

Female Speaker 1: ...okay.

Nick Ruland: So I have some ideas, thoughts based on, I don't know exactly, there's all – information needs to be gathered. I guess that's what you're asking a little bit?

Female Speaker 1: Yeah.

Nick Ruland: So – and I've – I was doing some, a little bit but what I think is very important, you know, this is Fort Myers, this area, whatever you're looking at is all inshore okay?

Female Speaker 1: Yeah.

Nick Ruland: What – I don't think there's almost zero information what's gathered offshore?

Female Speaker 1: Yes.

Female Speaker 2: Yes, exactly.

Nick Ruland: So what my suggestion would be and I know Casey has got some great things. We're trying to find something that will then, that's a full-time job for me, but it – trying to find something that will then, you know, without NOAA doesn't move too fast on things that get funded. Whatever is already funded, it's a year and a half behind already that was a NOAA hearing up I mean budget thing up in DC one time accidentally and you guys get a heck of a lot of money, where it goes is so many different places of course, but – so what – number one my suggestion is, if it has to be – it has to be accepted information for you to use it, I guess. And then the other two or three different agencies that might – and a combination thereof, my suggestion is if you're wanting your focuses the red tide, poor water quality that kind of thing, there's almost every vessel that's federally registered, that's fishing in this area possibly would participate to some degree, okay?

So in other words, here's my thought, I don't know the scientific [0:02:00] information you're getting, but whatever the red tide unless you get that, you know, the equipment that Casey is – understood and a couple of the trips you guys have taken, there's no way that you can spend the amount of time that needs to be there. And you might not get that exact information until we get four or five pieces of equipment that alternate, I mean, different vessels can use, okay?

However, almost all the federally registered vessels and I don't know, shrimp boats, exactly but if there were – if there was, they only have plotters and they know exactly where they are. If you created a form, okay?

Female Speaker 1: Uh-huh.

Nick Ruland: That said name, right? A vessel, captain, okay? And then of course you want date, right? Date, time, you know how to get...

Female Speaker 1: So essentially like survey form...

Nick Ruland: You just – yes, survey from the people that are passing through these waters all the time, okay?

Female Speaker 1: Uh-huh.

Nick Ruland: They might only be able to give – right now, they may be only be able to give you surface view but it could be verified back because all law enforcement, which NOAA is a law enforcement branch, has access to their locations at the same time. So then you could verify the information. That's my thought, you know? So you make a forum where it'll say that vessel and, you know, they fill out and put the federal permit on, yeah?

Female Speaker 1: Well I know you know a lot of these offshore guys and you know a lot of guys that...

Nick Ruland: Yeah, well let me finish the thought for – because I'm not good at it. I just start jumping, even worse than you. So you get the date, you get something that then is quantifiable. So date and of course you want lat and long right?

Female Speaker 2: Uh-hmm.

Nick Ruland: Okay? And then you pick four or five different – I mean I hear some say we've got whatever different color water, you know, you pick what did it – you know, what you're looking for, you know, in water quality. And so you will lat long so that'll be there. You can verify that with that federal permit that we're fishing there or passing through. There's – they're – all these shrimp boats are going through that area all the time. They might be fishing south but I try to start working with some guys just so I, you know, and it scared me what I was finding, you know? But if there's a forum that then is issued that from NOAA for survey or whatever you call it, and it stays simple enough that they could take four or five readings, you know, on their way back to port. We start getting something.

Female Speaker 1: Yeah.

Nick Ruland: And if it comes from you then it all suddenly becomes verifiable data.

Female Speaker 1: Yeah.

Nick Ruland: You know, there's no data offshore. That's why when I saw this, you know, I'm going this is – no one knows any, you know, the news never covers any anything past this. They make it worse than it is but we don't know what it is. So if you

if you came up with that form, I would then try to get back to. There's two fish house over there and [overlapping conversation] and they would – you know, I believe there's a lot of people that would participate, okay?

Female Speaker 1: Yeah.

Nick Ruland: And, you know, if they, you know, brought that in – I mean I don't mind – I think I could talk all my guys into, there's not that many but there's a great deal of, you know, as far as number of vessels on those two spots, so I'd be glad to go through with it and add what I think might work for guys and what might not. If you'd like and – but I think...

Female Speaker 2: It's a great idea, get people involve.

Nick Ruland: I think – well they won't – listen, but there's no way for them to tell you and when they're going by they – they make – they'd say I can't believe it. You know, they're 60/80 foot water and they're stay still, you know – because it keeps changing. Because every time the wind changes, it blows that red top back in different places. You know, that's how, I guess it got all the way up in the back to close the [indiscernible] [0:06:00] and a way that Southwest wind from the last hurricane. And of course, according to Casey, I mean – yeah, Casey that all of a sudden, you get the gulfstream coming in and Eddie's back up and that's why it got dropped up by Canaveral. You know that – these are natural patterns and then you can then track the, you know, the gulfstream because that gulfstream will move unbelievable, 10 or 15 miles in and out in a day-and-a-half from what I see.

Female Speaker 1: Uh-huh.

Female Speaker 2: Wow.

Nick Ruland: And it will pick up – yeah, so I'll said it comes in, the wind is blowing this way, it picks that up but we know some of these guys especially, you know, people going offshore, real offshore, deep-water fisher we called it, they have to look. It'll show the gulfstream. There's a chart that shows – I think private comes from NOAA, gulfstream coming in and out, prediction wise. And so, in other words, there's been no real information other than someone taking some samples here along the shoreline. I don't know how far but no matter what, you know, unless there's a vessel that is constantly working, there's no way to get consistent data. Other than, this is the only way I can think of it is if you start simple, we can make it more complex afterwards once you start getting something. You know, you'll know you want more.

Female Speaker 1: Yeah.

Female Speaker 2: Right.

Female Speaker 1: I think that's a great idea. What we're trying to do is kind of do that retroactively through talking to people and getting the history.

Nick Ruland: Oh you're doing historical stuff?

Female Speaker 1: Yeah. Well I'm really interested in...

Female Speaker 2: Actually that's the end question. It's pretty much what – how would you envision trying to make a process that can help us.

Nick Ruland: Well what happen is there is no historic data because there's nothing other than people's memory, you know?

Female Speaker 2: Right. And as you said everything – what we know is from [indiscernible] [0:07:53] it's from FWC monitoring the water and they don't really know off.

Nick Ruland: Yeah, and then – whatever. Yeah. I heard it, yeah whether they want to give it to you, don't want to, whatever be that was [0:08:00] but the point is that this could flow all the way up and down. You just start getting, you know, like I said that could be verifiable because you could follow the VM message back and forth or wherever they are and – but you got to start somewhere. I can't give you if you're looking for what did Casey called as, what do you guys called it...

Female Speaker 1: Let me just explain.

Nick Ruland: Okay. All right and then I'll go ahead so.

Female Speaker 1: Okay, all right. So essentially what we are – we want to know is when red tide is in this area in the past like if you think back to the first red tide that you experienced here, you know. And start there and talk about that, what was that like, how did that affect you? Move forward, talk about what's happening now, you know, but I want to start, like – I mean you've been – you've been here your whole life?

Nick Ruland: No, not my whole life.

Female Speaker 1: For how – how long have you...

Nick Ruland: 30 years.

Female Speaker 1: 30 years.

Nick Ruland: I'm 39 so...

Female Speaker 1: Okay.

Nick Ruland: No, I'm not but – no. So, but a lot of it I got from some of the older fisherman, you know, from some different generations, you know, but the problem is it's not statistical. It's more, you know, the story part of what took place, I know when Britt Palmer first told me the first time they saw red tide and there was a lot more fish back then. You can almost walk on. They thought it was like a biblical portions. They thought it was one of the, you know, the locusts [overlapping conversation] [0:09:35].

Female Speaker 1: Yeah like a plaque.

Nick Ruland: Yeah, he thought it was like a plaque.

Female Speaker 1: When was that?

Nick Ruland: This was probably in the 50s. I don't – but I don't know when it was.

Female Speaker 1: Uh-huh. What was the first then that you experienced here?

Nick Ruland: I don't remember seeing – you know, it was not – see we didn't look at it as a big deal because it wasn't on the news like it is, you know? There was no news like that. And, you know – but it's been going on since I've been here [0:10:00] but not, you know, who knows what is being blooming out proportion that we're hearing from the news part. And there was no qualification or classification. The only thing that could be known about it is, you know, the amount of fish you saw floating. But I don't recall any dolphin being floated and who knows if that's even part of it or how that interacts, you know, I don't know but I do know that there's been a whole lot of – a whole lot less fish being caught for the last four or five years different hurricane where it pushed back up in what they called the middle grounds up there that – because there's been no production of fish.

So you got to tie that, you know, what my stuff is always for the most part of been offshore fishing. So, there's the data that we're starting to see or, you know, possibly which I was not really known even was the fact that, you know, it made no sense red tides biologically is a, you know, is a plant. It's supposed to be making oxygen but I do realize that because of like the same thing was told to me afterwards and it took me a while to understand but, you know, when we had that oil spill, right? Well, that's a natural substance actually and what happen is the enzymes that eat it, their lives cycles, maybe a day and a half in the volume and they multiply within a day that was – I mean, I don't know, and there's – what they're doing is they're sucking up all the oxygen, which really – that was not – it's never been explained on any news I've seen so far. Those simple things to get it straight – to give the simple biology of it and make – instead of make it seem like it's a, you know, unbelievable mystery so that's...

Female Speaker 1: So you think it's – you think it's been blown out of proportion?

Nick Ruland: No, I don't think it's been. No, I just don't think it's – no [0:12:00]. I didn't say that at all. What I'm saying is no one knows what it is. So I mean, blown on

proportion, you know if – you know, I didn't say anything about red tide today because, you know, there's President Bush died, you know? It's just, you know, you make the news with, you know, they got backup news where they could throw in there whenever they want. So, but that's got, nothing to do with what you guys are supposed to be science, right? You're working off of science basis?

So, you know, even if you could put together sort of what cases I put together something to the fact that, you know, here's the site – here's the life cycle of what red tide is and then it keeps blooming or whatever, and multiply but then what I now understand is that aerobic or anaerobic bacteria, which is in the animal species that requires oxygen and when they're dropping – when they die and then they're consuming it down below or doing, you know, the process. Is that correct or no? You guys are – aren't you guys in that sort of field? Look it up. Don't say – don't say next sentence okay?

Female Speaker 1: Okay.

Nick Ruland: But – so, but you got to look at it. It's sort of like decomposition of anything. You know, there's plants, you know, that die and then what you'll see here [indiscernible] [0:13:18] same thing as compost, only water I think. Does that make sense?

Female Speaker 1: Right.

Nick Ruland: So in other words, there are two different kinds of bacteria, anaerobic and aerobic, okay?

Female Speaker 1: Uh-hmm.

Nick Ruland: And anaerobic needs what – you know, it only seem backwards to me but one of them, they multiply so fast. It's like enzymes. I mean, you know, now people use enzymes for a lot of things that will consume grease or fat. I mean they multiply so fast and that's their job, you know?

Female Speaker 1: So this red tide, you said it's in the news a lot this past year. How – is it different from red tide site you've experienced in the past?

Nick Ruland: No, I got no idea. I didn't until this year, there was – there was never an explanation that [0:14:00]– even there was no information and there was never an explanation of this simple biology, you know? High school biology in the cycle of those – mainly for organisms or whatever they are involved, okay?

Female Speaker 1: Uh-hmm.

Nick Ruland: And the amount of growth, they – the first ones could have, you know, because it's all the nutrient rich stuff that plants grow off of and that's the red tide and the green algae, right?

Female Speaker 2: Right.

Nick Ruland: But – and they multiply so quickly, unbelievably, in a day, right? That's, you know, so if we don't have that mixing and – and they live in a certain temperature probably but it's the stuff that you guys – you guys can look that up for a minute properly. And I would love to hear that – I would love to hear the outcome of it and then whatever the bacteria that are enzymes, I don't know what, that feeds on it at the – you know, when they die. So, they're – it's just creating so fast and then it drops down.

And if it drops down then that's where the oxygen gets sucked out. It's not – so it's not on top. Now I saw a lot of fish come through. I didn't see them in our bed base. I didn't see dead fish so I don't know whether the fish I saw going, between here and Pine Island or something because I get a restaurant over there so I go back and forth by boat a lot. Let's see if...

Female Speaker 1: Yeah, if there's any area that you can point out where you saw like a big fish killed...

Nick Ruland: Well, you know, the thing is it's – and that's why you need these people that are going out there and multiple people that are giving this form because, you know, I could tell – I can't tell you when that was anymore. I can't tell you what you call big fish killed. Those are really scientific things to me. The fish kill, 10 fish being death might be a huge fish kill with some people especially if it washes up right in front of their condo.

Female Speaker 1: Uh-hmm.

Female Speaker 2: Right.

Nick Ruland: And that's where it goes [0:16:00]. You know, it stops here. They show it, you know, whatever they do but first, you know, the news things, you know, we have to have educate some people what to – what it is first of all, so they know what they're looking for but I think the fishermen, shrimper or fishermen might be a great start and you can always edit it and alter it but if they really feels getting used, there are so much information that fishermen create and they can't get the information back.

Female Speaker 1: Yeah.

Nick Ruland: You know, and people will do on the [indiscernible] [0:16:28] you know what that is? [overlapping conversation] I mean, I was so excited when they started – you know when they started like 25 years ago, so this is great. So, I'm giving them all the information to the boat, you know, the boat where they were and some of the random sample so the weight measuring. And then they get – then it gets people who are really lazy. Do you have any fish I can, you know, they had their quota or their job. So all it is

take whatever is on top. That's – those are great. That's not very random sample in my mind.

Female Speaker 2: Oh my gosh.

Nick Ruland: Oh yeah, I saw a lot. So those were the statistics that then get used to show what our biomass is and all those things. I mean I – yeah and all we want to know is so the fishermen knew how old was that fish that was three pounds, how old was that fish that was five pounds and when it was three pounds – we know some are 18, that's 18 inch fishes is what we called three pounds, 20 inch fish is five pounds I'm talking about red grouper. Well if that grew that much in one year, well hell, let's turn it into 20. Let's get it back to the 20 inch fish because the biomass on those fish, that size, what – so it went up 66%, are biomass and those fish not being killed. I mean this is the stuff I'm rambling, not really but I [indiscernible] [0:17:52] off, but those are the kind of things that needs to be put out there, you know?

Female Speaker 1: Yeah. No, I mean it's – yeah.

Nick Ruland: When the fishermen want to know, believe me, they are the ones [0:18:00] that care more than anything and it's to their best interest, you know, instead of saying, you know, when we're doing something that is by biomass, okay, instead of headcount, you wipe up – we wipe out and these are allowed to be in the biomass and how many – so that means the same thing in reverse, the head count, the live fish that made it to three pounds or 18 inches. You just wiped out more, you know, 50% more of what could have and that's just only that first year or whatever it is.

Female Speaker 1: Yeah. So...

Nick Ruland: So these – and then those have to then be stack back in with your fish kills and you're – I mean and you're – you know, so yeah, you might want to say what fish did you see floating if you will through red tide.

Female Speaker 1: Yeah.

Female Speaker 2: Right.

Nick Ruland: You know, they'll identify – yeah.

Female Speaker 2: That's exactly one of the thing, with some management perspective that we need to know [overlapping conversation] [0:18:56] able to survive it or do they move...

Nick Ruland: Well see that's what I was – yeah, so – yeah and we don't know. Because we don't know the oxygen that they were able to move out of, you know? That that's like new information, you know.

Female Speaker 1: Uh-huh.

Nick Ruland: You know, we thought – we were thinking mostly red tide was a surface situation and ensure. Well I never knew or heard of the fact that the fallout from it is what sucks out the oxygen without oxygen, you don't have any – you don't have any habitat.

Female Speaker 1: Yeah. So I really want to talk to definitely the people you know that got out, the fishing people out there that go offshore. That's really...

Nick Ruland: What you need to do is pick a form even if it is just starting, that way I can get you information, I can get their numbers for you.

Female Speaker 1: Yeah.

Nick Ruland: It needs to come from you guys.

Female Speaker 1: Yeah.

Female Speaker 2: Uh-huh.

Nick Ruland: So, you know – and keep it as simple as you can always update it or make it simple enough where they do it.

Female Speaker 1: Yeah. I'm also interested though in how, you know, I know you're a secret wholesaler, how does – how does this red tide been affecting your business?

Nick Ruland: We don't know because it's – [0:20:00] for all the reason I just said, you know, I shipped stuff out and, you know, red tided because red tide is treated as an ensure thing. It can be very easily explained whatever fish size is coming in for me, is not red tide in theirs, you know, I don't even – I don't know.

Nick Ruland: Yeah, it doesn't...

Nick Ruland: But it's their offshore fishing anyhow so it's not...

Female Speaker 1: The more we've heard it, it doesn't build up and there's [overlapping conversation] [0:20:27] kind of an immediate thing.

Nick Ruland: It's a natural – yeah, because it's a natural – you know, it's a natural organism that's in – it's already in the system, it's part of biology. But the big blooms and everything comes because of tide water. You know, just like anything else growing right? You got to have a certain amount of ambient temperature, certain amount of conditions, you know, like plants growing in here, they need water. Well they need fresh water and then at certain solidity, I assume that they can't – they don't reproduce, right? But in the right conditions, they don't stop reproducing.

Female Speaker 1: Yeah.

Nick Ruland: They're very – it's very fast. And then whatever feeds on them whether its enzymes or bacteria, they grow just as fast.

Female Speaker 2: Yeah.

Female Speaker 1: When you talk about the big blooms, can we kind of narrow that down or do you have ideas of like, what years that there were blooms that were really bad?

Nick Ruland: No.

Female Speaker 1: Okay.

Nick Ruland: I mean there's no way I could say that. I know it was four or five years ago and it was up to the north but...

Female Speaker 1: Four or five years ago?

Nick Ruland: Yeah. You know, you can't – whatever I say, I don't know what you're looking for, but I mean there's no way I could...

Female Speaker 1: I'm just looking for, you know, your personal experience with red tide in this area. That's what I'm interested in.

Nick Ruland: I don't even remember when my kid's birthdays or stuff like that but – you know, it's hard to say...

Female Speaker 1: Yeah but I mean if there was a bad bloom and it was around your kid's birthday, then maybe that will...

Nick Ruland: Oh okay but the thing is...

Female Speaker 2: Or they wanted a party [overlapping conversation] and you said no.

Nick Ruland: Well the thing is, you know, what it was, you know, [indiscernible] [0:22:00] around here for as long as it did, you know and if nothing happened next year, we wouldn't remember this year. But it doesn't mean it doesn't have that long-term effect. Do you follow? So we don't know because we didn't know what it did to the bottom and whether that kills the habitat and how long it killed it for, you know. So that's why we need to have some of this equipment out so that then we follow up with the information, what they're seeing on top and then be able to follow up with some equipment that does the – does the scientific data collecting, you know. And then when you move the equipment to the right areas too maybe.

Female Speaker 1: Uh-hmm.

Nick Ruland: So, you know, I wish I could tell you, you know, specific but it can't be specific about something. That's the beauty of humans.

Female Speaker 1: What about [overlapping conversation] [0:22:49]

Nick Ruland: After six weeks, it doesn't bothers anymore.

Female Speaker 1: So what about right now and in the past year?

Nick Ruland: I saw a lot of, between Pine Island, I saw some stuff that you don't see – here's what I saw, more bottom things coming up the river...

Female Speaker 1: And – why don't you take one of these and then feel free to draw, you know, as long as we're being clear, you know...

Nick Ruland: Anyways, you know, of course [indiscernible] [0:23:17]

Female Speaker 2: Do you remember this area?

Nick Ruland: No. Oh [overlapping conversation] [0:23:26] So I mean on a regular basis I leave from like right here, and I got right here and the fish camp is right. And I go across to an island [0:24:00] which is right here. That's one, so I've got a – I've got a restaurant over there so I was going back and forth between...

Female Speaker 1: Let's go ahead and just – go ahead and draw that line.

Nick Ruland: ...no, that's all right, doesn't matter. So I go from here and I was going on, you know, I go once so at least a week and I guess that's where we coming at. Then there's, maybe it's right here. I can't see the – anyways, yeah, so this is where I was going back and forth. So I was seeing things coming and going depending on the tide. You can see the timeline like you can almost all the time, you know, when tide is coming on right now, it's greenish and brownish and there's a, you know, mix but it was mostly what I saw was in the tideline, okay?

And coming or going and I did – I never saw any – that's what makes me wonder a little bit, I never saw like fish don't just die and then they're rotting next day. I mean this one fish would die, right? You would see the flopping around, the same thing like going in a sort of a circle when they're dying, you know old age or however it happens, you know, until they drop down and crabs, whatever but I saw, I don't know whether there are sea snakes or eels, I saw – I had no idea there were that many of those. I mean these are things on the bottom so, you know, that you never really see.

Female Speaker 1: So this was...

Nick Ruland: Catfish, eels. I mean – and they were coming and going in tide for quite a few weeks. I'd still see them, you know, I can feel it some – I guess some part of me, a little more convenient than some others but – or it doesn't bother me that much but, you know, at certain points you can tell. But what – but what I'm saying is I was surprised. I saw a couple once in a while but I didn't see that – it's like [0:26:00] those creatures were able to, with freshwater and so on, I think they moved, you know, I don't know. Hopefully they did. I mean I was glad that that's all I saw, you know, each time but I didn't see – you know I think they're going on their way when they say they find all these turtles, I don't know or dolphins. They might have got goofy but those look like deep, I don't know. I try not to watch the news too much so the deep water – looked like deep water dolphin. I didn't see any, you know, [indiscernible] [0:26:30] dolphin.

Female Speaker 2: And that's what goes to when you said you don't really have that much information. Are they coming from offshore? Are they feeding on something else? They fed on the red tide or...

Nick Ruland: Yeah. Well those looked like – you know, the one I saw those were offshore dolphin, those black ones and there's, you know, [indiscernible] [0:26:48] the entire time during...

Female Speaker 1: During this past year?

Nick Ruland: Yeah, yeah, yeah. They, you know, - and they're residential dolphin usually. I mean I saw some breeding again. It's first time I ever saw one giving birth, pretty wild.

Female Speaker 1: That's really cool.

Female Speaker 2: You see breeding dolphins and then giving birth during this year...

Nick Ruland: Yeah, yeah, yeah. But I mean I never saw. I'd never seen it going back and forth. Here's what pretty cool about the...

Female Speaker 1: This back – this trip here, is this a fishing trip?

Nick Ruland: No, I have a restaurant over there. So I go over there by water but it's not the one.

Female Speaker 1: So this is your commute? This is your commute?

Nick Ruland: Yeah. So that was – that was, you know...

Female Speaker 1: Is there anywhere on this commute that you saw – you used to see more cat fish and eels...

Nick Ruland: Well here's what it is, coming out of the river so that's the tide and the – the river – the rivers got its own flow and direction, you know, which it always has and will. It just depends on how high or low the tide is, how much pressure that is. So they were in that tide line and this is where the dumping goes, you know, whatever from, gets the river. So, that comes here and depends on how it pushes way back in here. I don't know where it ends up getting or [0:28:00] you know, what level of toxic but that was – they were bottom fish, what I saw mainly.

Female Speaker 1: Yeah.

Nick Ruland: And there are fishermen that might have gotten trapped, I don't know. You know, that's what happens. You know, when we have these severe cold fronts or it gets the water temperature, they go almost dormant but they're sort of floating but they're alive.

Female Speaker 1: Yeah.

Nick Ruland: But – so now we're kind of wishing floating on cold fronts and a solidity to stop the growth I guess.

Female Speaker 1: Yeah.

Nick Ruland: I'd be glad to try to help [indiscernible] [0:28:36] fisherman's and maybe the guys from Erickson Jensen and – because I talked to some guys and – he was actually giving me some lat and long when he was coming back and where he saw, stop and what he saw that's what made me think of it, you know?

Female Speaker 1: Yeah, that's definitely...

Nick Ruland: Because without them, you know, you guys can – you guys do, you know, not that your information is useless but when you go out there one time and do a study every two years, we've got the people that are living it.

Female Speaker 1: Exactly.

Nick Ruland: You guys just need to get something that is useful to you without making it too complicated begin with.

Female Speaker 2: Right.

Female Speaker 1: Yeah. This has been what we've been doing with the mapping, has been like really educational and we've been learning a lot from it and talking to these...

Nick Ruland: Yeah, there were often 60-70 miles, you know, at certain points and they were seeing that copper colored or whatever that, you know...

Female Speaker 1: A 60/70 miles?

Nick Ruland: 60/70 feet, you know, so six – the mileage is different, you know, offshore from where they're fishing, so sometimes they're measured from – that's why I say once you turn into lat long, beginning and ending, you know, they can always put notes on the back side so that, you know, you get further information and you can digest [0:30:00] as long as you start getting some times, locations, and some information. You can start build a database. Without it, I don't know how you could. And that's the whole thing that there's – that's why you're – you know?

Female Speaker 2: That's why we're sort of what we – best we have knowledge like you have so ideal information for the fisherman but at this point with, that's the best we have but it at least gives us an idea...

Nick Ruland: Still hearsay if you want to actually get something done.

Female Speaker 2: Yeah.

Nick Ruland: Until you have time, lat long and what you're actually looking for. And you can always add to it. I mean I know I could get people involved in that part and then really get them involved if they – if we could find some funding for, you know, [indiscernible] [0:30:48] auto machines because they're – according to Casey, they're very – it's not a time consuming thing, you know. Until you get that bottom information, temperature, salinity and oxygen, we don't know the end result. I mean that's the first time I heard about that. I mean it's always been bugging me and there's got to be simple biological answers at least to understand the cycle.

Female Speaker 1: Yeah.

Nick Ruland: That's the first year I've ever, you know, it's been bugging me because I always was considering the thought process was that these are plants. They're creating oxygen. How can any of that be really bad? But, you know, I never thought it would affect the next part of the chain sucking up all the oxygen and their life cycle is so, I mean – and that's why I believe [0:31:51] [00:31:51] believe it or not, that amount of oil gets filled or gets released in the gulf on a yearly basis but not in that [0:32:00] intensity. And that's what would have killed it [indiscernible] [0:31:51] would have done it, probably did a whole lot anyhow. But they suck the oxygen right out and they would – it would have killed all the – I mean animal life, right? So that's as much as I know that I'm going back to school.

Female Speaker 1: How often do you all get red tides here?

Nick Ruland: You guys know the one I do, look it up. I mean it moves. You know this is the first time we were realizing that wind moves it and if we don't have enough wave action and fresh water, it's lighter. It stays on top. Cold water goes the bottom – you know, those are the kind of things. It's starting out fresh water and hot water so it

naturally stays up longer than if everything was, you know, so – and so those nutrients stay in same point, I think, I don't know. No, I can't answer that. I mean, I don't know...

Female Speaker 1: And your business isn't impacted or your...

Nick Ruland: Well it's impacted. You know, I don't know what the – I'm worried – the long-term thing now worries me way more because I didn't know that that's what – that – I didn't understand that last part of it and that's what we got. That's what we got to get some equipment out there.

Female Speaker 1: Yeah. What do you think are long-term impacts?

Nick Ruland: I don't know. I mean you got – you got to figure out where there's oxygen depleted water, there's not going to be any fish. Hopefully, they'll swim off but they haven't swim back to the middle grounds at all. We don't [overlapping conversation] [0:33:47] of course Tampa...

Female Speaker 1: Yeah, this area? Right here?

Nick Ruland: Yeah. So what - but, you know, none of us knew that that's because there was – the oxygen ran off and [0:34:00] and this fish don't naturally move a whole lot until we get weather, you know, that actually [indiscernible] [0:34:05] from top to bottom and I – which then I was thought was pretty good but...

Female Speaker 1: So the middle grounds are still totally depleted?

Nick Ruland: I don't know.

Female Speaker 1: Okay.

Nick Ruland: I don't know but you can – you know what you guys can access all the records where things are caught in the depth. It's – you guys have that from the fishermen that we have right now. You know, 49 or 39, it's not that exactly specific but you'll know 59 and above or 49 and above wouldn't be almost in that area. And that would be, when you look at the what gets caught, what the effort was, you know, I mean and how long they were out there, you know, that kind of stuff. That's the data that probably is sitting there just waiting to be used to a certain degree. I mean I only catch 20% or 30% of our [indiscernible] [0:34:57] for this year. We're pushing hard to get hopefully, you know, sounds strange, but trying with an emergency reduction in the quota.

Female Speaker 1: Yeah.

Nick Ruland: So it's supposed to be we're going to get it next, you know, and it takes time for something – that's what emergencies mean, you know, took fast. So they're

going to try and turn it back to 2017 which would put the catcher out 3.3 million pounds for the commercial sector so anyways. And there's other things, who knows?

Female Speaker 1: Well I'm really interested in what you just said and anything else like that. So any changes that you think should be made...

Nick Ruland: Well the sooner you get going because what's going to happen is it's going to get cold and the red tide won't be an issue anymore.

Female Speaker 1: Yeah. No, I mean that's...

Nick Ruland: It's going to happen, period.

Female Speaker 1: Yeah.

Nick Ruland: And the sooner the better on that but we lost the collection period but that's all right as soon as there's – it's [0:36:00] spotted again at all, then we can start putting the stuff out again, you know?

Female Speaker 1: Uh-huh, yeah. One of the – I mean that's the reason why we're doing this work, is trying to get a hand on it because we haven't been able to go out on the bus.

Nick Ruland: No, because you guys can't – you guys can't do a constant, you know, so the data you collected is, you know, it's good for that particular moment in that particular time and it costs a lot of money. These guys can put stuff together and then it can be very, very useful. And they're already – and you know what, you won't find people that care more about it than these guys so...

Female Speaker 1: That's true.

Female Speaker 2: Yeah.

Nick Ruland: Because it's their life, you know [indiscernible] [0:36:40] you're going to email me some stuff back, you know, so we're in touch.

Female Speaker 1: Okay, but I need your email. I need your contact.

Nick Ruland: nickruland@aol.com.

Female Speaker 1: Okay. And...

Nick Ruland: You're going to give me your thesis too.

Female Speaker 1: Oh yeah. Okay so I haven't...

Nick Ruland: No, it's all right.

Female Speaker 1: I just – I finished it and I haven't published a paper on it yet but once I published on paper, I'm going to send it to you.

Nick Ruland: All right well, thank you ladies and I appreciate [overlapping conversation] [0:37:17]

Female Speaker 1: Can I get a couple of signatures here.

Nick Ruland: You mean that I was allowed to talk to you?

Female Speaker 1: Yeah, essentially. I think that, you know, if we got some – I think you said some really good stuff and we might be able to [overlapping conversation] [0:37:29]

Female Speaker 2: Well great ideas, we're moving forward, you know?

Female Speaker 1: I love the ideas for moving forward and I want to – I really want to...

Nick Ruland: We got to go – we're going to do it, that's all.

Female Speaker 1: Yeah, and then right there. And I want to – I really want to do this mapping exercise with some of the guys that work with you.

Nick Ruland: There are two guys out fishing right now. I'll quiz him on when they get back just so you can see what they're saying but...

Female Speaker 1: But I – if you just, you know, if you send me their – I'll email you?

Nick Ruland: Email me and get [0:38:00] all sheets with some questions, not too many and I'll try to get around a little bit...

Female Speaker 1: But I think that's, you know, that's the next project. I want to focus in on this mapping thing and I want to do – I want to do this with them.

Nick Ruland: Well you got to get – okay, you need to be using this map?

Female Speaker 1: Yes.

Female Speaker 2: Uh-huh.

Nick Ruland: Oh quite this is it? No.

Female Speaker 1: We have a couple.

Female Speaker 2: Yeah, we got the...

Nick Ruland: Yeah, this is the one where everyone fishes.

Female Speaker 1: Okay.

Nick Ruland: Okay, right now they're fishing right here in this Compass Rose. And on this side, they were – it wasn't long ago that they were, you know, I'm not asking each time what – you know, that stuff and then a lot of times, fisherman to a certain degree...

Female Speaker 1: So you think when we talk to the guys who work for you, we should probably have a big blow up...

Nick Ruland: This is the one you want to work off.

Female Speaker 1: That's the one, okay.

Female Speaker 2: Okay.

Nick Ruland: And especially the shrimpers too because they're fishing between here and there, you know, that's where – this time of year and they're going to be continuing on – there's some information that can be garnered from them as well but they fished different bottom.

Female Speaker 1: Can you hold on to that?

Nick Ruland: Oh yeah, yeah.

Female Speaker 2: Yeah, didn't you make notes on that – yeah [overlapping conversation] [0:39:13]

Nick Ruland: All right ladies well...

Female Speaker 1: Thank you so much for taking the time out of your lunch break and come and talk to us.

Nick Ruland: No, no, that's [overlapping conversation] [0:39:19]

Female Speaker 1: ...I'll email you but I want to get contact with some of your guys and then do the mapping [overlapping conversation] [0:39:27].

Nick Ruland 2: Yeah, Casey's been great. I mean...

Nick Ruland: He's very good, yeah. So I had no idea [indiscernible] [0:39:37] All right thank you ladies.

Female Speaker 2: Thank you.

NickRuland

Nick Ruland: Yes, stay on me. Bye-bye.

Female Speaker 1: Okay, all right, you're welcome.