?

Interviewee: I wouldn't remember.

Female Interviewer: Okay.

Interviewee: I remember that was very first one and I remember how extreme it was. From that day forth I knew what red tide was.

Female Interviewer: Okay.

Male Interviewer: And you said on species, you said everything. Did you mean finfish, were there other crustaceans or what were the other things out there other than finfish that you saw?

Interviewee: Finfish that were floating and it's mainly and it's mainly any species that were floating into all different size, make, shapes and all different size [00:06:00] and one small but large one also.

Male Interviewer: Yes. Okay. So then the next one that you remember you said was in?

Interviewee: Early 80s.

Male Interviewer: Early 80s and where was that?

Interviewee: At that point I started learning, you know, the red tide would come up from the south and we get Sarasota and it would come across the bay and come on up the beach, and we still fish. We still went offshore. So I don't think it was offshore that bad. But it just was on the beaches and…

Male Interviewer: Was it more extensive than this one or…

Interviewee: No, no. It wasn't. I have not remembered when that bad until just this last one and even that was spotty. This last one we had last year, it was the area back behind this island that had that real dark crimson look. It just looked like sandpaper in the water. I mean look like you put your hand and they come out on the bones. I mean…

Female Interviewer: And this 82 one, do you remember how the spatial extent of that or…

Interviewee: It was all along the beaches.

Female Interviewer: Can you draw and we're going to draw in a different color?

Interviewee: And move that map as she wants.

Female Interviewer: And this is the general direction of the red tide, I'm just going to make a few additional notes.

Male Interviewer: But then do you say this one in the 80s, wasn't as bad as this one?

Interviewee: Yes, correct.

Male Interviewer: And was this one more patchy than this?

Interviewee: I was mainly operating from there to here at the Blind Pass. From here, from the pass then go over here.

Male Interviewer: Okay.

Interviewee: That was my circle of influence right there and going off to Gulf [00:08:00].

Female Interviewer: And you know, do you remember how far offshore it extended or… s
Interviewee: Never really goes more than 10 miles.

Female Interviewer: Okay.

Interviewee: This last one even that, I mean, there would be patches that would blow off and go a little deeper. Some of the researchers say it starts way out in the gulf and comes in. I don't know. You know, there may be bacteria out there, enzymes or something that might spark it. But I never recall seeing I mean, fish had died near shore get blown out, but around the middle grounds or 100 of foot of water offshore, I've never seen red tide out there.

Female Interviewer: Okay.

Male Interviewer: Do you see any indication that these things were coming?

Interviewee: For years, it always starts down here and it seems to work its way up and it jumps from Sarasota over and it works its way right up in here. Even this last real bad red tide didn't really get up into this area at all. It got up to the Narrows and then somebody said we have red tide all the way up into the Pine hill but that must have been a different bloom. Because this bloom never really got pass Clearwater.

Female Interviewer: Okay.

Male Interviewer: So the indicator is you're hearing that is down south and…

Interviewee: Yeah. Fresh water goes this way.

Female Interviewer: Yeah, okay.

Interviewee: Loop current goes down, goes up into Florida Bay and then current goes right up the beach.

Female Interviewer: Okay. So you always see it coming from the south basically always find the same direction?

Interviewee: Yes. The current goes like around the sea Buoy out here. It'll go in and out this way and sometimes a little bit this way. But the movement of the water generally goes north like water all go in. If you go down here, the water is super clear and nice. And over here, it's different waters, dark green. Goes in Tampa Bay gets floated up the nutrients and then comes out and goes up to the north. When you come out here on a hard outgoing tide, the mudline is right here and they all mud bloom to the north to the channel [00:10:00]. So, the water comes out and goes north. Same thing as John's Pass just the other day I was fishing. The mud line came straight, almost straight out all the way out and went away up to the north and came back down, nasty big black, not black but chocolate milk mud because we had rough weather a couple days earlier. All that came into the inner coastal and when it washed out the next day is great fishing. I fish right on the mudline but moving north.

Female Interviewer: Okay. Do you see any sort of differences in where the red tide concentrates on those scales with respect to those similar *[overlapping conversation] [00:10:37]*?

Interviewee: No. There's some times, right. Treasure Island, Capri right here. These two landfills and there's a little creek, it's a deep-water creek runs through, and right and that spot right there, it's called the Kitchen. It used to be a freshwater spring there. And now back in this little area, there will be a bloom occasionally all by itself. And since they started the illegal or reducing the nitrates or the pesticides and stuff that really hasn't occurred.

Female Interviewer: So that sort of explain...

Interviewee: But, yeah. That's sort of an interesting little area.

Male Interviewer: Why did they call it the kitchen?

Female Interviewer: Oh yeah, sorry.

Interviewee: This area, right here.

Gavin: Because the Indian burial grounds from the bar for parts all over there, the Indians lived both side *[indiscernible] [00:11:33]* they lived on that side and then they would come over here and bought fish and that area they discovered a lot of kitchen utensils.

Male Interviewer: Oh really?

Gavin: And believe that they clean the fish.

Male Interviewer: Nice.

Female Interviewer: Interesting.

Interviewee: So I would imagine probably in the late summer that'd be a perfect research area to do some water sampling.

Female Interviewer: Yeah.

Male Interviewer: So this one in [00:12:00] the 80s, how'd it affect your business? Do you remember?

Interviewee: No. I was working in the restaurant. I came out start working on the boats after being a little kid in like 1982. I was net fishing in the fall. Bad red tide would mess up the mullet, but they're all up in here. They work their way around. The only time it really messes them up is the bad red tide event.

Male Interviewer: Okay.

Interviewee: But it wasn't -- it was more patchy, I guess. The two worst ones was the one back in the 70s and the one we just had.

Female Interviewer: Okay.

Interviewee: I guess there was one in 2010 but…

Gavin: 2005, I was in *[indiscernible] [00:12:48]*

Male Interviewer: 2005?

Gavin: 2005.

Interviewee: Is that when they dumped all that phosphate out there?

Gavin: Yeah.

Interviewee: Oh, I thought that was 2010.

Gavin: The 2005 one was worse I remember.

Male Interviewer: So, before we get to that was there any after this one in the 80s? Was there anyone in between that 2005 you remember?

Interviewee: The 90s, 80, 90s. I vaguely remember something but then for whatever reasons I'm not remembering the day, the 90s.

Female Interviewer: Maybe 90s.

Interviewee: It really didn't bother me much until this one when they dumped the phosphate out in the Gulf because when they dump the phosphate, they killed everything in the Gulf and blamed it on red tides.

Male Interviewer: And that was 2000?

Interviewee: I thought it was 2010, might be 2005 but I know the mullet or the grouper, gag grouper fishery class right after that inshore, they blamed on red tide. There were multiple documents that show us the bottom was dead [00:14:00] from that heavy phosphates. Excuse me. And some of the crabber guys have lawsuits and they're getting paid. So, I mean, they recognized the fact that phosphate did a lot of damage.

Female Interviewer: Oh, there really is that?

Interviewee: Yeah.

Female Interviewer: With stone crabbers or?

Interviewee: Stone crappers, yes.

Male Interviewer: Do you want to. Go ahead. Do you have questions you want to ask?

[overlapping conversation] [00:14:28]

Male Interviewer: I was going to ask you if you want to -- so this one in 2010…

Female Interviewer: Yeah. So, there's nothing in the 90s that we -- I've heard folks talk about the phosphate dump that was that they loaded the stuff on the barges, that was what damaged the water…

Interviewee: It's the worse of two evils. It was going -- it was way up in the bay here at Bay Brawl Harbor *(phonetics)* where we are – where the hook that – there is the bridge, so wherever Port Manatee is and it got to Port Manatee.

Male Interviewer: That's it.

Interviewee: And around in here somewhere they have the phosphate holding areas. And they're slipping slurry pits and we have a bunch of hurricanes and they were getting ready to overflow. So, they were really going to dump a bunch of phosphate right here, which would have destroyed the bed, they got an emergency rule to load up tankers and they were supposed to run out 100 miles open up the valves and dump it, because at 100 miles it drops at 10,000 feet. What they did, they did they open up to Sea Buoy and ran out until it was empty and turn around and came back.

Gavin: April 9, 2003, *[indiscernible] [00:15:43]* okay to dump wastewater in gulf Mexico then a phosphate plant involved.

Male Interviewer: And so there was a red tide then tied to that?

Interviewee: Yes.

Male Interviewer: Phosphate dumping, where did that occur? [00:16:00]

Interviewee: That was mainly from this area north.

Male Interviewer: Offshore?

Interviewee: Yes. And they came in as well.

Male Interviewer: How far in did it come?

Interviewee: Do you remember coming all the way into the bay? You said it's pretty bad.

Gavin: 2005 was the worse one I ever remember. That was one the first time I saw that one red water and I remember it being as far as south that's like Boca Grande all the way far north east, I knew about that.

Interviewee: 2005, yeah that's right. And I surfing, I remember it.

Gavin: In 2005 that red tide that satellite imagery from that red tide is the some of the most widespread to my knowledge, and I think that was one of the worst of my lifetime.

Female Interviewer: Okay. So you said Boca Grande up to...

Gavin: I mean, it was everywhere.

Female Interviewer: Yeah. Can you try and draw out in here too?

Male Interviewer: Boca Grande, all the way to.

Gavin: I would say that pass Clearwater. That was big. And my view is a little biased from the cedar data workshop that showed the satellite imagery of that red tide and that they compare the 2005 and 2014, all the recent red tide events and they showed the satellite imagery that 2005 imagery was from like Cedar Key all the way up the whole -- it's all been bad.

Female Interviewer: Yeah.

Gavin: It was the whole coast for it.

Gavin: Can you try and draw that one out?

Female Interviewer: Yeah.

Female Interviewer: Just showing, you know, how far offshore-inshore.

Gavin: I remember it was -- like he said I've never had a red tide. I've never seen or heard of a red tide going much more than like 10, 12 miles, so and I remember in 2005 we were still fishing, but we just had to go a little further.

Female Interviewer: Okay.

Gavin: So I would say definitely came up in the bay, going way up there.

Female Interviewer: Okay [00:18:00]. And it was generally restricted that you said that this that far offshore, okay.

Male Interviewer: Had that one in 2005 differ in terms of that species that were affected that you remember?

Gavin: Well, being as though it came out further. I think it had more of an effect on the offshore species. From all the accounts, besides just my dad talking to guys like Brad Gorst, the gentleman that he works for that's been around since like, forever, he was saying in the 1972, red tide 1970-72 red tide was the worst one ever that he had to actually push through dead fish all the way out 15-20 miles. But this 2005 red tide was really, really bad.

Female Interviewer: Okay. Since you brought up the satellite data, one of the things I wanted to ask you, we've heard about how the events differ in terms of where they are in the water column, so I've heard there's surface blooms and then blooms that are further. Do you see any sort of distinction and like the 2005, do you have a sense for if that was just the surface or if red tide was all through the water column or?

Interviewee: We're strictly hooking along. We don't do any diving or anything like that. So in my experience at least, I don't have any depth or knowledge of where that red tide is on the water column.

Female Interviewer: Okay.

Interviewee: But I mean, for example, this most recent red tide, it's still that fishery still not really recovered whereas a lot of areas had bounces back quickly, so that tells me that this one had more an effect [00:20:00] on the bottom.

Female Interviewer: Okay.

Interviewee: Because like inshore it bounced back really fast. They came back, fish came back near shore, that 6, 8, 10 miles area that we fish, a lot of our half day trips, the fishery -- we've been starting to see the fish come back. But it didn't bounce back as quickly it's inshore. So that tells me that the bottom structure was probably affected.

Female Interviewer: Okay. But you don't see it, yeah?

Gavin: Yes.

Male Interviewer: That was from last year.

Gavin: Yes. But in 2005, I wouldn't know much. I was only 14. I wasn't out there a whole bunch.

Female Interviewer: Okay.

Interviewee: I always thought it is being more on the surface, except where there's a lot of water movement into the mix. I heard that talk from a biologist at a rotary club. She again, she talked about out in the Gulf and different areas in the water column, the red tide comes from the bottom and it says, okay, well, I cannot take a word for it, I don't know, it doesn't bloom and kill fish that lived on the surface in your shore. Yeah, might start up there but…

Female Interviewer: Okay.

Gavin: And as far as your question earlier about how red tides affected business, in my experience, it affects business more and more as we get more and more into the future because people are: A, more health conscious nowadays and B, everybody's connected. So, if someone said red tide, it's all in social media and national news. So red tide was in the national news for six months. It killed the state of Florida because of the sensationalized news that they're saying -- I mean, people were saying the air is toxic. The sand is toxic. You can't even go to the state of Florida, you'll die. I mean, just a crazy and stuff.

Female Interviewer: Yeah.

Gavin: Yeah. You can't swim, you can't go to the beach.

Male Interviewer: It affected your business in the sense that you didn't have any people here?

Gavin: We have people here, we went fishing [00:22:00].

[overlapping conversation] [00:22:01]

Male Interviewer: Did you remember any…

Gavin: 2005 wasn't that bad, because that was a decade at the time and we worked all the way through that, we didn't have a slow down like we did basically. And 2005, it didn't make national news.

Female Interviewer: Yeah.

Gavin: It was just Florida local news, you know.

Female Interviewer: Do you have other -- I mean, did you have any additional like, fuel expenses, if you have to go for offshore, it would -- 2005…

Gavin: Oh yeah. But still having additional fuel expenses, because we're still going a little bit further than we'd like to.

Female Interviewer: Yeah, and sorry, for the 2005 I'm trying to focus on whether it impacts your business back then, did you…

Gavin: I would say there's probably somewhat of a reduction. I mean, locals knew about it weren't going out there and the tourism town, coughing…

Interviewee: Yes and we definitely burn more fuel going farther offshore.

Female Interviewer: Okay.

Gavin: A half day trip, which is about nine to 12 miles from shore is what we advertised. But realistically, a lot of times we're 7, 8, 9 from shore, we might be 9-12 miles from John's Pass. It's six miles from shore fishing. And during this red tide events we're consistently 10, 12, 14 miles from shore.

Female Interviewer: Okay.

Male Interviewer: So after 2005, the next big one was?

Gavin: The next big one was this recent one. But there was a little one in between of 2014 but we didn't really even feel any effect on that, in my opinion.

Male Interviewer: Why do you say?

Gavin: Because it was very localized and it seemed to be up north of us, which is strange because most of the red tides kind of start from the south.

Male Interviewer: Did it start in the Meadows?

Gavin: It was to the north of us off Tarpon Spring area and that's the one that everybody's blaming for the red grouper issue, because it was more offshore.

Male Interviewer: Okay. So but you guys weren't...

Interviewee: I heard some that goes a spill up there. Some kind of a spill, chemical spill. [00:24:00] All these conspiracy theories.

Female Interviewer: Well, I mean, they did shipped stuff off and dumped it, I don't know it's connected but there is certainly been stuff dumped out there, so.

Male Interviewer: So the 2014, you guys weren't affected so much at the business?

Gavin: It was very localized.

Female Interviewer: Okay.

Male Interviewer: So last year, then, can you kind of draw the scope of that red tide? And then kind of talk a little bit about what you saw from that red tide and how it might be different from the others?

Gavin: Yeah.

Female Interviewer: Do in a bigger piece of paper.

Gavin: I think it pretty much follow the same outline of this one up to the narrows.

Male Interviewer: Where is Clearwater pass?

Gavin: Right here. So it kind of went all the way up here. But it stayed pretty much at the mouth of Tampa Bay. It didn't get all the way up in Tampa Bay and of course, it went all the way down.

Gavin: Now 2018?

Female Interviewer:. Yeah.

Male Interviewer: And did you see any difference in the species affected by that one?

Gavin: No.

Male Interviewer: Anything that…

Gavin: I mean, I guess. Again, I think a lot of it relates to the media because this was so sensationalized. If some guy on the beach and they would -- and this one was unlike any other one because they did a cleanup. They never done a cleanup. In 2005, we were

inundated with death fish. No one gave a shit. They just sat there and rotted on the beaches. This recent one they did a cleanup. So they had metrics for -- there was millions of pounds of dead fish collected from the beach today and they -- someone picked up that dead fish. So they knew what it was, so we have a lot more data and metrics and they had truck fulls that they were weighing so they knew how much dead matter and biomass was coming out [00:26:00] of the water. And because someone was out there cleaning up the ship, they saw there's a goliath, oh, there was a dolphin and they had that whale wash up, which I never heard of before.

Male Interviewer: Was there any species that you didn't hear that surprise you, something that you don't think was affected by the red tide?

Interviewee: Shrimp.

Male Interviewer: Shrimp?

Gavin: Shrimp lived and loved it.

Interviewee: That was all we know.

Gavin: Yeah, we had we have live bait tanks right here that pull water from right here. And dead fish falling all around the shrimp were not…

Interviewee: Days could be…

Male Interviewer: Amazing.

Female Interviewer: I heard that *[indiscernible] [00:26:41]*.

Male Interviewer: Can you talk a little bit about last year what it looked like and were there different types or colors or can you describe what you saw then?

Gavin: Just a lot of dead fish and as far as colors go, there was definitely some weird tense and huge through a water like you'd see sometimes like this yellowish stuff and those are the water that was pollen the red tide or yellow tide or all this craziness. But I mean, we get those times a year where you get that pollen on top of the water and it looks like an algae, and tourists are like oh my gosh but ends up being just pollens going offshore from strong east wind. So, I don't really know other than the back areas where water gets trapped, you get that deep red color and that's about all we saw. Inside John's Pass, I remember one or two days.

Male Interviewer: There was one -- someplace that you saw that deep red that shows up and is it just in that place or were they just like a different areas where it shows up like that?

Interviewee: That particular bloom it was all around this area?

Male Interviewer: Okay. Around the kitchen again [00:28:00].

Interviewee: Outside, yeah.

Gavin: And in that most recent red tide, there was one to two days where the water here was actually had a red color in the pass which I don't remember seeing so much in 2005 because the water moves so much. But that's typically on a hard-outbound tide and all that water's flushing out of the Back Bay kind of bottlenecks here. And that's when you see a lot, that's what we saw a lot of dead fish...

Female Interviewer: Okay. I am curious to know why they decided to clean up a fish this year, I mean they hadn't done it previously. Is it just more awareness or…

Gavin: I think it all has to do with the media coverage. It was so sensationalized that it started to hurt business and then the Pinellas County government was like, well, this is tourism, this is our lifeblood. So they forked out a couple million dollars and the fishermen were not working. So any fishermen with a boat that met the requirements were able to go to work picking up dead fish. So, it was a win-win for everybody. A lot of guys made some good money doing it. Our boats didn't qualify because there weren't flats style boats that could accommodate that type of cleanup, but it definitely was good for the fishermen and it was good for the county because it kept them off the beaches and they kept them from choking the million dollar waterfront homes and it was something that I hope they continue if we ever have to see this type of devastation again, but hopefully it does not.

Male Interviewer: You said that your business took a 60% hit. Did you do anything to did you have to change any business practices to kind of counter that?

Interviewee: Yes.

Male Interviewer: What you do?

Interviewee: I ramped up the social media information. Let people know when red tide wasn't here and that we [00:30:00] didn't have red tide offshore, and were ran farther offshore and all the fish offshore are in good shape, they aren't going to hurt you. We could still eat them and I kind of make a it safe.

Gavin: We took FWRI handout and I edited it up to highlight the different things about the safety of the fish and how it's safe to eat and how it's safe to be on the beach, save the swim, all that kind of stuff. And we're promoting that really, really hard, doing lots of videos and testimonials. We went from a five-hour half day to a six-hour half, given us more running time, and that helped us to win back some people. Actually the fish was really good because I think a lot of times, fish aren't stupid. They're not going to sit there and so they get suffocated to death. So, I think the red tide is almost like a wall that pushes fish similar to the BP spill and the BP spill happened yet a flood of whale sharks

that -- I've never seen a whale shark before and that six months after the BP spill, I saw six.

Female Interviewer: Wow.

Gavin: And billfish, we got a ton of billfish from the northern Gulf and I think the same thing happens with red tide. As that most recent red tide event worked its way north, the fishing was on incredible on fire. And then when it hit us, we had to go out a little deeper and when you fished on that line just ahead of it. Remember you were even telling me about that. You were fishing right in front of it up the north on the beach and the fish was really good on the edges of it. So, I think it kind of concentrates it.

Male Interviewer: Yeah, so that's pushing them up to those areas.

Gavin: Yeah, they're trying to swim away from it.

Male Interviewer: So you increase your social media, so you do some new marketing campaigns, you're going further offshore. So increased fuel costs and anything else?

Gavin: Increase personnel costs because we were paying them more to run longer trips and putting our family [00:32:00] business, our employees and coworkers, their family having to cut people's hours and send people home and lay people off, it wasn't cool. But severely reduced hours and cut that trying to save money where we could. Lot of news interviews. Lot of interviews.

Female Interviewer: Is there anything that could be done that would help you adapt to severe red tide events, and again on the management side or…

Gavin: Just controlling the narrative on the media would be helpful, and just absolutely ridiculousness that's some of these reporters were saying. And like even in my news interviews, these people will come out here with an agenda and they try to get me to say a certain thing. I wouldn't say it and then they just cut the interview, and then they went there. But if I went along with their narrative they're there. It was so perverse. Like one guy tried to interview me in front of the dumpster where they were collecting all the dead fish in the freaking town. He wanted to get me even in front of them, I was like no we're going to interview front of the water where there's no freaking dead fish. That was crazy.

Female Interviewer: Wow.

Male Interviewer: Have you seen any recovery up there?

Gavin: It's definitely bounced back.

Female Interviewer: Yeah, I think you mentioned earlier that this has been a slower recovery than 2005 or was it…

Gavin: No, I would just say that they're all kind of slow. I mean, I remember 2005, it took a year or two to kind of get back to normal. What I mentioned earlier was, as far as your question of where it's at the water column, I feel like the bottom structure was a little bit affected on this recent one.

Female Interviewer: Okay.

Gavin: And I don't know how that was back in the day, because I wasn't as familiar with it. But I feel like the bottom 6, 8 [00:34:00], 10 miles from shore from this recent one was affected and the history wasn't affected, it probably was the same way.

Male Interviewer: What the signs that you see up there that there's recovery occuring?

Gavin: Juvenile, juvenile fish and the big fish returning. I mean we have huge schools from the beach all the way out to 10 miles and that big fish is going to bring predators and the whole food chain back to life. There was so much bait here in the past the other day, the water is black, from the islands all the way out to about two miles, thousands *[overlapping conversation] [00:34:41]* Fridays, I mean thousands…

Interviewee: And they bait for the whole summer. They're all going to go out on the beach.

Gavin: Yeah.

Interviewee: Work their way out here.

Gavin: And there was -- just another couple days later it was like big clouds moving through the pass and they would get stuck right here on the beach where it bottlenecks and it was just huge circles where all of a sudden it would be black. A white circle would open up where you can see the sand and there'd be a 40 inch snook or 50 pounds black drum. It was crazy. Just this huge predator and everybody on the boardwalk, it's like looking at a fish tank.

Female Interviewer: Wow.

Gavin: It was really cool. It was right before those big cold fronts, it's like two three weeks ago. The water got really clear ahead those most recent fronts, and then we had that barrage of fronts and the water hasn't cleared up yet, but I assume that the white it's still doing the same thing. We just can't see it because every morning out here, when I climb up there to film our morning videos, there's always pelicans everywhere, dolphins working, so.

Male Interviewer: When you say white bait, what are you talking about?

Gavin: The whole gamut from greenbacks to glass minnows to whatever is attracting the predatory action.

Male Interviewer: Okay. Are there any other species that you fish for that you've seen any kind of different signs that they're coming back or? Well first of all, are you still going up further [00:36:00] or?

Gavin: No, we started cut pulling it back a little bit but I mean when we are rough weather route that we only go a couple of miles. If it's really, really rough, we can come up here and kind of fish right up here and right out here and you can't do that right now so close to shore, the fishes aren't there.

Male Interviewer: Okay. Some places haven't recovered fully yet though?

Gavin: Yeah. In the shallow or waters, the 18, 28, 30 foot hasn't really seen that come back yet.

Female Interviewer: Okay.

Gavin: And I think that's the area that the bottom might have been affected.

Female Interviewer: Okay. All right.

Male Interviewer: Any other questions? So, I just wanted to ask about your theories.

Gavin: Because like when you come out here, it gets a lot deeper a lot faster out here like down off the Egmont Channel around this area. And this is where we've been doing most of our fishing lately. It's a little longer run but it gets deeper quicker down there, 35 to 50 foot a water and the fishing is really, really good.

Female Interviewer: Okay.

Gavin: And it was good during the red tide as well.

Female Interviewer: So, same question as earlier but are there any areas where you see the red tide of consistently concentrating on the offshore areas? Or is it just kind of everywhere?

Gavin: Always on the beach.

Female Interviewer: Always on beach, okay.

Gavin: Yeah. It starts on the beach and as it gets worse and worse and worse on the beach, it seems to push out. I've never in my lifetime seen red tide start or develop or standalone offshore.

Interviewee: Because current goes out every day. It's always out to here. Like this north. So, once it comes across for six hours, half of that's gone up here and the other half comes and infiltrates *[indiscernible] [00:37:59]*.

Female Interviewer: Okay. Do you [00:38:00] ever see it starting up in the base or does it gets washed in after it starts off the beach?

Interviewee: It's always washed in from the beach except for the Kitchen, and you need to talk to someone else about downtown.

Female Interviewer: Okay.

Male Interviewer: So, over the time period, let me know what's your perspective of what's happening with red tide from the 70s till now? How would you describe it?

Interviewee: Well, if they're going to fix the Everglades and all that, that'll take care of one of the theories a lot of people seem to think it's coming out of when you go to area *[indiscernible] [00:38:40]* by north.

Male Interviewer: What about that USF research study that just got publicized like crazy? It doesn't hold much weight?

Interviewee: And there is the whole pesticides on the grass on all the coastal community. I think that helps a lot. I think our water qualities come up. Peter Clark, he's down here at the Tampa Bay watch, you guys interview him yet?

Female Interviewer: Who is it?

Interviewee: Peter Clark?

Female Interviewer: No.

Interviewee: He is been in charge of the Tampa Bay watch since the early 80s, late 70s. And he's worked on bringing the scallops back, so he is very attuned to the water quality in the back. He is a great researcher.

Male Interviewer: You've seen yourself that the water quality is improved?

Interviewee: Yes.

Male Interviewer: And so but these red tides and I guess, why do you think -- why would we have had such a bad red tide last year?

Interviewee: The warm winter, the mild hurricane season, dump of bunch of water out of Lake Okeechobee and worked its way north.

Female Interviewer: Okay.

Interviewee: I don't think [00:40:00] down in Sarasota they have that that the fertilizer bands down there like they do in Pinellas County.

Female Interviewer: I don't know.

Interviewee: I know Pinellas County has it. I don't know if Sarasota has it.

Male Interviewer: I don't think they have a ban, I know that they have a...

Interviewee: But just June, July and August they didn't do this. You're not allowed to use heavy nitrates anywhere.

Gavin: From Memorial Day to Labor Day, if you get caught using any type of fertilizer in your pond, you'd get fines, seriously.

Male Interviewer: I didn't know that.

Interviewee: But I don't know if they have it down there. But that might contribute to -- because the coastal communities get more dense in the stormwater runoff. I mean, Peter Clark and his groups work hard to change the regulations in Pinellas County to where he getting rid of the rock lawns and getting grass going back to the grasslands. The whole movement with the stormwater runoff has to have 10% retention in your property. All that kind of stuff helps. They keep getting grants to all the stormwater runoffs or runoff, no pocket park directly right into the bay. Now they're putting those big boxes in, so all the heavy stuff falls in the box and they pump that out every month. So that takes a lot of the junk out of the bag.

Female Interviewer: Yeah.

Interviewee: All that helps. There's still a lot of the old strong grains that's dumped right straight into the bay. But those are the kind of things Peter Clark is working on. And I think it's helped Tampa Bay in this region really, really well.

Female Interviewer: Okay.

Interviewee: But when it comes up from the south, there's nothing you can do. It is what it is.

Female Interviewer: Okay.

Gavin: It always and then all these recent events, I always watch at the BBC reports really, really vigilantly. And when I see it started hitting tip of Anna Maria, that's when I get worried, if it jumps to *[indiscernible] [00:41:52]* that's when we get screwed. The

once it's imported, so it just spreads. And then it seems to stop right here again. And then it takes a little bit of an effort to get up [00:42:00].

Interviewee: I think there's a little Eddie *(phonetics)* right here, because this this current goes up and because they say the sand flow is a little different up here than the same flow here. And I know when we finish up here, we'll have a current coming this way. So perhaps the water comes up around, you know, you see how this concave here, maybe the water comes up and goes northwest, and then there's like a big Eddie that comes down and comes around this way. Are you seen anything like that on those at the sea charts? Probably look at…

Gavin: It's a drifter map that I watched a lot but I've never seen that. That's what I think about.

Female Interviewer: We can look it up, yeah.

Male Interviewer: A lots of stone crabbers, so they moved up into that area because that's…

[overlapping conversation] [00:42:54]

Interviewee: The red tide weren't that bad up there. The red tide was much worse right here.

Gavin: There's a magical wall right here. And there's a magical wall right there.

Female Interviewer: Right here? Okay.

Interviewee: And right in this area, which is Clearwater Path is right there. So somewhere like right in here.

Gavin: And I know…

Interviewee: Right where we're talking about?

Gavin: This year another thing that they did that I've never seen before is they were trying to stop the red tide from crossing Tampa Bay and they opened up a lot of the rivers and stuff out here. Like I know the Manatee river and a lot of those rivers that are dam control. They opened up the floodgates and they tried to increase the tidal float of Tampa Bay to create kind of a dam that's stopping that stuff.

Female Interviewer: Did it work?

Interviewee: Which all it did was make it go offshore.

Gavin: Probably.

Interviewee: Quite helped a little bit reduce, you know.

Gavin: It helped it getting up in the rivers at least.

Female Interviewer: Yeah, huh.

Interviewee: Once they can get there.

Gavin: Once it gets up in the bay, it stays up in the bay. It seems to perpetuate itself and seems to…

Interviewee: The water is so much hotter up here.

[overlapping conversation] [00:43:56]

Female Interviewer: That's interesting.

Gavin: Like the upper Tampa Bay, this whole region up here [00:44:00] it's like one foot deep, all this and once it gets up there and that shower shallow water, it just permeates our area in a small cliff.

Female Interviewer: Okay. Let me mark that. Is that every year or I mean, when does it -- when you see a perpetuating up here, does that happen all the time or?

Gavin: I don't know when that happened but I remember it happening and that's kind of what I always had envisioned.

Female Interviewer: Okay.

Gavin: It must have been that 2005 event that it got way up in the bay.

Female Interviewer: Okay. Interesting.

Gavin: Because I remember that being the worst that I've ever experienced and it was so long. It was like 2005, almost 2007.

Female Interviewer: Yeah, okay. Okay.

Male Interviewer: Is there anything that we haven't brought up that you'd think's important to this topic, anything that we have it missed?

Gavin: Oh, you were asking about the last recent event, I feel at least myself that Irma dumping all that water into Okeechobee and the Everglades. It seemed like that event kind of started at the end of 2016. Irma was fall of 2016, like early fall. That was like August, I think and it seemed like that red tide kind of started way down south like, south

of Fort Myers and it seemed like it was sitting there and you had -- I don't know what you called, I think for some reason. But red tide was this smoldering event and it's got smoldering camp fire on the beach, and that Okeechobee outflow coming out of Fort Myers that goes to Hatchee was just somewhat important *[indiscernible] [00:45:45]* and all the sudden it just blew up and traveled north along the coast and just burned up everything.

Female Interviewer: Do you see? Do you perceive -- do you have a similar trigger was like, what is it Wilma that came by in 2005 [00:46:00] but the 2005 event, is it kind of similar?

Gavin: Yeah. I mean, between the stormwater runoff…

Male Interviewer: Good theory to go look, see how much the storm water came out of those different storms and see if it coincides with the red tide event the following year or that year. If it does then that, you know, it's basically it's washing all the stuff off the land and increasing those or decreasing the salinity and freshwater's doing whatever it might do, something out here or it's going to wash this and...

Gavin: Because not only is -- you have all those, the sugar, big sugar as everybody says but also I mean, look at Orlando, you've taken a marshy headwater of Okeechobee and totally made it a concrete jungle. And to me, what drives me the most is you see it on these roads. If as it rains for a few weeks and you get a light rain, all of a sudden, the roads were all slick, it's all that brake dust. I mean, look at the brake dust on your car, you get your car detailed a week later, that brake dust is thick on the inside of your rim. And all that brake dust is sitting on the road getting washed into the sewers and then when a big hurricane comes and washes the state off, all that brake dust, all that fertilizer, all the crap and garbage and plastics all get into the water.

And it definitely puts fuel on a fire. To me, in those interviews, I always said red tide is a naturally occurring thing. But we are exacerbating it by pouring this lighter fluid on the fire through untreated stormwater runoff, all the sewers spills, I mean countless sewers spills. One of the things that made red tide jumped this was the city of Indian Rocks, built like something like 9000 gallons of sewage into the water like every hour for like 36 hours. They finally shut it up during this red tide event. That's what it my opinion made it jump that magical wall [00:48:00].

Female Interviewer: Interesting.

Gavin: And the city of St Petersburg, every time we get a hard rain or tropical storm, they'll make thousands of gallons of sewage.

Female Interviewer: Yeah. Same in Miami. All right.

Male Interviewer: Anything else?

Female Interviewer: No, I think I am good…

Male Interviewer: Appreciate you guys doing this.

Gavin: Well, what is your opinion on the USF Research?

Female Interviewer: Let's turn this off. I'll give you my honest opinion. Hold on, let me just make sure…