COMPREHENSIVE EVERGLADES RESTORATION PLAN (CERP)
LAKE OKEECHOBEE SOM NEPA SCOPING MEETING

PUBLIC MEETING
February 19, 2019
6:00 P.M.

Indian River State College
Wolf High Technology Center
2400 SE Salerno Road
Stuart, Florida

Corps Team Members:

Colonel Andrew Kelly
Lieutenant Colonel Jennifer Reynolds
E. Timothy Gysan, Project Manager
Jason Engle, Water Resource Engineering Manager
Marci Jackson, Planning Technical Lead
Jessica Mallett, Engineering Lead
Kim Taplin, Senior Program Manager
Andrew Geller, Operations Division
Allie Joura, Water Manager
John Campbell, Corporate Communications Office
Colin Rawls, Economist
Ann Hodgson, Environmental Lead
Erica Skolte, Corporate Communications Office
Kevin Wittman
Eric Summa
Savannah Lacy

(Whereupon, the following is a transcript of the proceedings had on February 19, 2019:)

COLONEL KELLY: So good evening, everyone. I know there's still some milling around and if we learned anything from the earlier session today, there will be folks kind of coming in and out as we go. But in the interest of time, we'll go ahead and get started.

I get the privilege of kind of starting this

out. My name is Colonel Andrew Kelly, I go by Drew, I'm a Jacksonville District, U.S. Army Corps of Engineers Commander. So my responsibility includes -- my office is in Jacksonville, it includes the State of Florida, Puerto Rico, and the Virgin Islands. It's my pleasure to be here today to see so many people out here who are passionate about what's going on. And I know many of you are frustrated and want to see change and honestly, the Corps of Engineers, Jacksonville District, we want to be a part of that. So thank you for coming out tonight. Really appreciate it.

I know we've got a list coming around, there's some additional elected officials which we will properly introduce.

Congressman, just want to welcome you back.Thank you again, sir, for coming out.

Today we are here to hear from you. We are here to hear priorities. Bottom line, I got -- I got to the District in August and this was the second place I came. So I was down here in August in Stuart right before I took command. I felt the passion then and understand a lot of the issues as they're unfolding now. And bottom line is we are looking at changing what was called the Lake Okeechobee Regulation Schedule, LORS 2008, which we've been operating in for about a decade and we're moving forward and we're calling it LOSOM, so Lake Okeechobee System Operating Manual.

And the reason we're doing that, we're doing it for two reasons. One, predominantly the name change is an indicator of how we need to take a better look at the system in its -- in its holistic entirety. Lake Okeechobee does not sit on an island, it is not one of just -- it is more than just one piece of the puzzle. It is part of a greater system, and so we wanted to capture that.

The second reason is because this is not LORS 2008 just redone. We want to change. We want to change, we want the ability to change priorities, we want to understand what those priorities are. We understand that in the last decade perhaps those priorities have changed, and certain things have happened over time that we need to be able to respond in kind.

I'd like to mention that the LOSOM, this particular effort that we're going through to get a new Operational Systems Manual is going to be from now until 2022. Okay? So that date is tied to the date of completion of when we have got to get the dike structure repaired. So we've heard a lot in the past about trying to go faster. I wanted to start now rather than wait. I could potentially wait and go faster later, but we're trying to start now.

That being said, we are doing everything we can within -- within our ability to adaptively manage kind of the way we do the Lake Okeechobee Schedule right now. This year since -- since LORS 2008, we have been able to move water -- more water south this year than since that time. We have been able to move water west during the dry season more so than we have in the past. And we're continuously looking at different ways to operate. And one example is trying to perhaps buy down risk of releases

later on in the summer by accepting some releases now. And that would be east, west and south. So we're working with the science community to try to do that correctly and effectively.

So that's about it. What we did learn -- just a couple of quick admin announcements. So what we learned from this afternoon's session, we started at just after 1:00 and finished about 5:20-ish. And we've got a hard stop to get out of here today.

So a couple of quick things.

One, when we start, we're going to have elected officials come up and then they will be able to make comments right away before we start our comment period. There is a little bit of an alarm. I mean think of it like the Grammies or something like that, you'll hear a beeping at the end of two minutes for folks to try and limit the time. And the sole purpose of that is so that we can have everyone who wants to participate and have -- and have their words spoken here today, we're trying to accommodate that.

We fortunately were able to do that this afternoon and I hope we can get through that tonight. I think we can. Please, it's not intended to be rude, we're just trying to track time, because everyone that we let go over is just another person who may not get to speak.

And then finally the words tonight, we encourage everyone to say what they need to say. There will be e-mails, letters, and other opportunities, and all of those go into the public record and all of them will be listened to, counted and considered.

And the last -- the last piece is that I promise you this is not it. We have done this four times so far, this is -- well, five if you count earlier today. This is number six. We've got two more coming in the next two weeks, and that will be eight Public Scoping meetings. And so that is, again, just the listening period. Following that, we're coming back. We're going to come back and do things like workshops where we have ideas and we reiterate back what we heard at all the Public Scoping portions.

And then we'll come back again when we have kind of what we think the right answer is and make sure we've got it right, make sure that you've got input into that before we go final.

So we're here today, we're listening today. But we will come back. And so I appreciate everyone's passion and really truly appreciate the ability to be here today with my team and listen to what you've got to say. So thank you.

(Applause.)

MR. GYSAN: Thank you, sir. My name is Tim Gysan, I'm the project manager for this effort.

Great to see everybody out here. Looks like there's a few less people than were here earlier, so you get the long version of this presentation, aren't you lucky? Just kidding.

We're here for you, to hear from you, not from me, so we'll get through this real quick and get straight to your comments.

A little bit of background on Lake Okeechobee itself...

(Whereupon, the formal PowerPoint presentation was given and has been omitted from this transcript per instruction.)

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MR. GYSAN: ...Thank you for coming out, I really appreciate it. I'll turn it over to Jason Engle, our Water Resource and Branch Chief of our Engineering Division. He's going to facilitate the comments tonight.

Again, thank you for coming out.

(Applause.)

MR. ENGLE: Thanks, Tim. Good evening, everybody. Welcome. You've got most of the pertinent points. Our purpose here is to get your comments tonight. This is important. We want to hear what you have to say. We want you to submit your comments here at the microphone. If you've got larger documents, you can submit them, hand them to me and we'll put them into the record. If you have longer written comments, you can submit them, as we've said, online with a comment card. But we do want people to limit their comments at the microphone to two minutes. We want everybody that's submitted a card to have a chance to come up and have their moment here at the microphone. So we just ask that when it gets to be two minutes if you're at the microphone, you'll hear the cell phone chime, that's the end of the two minutes, please wrap up your comments.

When I'm calling out the names, what we're going to do is I'm going to call out three names and I just ask the first person to step to the mic, the next two kind of stand by the flag, and that way we're going to be able to keep people moving through and we don't have large pauses. This way we can, again, get everybody in within the allotted time before they lock the door here.

One last thing. You know, we're here to listen. This is not really a question and answer period. We're here to collect, as we said, we're going to look at all of these comments, we're going to put them all together, we're going to think about the answers, we're going to respond officially to the answers, but we'll also come back later and we'll have a dialogue at our workshops where we've looked at the questions and we've looked at the answers. So just understand that tonight we're not going to be offering you answers, but we will be. And that's what this process is about.

So with that, what I wanted to do is first give our elected officials a chance to come up tonight. And I'm going to announce the names and if the elected officials could just come up by the flag.

Or if you don't want to make comments, of course you don't have to. But I'm going to announce all the names.

We have Sarah Heard, Martin County Commissioner. Harold Jenkins, Martin County Commission. Ed Ciampi, Chairman, Martin County Commission. Merritt Matheson, City of Stuart. Congressman Brian Mast. Susan Gibbs Thomas, Mayor of Village of Indiantown. And Stacey Hetherington, Martin County Commissioner.

So with that, what I would say is I will give the mic first to Senator Mast.

CONGRESSMAN MAST: Senator?

(Applause.)

CONGRESSMAN BRIAN MAST: I don't want to take up everybody's time, I had the opportunity to speak this morning. Just to say this community has done an incredible job of going out there and making the voice heard in a respectful and knowledgeable way, really working to inform the Corps of Engineers that our health, our safety, our environment, our economy all need to be taken into consideration this time around, making sure that they know -- you know, we acknowledge we have our own issues here, but having our own issues never gives anybody the right to dump more issues on top of us. And these are important considerations for them to take into account as they're going through this again. And y'all have done an incredible job and all of your neighbors have done an incredible job. I look forward to hearing the rest of the comments.

Well done, community.

(Applause.)

MR. ENGLE: Thank you. Sarah Heard.

COMMISSIONER SARAH HEARD: Thank you. My name is Sarah Heard. I have been a Martin County Commissioner since 2002. I ran for office because I was concerned and discouraged by the rapidly deteriorating conditions in St. Lucie River and the Indian River Lagoon. My concerns have only intensified since then, largely owing to the escalating environmental health crisis caused here by Lake Okeechobee discharges into our estuaries.

Lake Okeechobee discharges are harming our public health, our people and our pets. Lake Okeechobee discharges are harming our environment, destroying water quality in our estuaries and on our beaches. Lake Okeechobee discharges are harming our endangered species and wildlife. Lake Okeechobee discharges are harming our economy. We need protection now, not 44 months from now. We can't wait until more infrastructure projects are completed.

(Applause.)

Just as flood control south of Lake Okeechobee is a hard line, human health and safety from Lake Okeechobee discharges here needs to be a hard line for us. Clearly, discharges from Lake Okeechobee are a prerequisite for harmful algal bloom formation in the St. Lucie River and in the Indian River Lagoon.

Cyanobacteria produces toxic microcystin. What level of microcystin in the water body does the Corps consider too toxic? The Corps needs to acknowledge toxicity, the Corps needs to establish toxicity standards, and the Corps needs to test for toxins.

(Applause.)

BMAA is a neurotoxin produced by cyanobacteria. Growing research points to elevated BMAA levels in neurological disease like Parkinson's, Lou Gehrig's disease and dementia. Off-the-charts levels of BMAA have been found in autopsies of dead dolphin in the Indian River Lagoon.

Discharges from Lake O into the St. Lucie River and Indian River Lagoon need to stop. This is a dire emergent human health and safety crisis in Martin County.

(Applause.)

MR. ENGLE: Thank you. Harold Jenkins? Ed Ciampi?

COMMISSIONER ED CIAMPI: Good evening everyone. I'm Ed Ciampi, I'm the Chairman of the Martin County Board of County Commissioners. I have the honor of giving you, the Corps, and other interested parties and members of our community the official County comments. We will be submitting, with our staff, reams and reams of information, research and documentation. This is just our overview comments.

I would like to begin by thanking the Army Corpsof Engineers for hosting these public meetings to allow comment on the Lake Okeechobee System Operating Manual, referred to as LOSOM, and choosing Stuart as one of their locations for the meetings.

My fellow colleagues have already been mentioned, so I won't do that again, but I will tell you that the Board is unanimous in our fight to make sure that these issues are addressed and addressed immediately.

150 years ago the land we are standing on now was part of the River of Grass. Water essentially flowed freely south across vast expanses of land and moved at a slow pace; about a quarter of a mile a day. It took water months to flush its way out to what is now Florida Bay. On the way, that water would be naturally filtered of any harmful nutrients and would naturally replenish the aquifer.

We don't live in that world any more.

Since the devastating hurricanes of 1926 and 1928, we have turned the River of Grass into a complex management system of ditches, dikes, canals, culverts, and pumps moving water around to prevent flooding and to supply water for people and agriculture. These impacts are far-reaching as water is diverted southward influencing surface water supplies, aquifer recharge, and our environment.

This system has forever changed South Florida.

But we all live and work here. And today, because of that managed water system, we are able to. In Martin County we recognize that; that the system we know today delivers water that is rich in nutrients and other contaminants from the central region. It flows water south into the Lake, where it is eventually released to the estuaries on both coasts, and then finally in a last devastating blow, makes its way to the ocean and to our coral reefs.

Over time the estuary, home to over 34 threatened and endangered species and reef track have become polluted and at times nearing ecological collapse. In some years, the discharge volume from the Lake can near 90 percent of all volumes discharged into the estuary. In 2013 we began to see the thick algal blooms associated with the Lake discharges. In 2006 we saw algal blooms mask thick like guacamole spreading in the St. Lucie River through the estuary and out to the Atlantic beaches. People were getting sick, not just from the smell in the air. This because so many of these nuances become a nuisance to us. Animals, humans, businesses, the environment, all sick from the discharges.

I recently read again, as many of you have, a copy of a Stuart News article dated April 13, 1961. It's about a letter sent -- sent by the Martin County Commission to the Governor of Florida, the Chairman of the Flood Control District, the South Florida Congressional Contingent, and the Army Corps of

Engineers. I just want to paraphrase a brief portion of the letter. "The eight-fold overload of silt-laden discharges have been progressively increasing and reached an all-time high in 1959 and 1960. These discharges pollute Martin County's naturally clean tide waters, deposit widespread mud flats and shoals, restrict boating navigation, destroy marine life, and seriously injure recreational facilities which are the mainstay of the County's tourist industry, with cumulative damages of millions of dollars to the coastal communities."

We knew about this since the fifties. This 1961 letter asked the State and Federal Government to stop the releases because of the environmental impacts they caused. Does that sound familiar? Almost sixty years later, it's only gotten worse for the estuary.

In Martin County we're not just -- we're not just talking the talk when the flood gates open. As a county, we have spent 75 million dollars over the last 15 to 20 years on land acquisition for things like stormwater treatment areas to clean the water. We have been partners with the South Florida Water Management District, contributing 27 million dollars to the C-44 reservoir. And remember, we're a community of less than 150,000 residents. We're not Miami-Dade or Broward. 27 million dollars of Martin County dollars is a lot of money for us to spend.

(Applause.)

In 2015 we launched the Martin County Septic to Sewer program. The County has partnered in pilot projects for oyster bed rehabilitation and buying land for conservation and aquifer recharge. The County spends roughly three million dollars annually for BMAP compliance for our own basin discharges.

Even though we are funding all of these programs, a missing component is the lack of addressing nutrient contributions from the Lake. When our livelihood is affected by polluted water, it matters. When our health is affected by polluted water and airborne toxins from that polluted water, it matters.

As a Commissioner, I am accountable for taxpayer money spent year after year on environmental and water quality projects, but I have to wonder after years like 2016 and 2018, and the devastation brought about by the massive discharges of polluted water, what is the point of these investments to fix symptoms if we do not address the cause?

(Applause.)

Looking ahead -- looking ahead, we are enthusiastic to work with our State and Federal partners, especially with the leadership brought by Congressman Mast. This LOSOM effort is important for all of us. Now is definitely the time to get started. It's a time for quantity and for quality to come together with realistic performance standards.

As Lieutenant Colonel Reynolds has said in the past, and I paraphrase, we need to fundamentally change the way water is managed in this part of Florida. And I could not agree more.

While we respect the positions of other stakeholders, we are the stewards and custodians of the Indian River Lagoon and estuary, the waterways, and the health of our reef track for all living beings. It's not just because it's in our backyard, this is everyone's backyard.

So let me be clear today, this evening. That Martin County is at the table, your elected leaders and officials are at the table, your competent staff is at the table, and Martin County residents are at the table. The time is now for us to get this water right once and for all. And I think with this new group and this new emphasis, we can do just that. We need to begin today.

Thank you very much.

(Applause.)

MR. ENGLE: Thank you. Merritt Matheson?

CITY COMMISSIONER MERRITT MATHESON: Thank you. And thanks again, I spoke earlier today.

But I wanted to address a few issues and concerns I had for the record. First, I'd like to thank Congressman Mast for clarifying last year with the South Florida Water Management District that no matter how low the height of Lake Okeechobee gets, they will always prioritize water for human consumption and drinking. No matter how low the Lake gets, the District will always ensure that there's water for human needs. That's a pretty important point because we heard a lot of concerns about that earlier today. But thankfully Congressman Mast -- thank you for addressing that with the District last year. That's important because the Lake needs to be managed for everyone. And during that management, it needs to not harm our health and public safety.

It was brought up earlier about septic tanks; perhaps they're the cause of our algal blooms. I will admit that the City of Stuart is not perfect with its own runoff, but we are a leader in sewer and septic conversions, and so is the City of Sanibel.

We have excellent stormwater treatment areas and we're a hundred percent baffled, so to say; every area of runoff goes through a baffle box in our city.

Does Miami not have any septic tanks? How about Pensacola? How about the rest of Florida? If they're the cause. How come the two estuaries that receive the brunt of the discharges are the only ones that have algal blooms? If it's our septic tanks that are causing it, wouldn't we have it year round, even during a drought? We don't.

(Applause.)

Low Lake levels are hard for marine use and Lake access. I love to visit Maine, my father goes there frequently, and all of New England. Those marinas seem to deal with 10- and 12-foot tide swings and it doesn't affect their business. Those tide swings are natural. Do you think as Floridians we could overcome a foot Lake drop with such things as floating docks and adjusting our marinas a little bit? Would that help? Or is -- is our human health and safety not as big of an issue as a floating dock? The St. Lucie Estuary used to be a healthy and thriving fishery. I grew up in the water every day catching fish and eating snook out of the South Fork. Is our fishery less valuable than the Lake's, or should they all be balanced and held to the same equal level?

(Applause.)

I've heard a lot of talk about the natural height of the Lake. We humans need to keep in mind that we are here in this room because of problems we caused in the past. Naturally there never was a dike around the Lake. The land south of the Lake seasonally flooded. There was the River of Grass.

We created this problem. We made it worse when we straightened the Kissimmee. Perhaps we should look to nature for a natural process in order to move forward in fixing the problem we humans created.

(Applause.)

Naturally there was no C-44 canal. And naturally there were never any discharges into the St. Lucie Estuary from that manmade canal. We're begging to go back to nature and for zero discharges.

Thank you.

(Applause.)

MR. ENGLE: Thank you. Susan Gibbs Thomas?

MAYOR SUSAN GIBBS THOMAS: Good evening. For the record, I am Susan Gibbs Thomas, I'm the Mayor of Indiantown. Indiantown sits at the site of the C-44 St. Lucie Canal. The C-44 reservoir that is being built and scheduled for completion in 2021 defines the east and northeast incorporated boundaries of Indiantown. So you can see that the C-44 is a significant component in Indiantown.

The C-44 was created by man in 1916 to move water from Lake Okeechobee. Water flows directly to the east coast in volumes that God never intended. If he would have, he would have created it that way. He created it to flow south and southwest, not east. But man, in our finite wisdom, decided otherwise, and in doing so has created problems that must be addressed. We have to live with and deal with the policy choices that were made in 1948.

My ask is that in this planning process that we are here today to speak to and the formulation of the Lake Okeechobee release schedule, that the consequences of the release scenarios are run all the way through to the end. Look at the consequences as a whole and look at alternatives and their consequences. We are here fighting for a better balance in the choices made today that will determine if we have a tomorrow. This process determines the importance and value we attach to our health, our wildlife, our economy, and even our pets.

Does the release schedule provide for releases to cease when the State of Florida tests the release water and the toxin levels are too high? Although the Corps of Engineers has no authority to regulate water quality in the Lake or the canals, you do have control over the catchment, retention, and releases of that water. Put resources and holding the water north of the Lake. Continue to work on removing the bottleneck to the south so the water can flow as it was intended and send water west as the -- let me make sure I get this right -- Caloosahatchee needs it. Take the steps to be responsible for correcting past errors and use science and data to plan what is best for Florida.

Thank you.

(Applause.)

MR. ENGLE: Thank you. Stacey Hetherington?

COMMISSIONER STACEY HETHERINGTON: Good evening. I'm Stacey Hetherington, your Martin County Commissioner. Probably your most recent; I've been a Commissioner for about ninety days now. But I'm from a family of over three generations of Martin County natives. I'm a Board member of the Indian River Lagoon Council and the Treasure Coast Regional Planning Council. But my most important role by far in my life is mother of my two sons, who are 13 and 14.

Born and raised in Indiantown, just west of here, as a kid we actually literally used to hydroslide down the St. Lucie Canal, the C-44. Something you would absolutely never imagine doing today. And something my kids will never have the opportunity to do. As a matter of fact, my sons will probably not get to experience a lot of things here in Martin County.

I attended the session earlier today at 1:00 P.M. and as I listened to the comments that were happening, I thought "This is really a tragic story of an environmental system in complete despair. And if we don't collaborate and fix the system now, stop passing blame, our kids and their kids are being robbed of a chance of experiencing one of the most diverse ecosystems in the world."

As a County, we look at the system holistically. We try to look at runoff and septic tanks and all of the above. And I assure you, we're trying to do everything we can in our power locally. We need to recognize here that there's absolutely a human health component to this. We can't ignore that our kids and our pets can't go in the water. There's absolutely an economic impact to our businesses. I hate to see some of our small businesses shut down and not be able to continue.

As it is, by the time this process concludes, my sons will almost be out of high school. They'll be getting ready for college and they will not have experienced all of the great things that I did growing up.

As you move forward in this process, I just ask that you recognize all of the impacts and that we need relief and that we need collaboration and we need solutions sooner rather than later.

Thank you.

(Applause.)

MR. ENGLE: Thank you. So with that, we'll start the beginning of the public comments. So I'm going to call out three names and, like I said, what I would like you to do is to come up and the first person can step to the microphone, the next two can stand by the flag, and I'll announce the names as people come up.

Also, when you get to the microphone, state your name, state any group that you're affiliated with. This way it's on the record.

And we'll start with the first three names. Jennie Pawlowsky, Dr. Francis Clark, Ashley Guzi.

MS. JENNIE PAWLOWSKY: Hi, everybody. My name is Jennie Pawlowsky. I am a paddle board yoga teacher. Or I should actually say I was a paddle board yoga teacher. I brought with me tonight a picture. I look at this picture longingly. This was the last yoga class that I taught. I made the decision back in 2013, it was August of 2013, we had just started receiving discharges, I made the decision to

stop my classes. And it was obviously way before we started receiving the real toxic stuff in 2013. Now, I could go on about how this has affected me financially, but I don't want to talk about that tonight.

What I want to talk about is how this has expected me physically, because here is the thing.I can get a new job. It might be difficult, but I can go out and get a new career. What I can't get new is a new body. I have one body and if this body gets poisoned, if this body gets sick, I'm out of luck. And the fact of the matter is my body is poisoned. I was one of the ones that was tested at Harbor Branch -- excuse me, Harbor Branch.

They did a test on our urine, they did a nasal swab, and they also did a blood test. So it came back that all of us had microcystin in our nasal passages. So we're getting bombarded, we know that we can't touch it, we know that we can't ingest it, and now we know that it comes in airborne. So we're getting bombarded on all sides.

So that leads me to my question. If a simple person like me, a yoga teacher, can make a decision back in 2013 that I'm not going to endanger my students, I hope that my government can also make that decision and make that connection.

(Applause.)

So let me just end here real quickly. I'm sorry, I know it's going off. I have actually two requests. I really would like everyone that is working on the Operational Manual -- Operational Manual to watch "Toxic Puzzle." That is going to give some insight on what this stuff is doing to our bodies. And then the second thing is to make sure health and human safety is the number one priority when you're working on this project.

(Applause.)

MR. ENGLE: Thank you. After Dr. Francis Clark and Ashley Guzi, we'll have James Moir.

DR. FRANCIS CLARK: Good evening, ladies and gentlemen. My name is Dr. Frank Clark. My wife and I have been full-time Martin County residents for the last 17 years, 16 and a half of those on the Bessey Creek in Palm City and the last six months on Hutchinson Island on the ocean. I'm also an Advisory Board member at the United States Sailing Center in Martin County.

In all three locations we've observed firsthand the destruction of our environment caused by the discharges of contaminated water from Lake O. These damages have been well documented over the last few years and today by many speakers.

My focus for my comments is concerned with an overarching biologic problem that is of equal concern to all parties involved in the dialogue on the Lake O issues. The overarching biologic problem we face is the deleterious effects of those increasingly toxic algal blooms and the impact on our food sources and supply. This problem has been studied worldwide since 2005, but I was made aware of the latest study done here in Florida commencing in 2017 to the present. And that brings this problem into sharp focus locally. This project covers the work done studying the transfer of microcystin toxin from harmful algae blooms to humans through our terrestrial food plants.

The goal of the project was to identify the extent of exposure to humans to the cyanotoxin microcystins to the consumption of grow-crop foods that have been irrigated with local waters. In the

simplest terms, we still have to rule out local grow crops as a source of human exposure to microcystins. The study demonstrated the lineal relationship between the concentration of microcystin in irrigation waters and the accumulation of microcystin into the roots and parts of lettuce plants.

The microcystin concentrations of 110 and a hundred parts per billion used for the treatment groups were selected to represent the range of concentration measured in the canal waters throughout Martin County as part of the preliminary research.

Finally, we purchased ten edible plants from local farms and four additional edible plants were grown in Florida from Publix. The samples were collected from each and washed in demineralized water. All of the edible portions of the plants analyzed had measurable microcystin.

Analysis of water samples have shown the possibility that irrigation waters used may produce -- contain microcystin. Our hope is to eliminate the consumption of local produce as a significant source of toxicity to humans.

Our study shows that does not allow us to do that. My objective today is to bring the aspect of the problem to your awareness and hopefully shift the approach to solutions from its current and unproductive adversarial model to one of a combined effort of all affected parties to pursue viable and vital solutions to this common universal threat.

You know, at the present time, Lake O and the preponderance of local irrigation canals may well be rendered unsuitable for irrigation of food crops in the foreseeable future. We don't know what the tipping point is, but frankly, we don't want to learn it after the fact.

Thank you very much.

(Applause.)

MR. ENGLE: Thank you. After Ashley Guzi, James Moir and Jim Harter.

MS. ASHLEY GUZI: Hi, I'm Ashley Guzi. The discharge has affected my family. First with our dog Koza who was affected in September by being exposed to the algae. She almost died, she and four other dogs, and one did die. She suffered due to the discharges, she's on borrowed time. She's a four-year-old Golden who is acting like a 10-, 11-, 12-year-old Golden.

Second, in December my five-year-old son cut his arm from wrist to elbow in the river. We took him to the ER. He was -- they were not able to close it due to it happening in the river. After we left the ER -- they irrigated it, they cleaned it. After we left the ER, we had to go immediately to the pediatrician the next day. His arm was infected and had to go on ten days of antibiotics. The discharges are harmful and affect my family.

I live on the river. We need to maintain better management of the levels. When there's an algae bloom, we need to close off the gate and not expose our community and our county to the toxic levels.

(Applause.)

MR. ENGLE: After James Moir, Jim Harter,Glenn Kellis.

MR. JAMES MOIR: Good evening, my name is Jim

Moir. I'm a native Floridian and resident of the coastal margin of one of the most bio diverse estuaries in North America for the last 27 years. I've watched the seagrass meadows and oyster reef habitats become extirpated by a pernicious degradation. This once resilient ecosystem is spiralling toward collapse. I am outraged and I'm fearful.

You are charged with revising the standards for Lake Okeechobee operation under LOSOM. Balancing the needs, wants and health and safety of a great number of South Floridians is your job. Your management duty is to share responsibility with South Florida Water Management District of controlling the inflows and outflows from Lake Okeechobee.

My simple question is has a thorough and updated cost benefit analysis been performed showing the clear benefit of providing and guaranteeing all of the permitted consumptive use allocation for water supply requests and all of the drainage demands of the agricultural industry located in the EAA, along with Lake Okeechobee navigational easements and a modestly flexible Lake Okeechobee operational band width. These have been established and accepted over years, but they're competing with the interests and the issues of economic cost, loss of use, tourism, real estate value, and the cost of mitigating for degraded natural systems services, loss of estuarine and coastal natural system resiliency and habitat, the wasted water. The cost of irretrievable natural resources to tide, inability to provide clean water supply to South Florida's urban and natural ecosystems, lack of flexibility to stem salt water intrusion, degraded human and faunal health from toxic algal blooms and bacteria, nutrient loads at toxic pollution levels throughout our estuarine systems, sediment load that require dredging to clear, social, emotional and economic cost in a pitched battle between communities on the interior and the coastal margins, the cost of litigation, the loss system-wide of resiliency in the face of climate change.

The list of harm done by discharges goes on and on and on. It's an outrage. Clearly an equitable balance has not been achieved by your operational mandates. More STA's are needed and more clean water must move south and zero discharges to the east.

(Applause.)

MR. ENGLE: After Jim Harter, Glenn Kellis, and Leslie Freed, Linda Kennett.

MR. JIM HARTER: My name is Jim Harter. I'm president of the Stuart Flyrodders Club and a member of another fishing club. I'm on the water every day.

As you travel over the Palm City Bridge or the Indian Street Bridge, you see a bay. Part of the South Fork estuary. That bay used to be 15 feet deep at the deepest point. It's now four feet deep. There used to be over a dozen giant oyster bars in there. The oysters are still there, but there hasn't been a live oyster in there for ten years. The last live oyster that was in that bay was when I volunteered for the Florida Oceanographic to try and raise some oysters for them in oysters beds under my dock. They had to take them away because they couldn't survive.

I've been -- I've lived on the South Fork for over 25 years. In the 25 years, I'm on the water every day unless there's a hurricane coming. Or it gets down to below 50 degrees out; I can't take the cold weather any more. Okay? But I'm on the water every day, I'm on the South Fork, the North Fork, the

Indian River. I know every inch of the river. And I've seen it deteriorate more year after year after year. It just continues to get worse and worse. I don't know if it can recover.

I do know this, though. We have to stop all discharges.

(Applause.)

MR. ENGLE: Thank you. Glenn Kellis, Leslie Freed and Linda Kennett, and then Anna Bergalis.

MR. GLENN KELLIS: Hi, I'm Glenn Kellis. I just have a couple points I wanted to make. I didn't mention -- I spoke earlier, but I didn't mention that I did get sick last year with a respiratory ailment that felt like pneumonia. It had those kind of symptoms. I went to the doctor, it wasn't pneumonia.

After -- I was sick for about two months with a cough. I don't know if you've ever coughed so hard you felt your head was going to explode, but that's how it was. And wheezing that I just couldn't get rid of. Two courses of antibiotics and four times a day on a nebulizer for almost two months. Finally, finally cleared up. It was awful and it was just from breathing -- just from breathing the air on Frazier Creek where we live.

I have two pieces of advice for the Corps.

Starting early might sound like a good idea, but also gives the sugar lobbyists, the merchants of debt ERX plenty of time to undermine every single good thing you're going to try and do. Everything you're going to try to do, they're going to come and fight you.

They're going to tell you they can't do it and here is the reason why. And there's going to be a lot of political pressure. And all I want to say is try to stand strong, try to do the right thing for the people here in Florida.

(Applause.)

Another thing I wanted to -- I'm full of advice now. Keep in mind that the public by far is the greatest -- the biggest shareholder or stakeholder, as they like to say, in this whole fight. Okay?

We're the stakeholders, the people that live on the east and west coast. That's where all the people live. There's hardly anybody in the middle. I don't want anything to happen to them, but when it comes to the critical mass, as we were talking about before, that's where all the people are. That's where it matters. You know, I don't mean that they don't matter in the middle, but this is where most of the people live. And this needs to be taken into account. Thank you.

(Applause.)

MR. ENGLE: Leslie Freed, Linda Kennett, Anna Bergalis and then George Bergalis.

MS. LESLIE FREED: Hi, we're Leslie Freed, Linda Kennett, and Maria Dunn. We're representatives of the Treasure Coast Rowing Club. Our rowing club sits on the west bank of the South Fork of the St. Lucie River. It's been in existence since 1983.

At present, we have 80 to a hundred junior members recruited from the local middle schools and high schools and 60 master rowers, who are adult members. Our junior program gives young boys and girls the opportunity to find strength, mental and physical, both as individuals and as team, gives them building blocks for a successful future of leadership, cooperation and dedication.

The master's program brings people together to find a fitness regime for a healthy lifestyle in what could be an awesome environment. We put people onto the St. Lucie River 24,000 times in 2018. 21,000 of those times the person was a child between the ages of 12 and 18.

Rowing shells sit a few inches above the water and splashing from oars or boat wakes bring water onto our rowers. During the summer of 2018 the children's clothing was speckled with indelible blue-green flakes from the toxic algae. Many children with asthma and other allergies were forcedto drop the program because the toxic fumes aggravated their conditions. We take precautions like -- to avoid skin rashes like requiring rowers to wash with soap immediately after they leave their boat and we disinfect the oar handles, the seats, the shoes, and the boat parts.

For two months the algae sat on our river every day until the Governor visited. The Corps was able to control the discharges in the days preceding his visit and then resumed them thereafter.

(Applause.)

Normal tides make our water brackish. For two months last summer during the discharges, the water lost its salt content. The normally salty water was filled with toxic algae. We didn't see a single dolphin. The bird population disappeared because the fish were not there.

You're destroying our river. There are many causes producing the toxic algae, but only one cause of it being in our river. It flows from Lake Okeechobee to the St. Lucie River because the Army Corps sends it there.

(Applause.)

MS. ANNA BERGALIS: Anna Bergalis, I live on Sewall's Point, North Sewall's Point Road.I'm getting hit. I just want to let you know. I would like you to all support Brian Mast. He's not a merchant of death, he's a merchant of life and we need life in our river.

(Applause.)

Also, too, I would like to know what I'm breathing. It's like Jackie Mason said, if they're not telling you what you're breathing, that means they're telling you it's none of your business. It is your business. And we have social media now and we can learn things in five minutes which a future (sic) generation might have taken a year or two years and by that time it's already done.

Also, too, I was here several times with the Army Corps and I said about how that river turns black and how that foam comes at me, especially around October when the winds are blowing and I end up with a sore throat and I have a constant irritated cough. Well, this year I'm here now because my husband was admitted for pneumonia in October. So it's gone past the irritated throats. He had a good case of pneumonia and was hospitalized. So I will speak up at every meeting that there is.

There is not only -- in our river, you know, you don't see boating, fishing, anything. It becomes a dead zone. Now it's becoming us. We're becoming almost dead. And I'm just glad that my husband was able to get to the hospital when he did. Otherwise he might not have made it.

Thank you. Keep fighting.

(Applause.)

MR. ENGLE: Thank you. After George Bergalis, Ashley Page, and Frederick Ritter.

MR. GEORGE BERGALIS: George Bergalis, Sewall's Point, the better half of the relationship of that lady who just spoke.

1802 when the Congress by formal action created the Army Corps, I'm sure the Corps has had many successes and many failures over all those years. I don't know about the successes, I do know that two of the major failures were right here affecting us.

In the 1960's someone had the brilliant idea to channelize the Kissimmee River. And about 30 years later somebody got the bright idea that that wasn't a good idea, we need to de-channelize the Kissimmee River. Now we're hit with your so-called stewardship of Lake Okeechobee and the Hoover Dike, which I have to say is a poor job, guys. Your stewardship is questionable. Not that the Army Corps doesn't do great things, but it also has its deficiencies and this is one of them.

And we've been dumped on so long on this side and on the west side for the sake of "The Lake is up, the Lake is down, got to take care of the people down the road and you people are here." We're here to take all the blunt of all of this mess. And I think we're tired of it. We're sick and tired and we're going to fight. We're not going to listen any more. If y'all need help because the politicians are pressuring you, let us know. We can deal with that.

If y'all don't have the ability to do what's right, let us know. We have a lot of skilled people that can give you a lot of good ideas what to do. But it has to end. It really has to end, guys. So you need to get smart and get moving and give us some relief, once and for all. That's your charge, let's see you live up to it.

(Applause.)

MR. ENGLE: Thank you. Next is Ashley Page, Frederick Ritter, and then Mark Yanno.

MS. ASHLEY PAGE: Somebody left their phone up here.

COLONEL KELLY: Nope, that's for the overflow room. Thank you.

MS. ASHLEY PAGE: Hi, I'm Ashley Page. I'm a resident of St. Lucie, a student of Indian River, and an employee of Martin County.

I share a lot of the same stresses as everyone that has spoken tonight, but I also would like to indicate something that hasn't been brought up. And that is something I found in the South Florida Water Management DBHydro, if anybody knows about that. It is a program that South Florida manages and updates quarterly with different water testing.

In the report, you can see that in 2018 phosphate levels were almost three times as much as 2017, and they grew previous years to that as well.

Cyanobacteria has limiting growth factor and that factor is phosphorus. So when you talk about the algae blooms, I think we need to look further back and not so much focus on the discharge, which is awful and I understand and agree with that, but I think we also need to focus on what exactly is in the water and treat that as well.

(Applause.)

My suggestion is -- thanks. My suggestion is arbuscular mycorrhizal fungi. So essentially it is the symbiotic plant that attaches to roots and it allows plants to uptake things like fertilizer, phosphorus, potassium, and nitrates. And these fungi are studied all over the world, scientists have publications about them, and they've done experiments with agricultural, and tonight I know this is kind of left field, but it is about water. Because essentially it all runs into the water. And I think we need to take a look at what it is in the water before we just dismiss that whole part and start trying to discharge elsewhere, because it is like the mentality it's mine because I like it, it's mine because I want it, but as soon as it breaks, it's not mine any more. We have to get past that. We have to treat our water and build our ecosystem, because it's worth it.

(Applause.)

MR. ENGLE: Thank you. Frederick Ritter, then Mark Yanno, and Daina Karol.

MR. FREDERICK RITTER: Good evening. I'm a little taken aback because this was last minute, I don't have anything prepared, but I represent two companies; one, Eco USA.US, and the other Nature's Own Solutions.com. And I've been working for about a decade helping cities and towns get all the toxic chemicals, primarily pesticides out of their parks, et cetera. And I think now this is a milestone, I've spoken ten times on this issue since I think Congressman Murphy was a freshman in Congress when I first spoke on this, on the algae and all the solutions that people come up with.

I've been offering the same solution since 2012 and the Army Corps actually has tested this in Mississippi, 2017 I think you guys finished and wrote a paper on it. But the people who are affected don't necessarily have to wait for political action, because there are products out there that can help clean the water. I don't think the discharges are ever going to completely stop, and I think we're kidding ourselves if we think they will.

But the product that I'm trying to introduce and I've spoken with a couple people at the Army and hopefully will get the information into the right hands at this point uses nothing but electric and oxygen. It can be moved around to different parts of the river and flood dams to let it do its job. It was first tested back during the oil spills back in Orange Beach, Alabama. So it's been proven since then to work on all sorts of things; oil, PCP, cyanobacteria.

If you'd like, if you don't get a chance to speak with me or come talk to me, again the website is Eco, E-C-O, USA.US. It talks about our product, all the testing. And they can be here in four to six weeks. So we have alternatives to help clean the water when this stuff happens.

As far as what you said, you would like to hear from us, I would like to see you encourage less toxic chemicals and less toxic fertilizers being used (inaudible due to applause) so you don't necessarily -- if

there does happen to be discharges, they're not as damaging to the ecosystem. I would like to see you offer alternatives to these folks and maybe promote those alternatives. And lastly, to test and see how these levels are being reduced.

(Applause.)

MR. ENGLE: Mark Yanno, Daina Karol and Todd Weissing.

CAPTAIN MARK YANNO: My name is Captain Mark Yanno, I have been operating an inshore fishing charter business since 1995. And let me tell you with absolute certainty, there have been very negative changes to the fisheries in the Indian River Lagoon. I was a former biologist with the State of Florida Aquatic Preserves Program and then a biologist with the U.S. Fish and Wildlife Service. I am currently the vice president of the Clean Water Coalition of Indian River County.

The situation we are facing is twofold. One is that for decades too much water has been directed to the coastlines and not to the Everglades. But the other situation is the primary cause of our algae blooms and red tide, and that is undeniably too many nutrients in the water that fertilize these blooms.

This is not a new concept and we have understood the problems of nutrification for decades. Nutrients come from many sources, but what has changed in recent -- but what has changed in recent years to increase the level of nutrients that are causing these toxic algae problems in Florida? One thing is more water releases. But the other change is that this water is more polluted with nutrients. One thing I know that has increased these nutrients is a very big change in the way Florida manages its waterways. Herbicides. Not too many -- not too many years ago, plants in Florida's waterways were mechanically harvested which removed massive amounts of nutrients that these plants had, removed them from the water. Now these plants are sprayed with RoundUp and other chemicals. The aquatic vegetation rots in the water and these water releases by the Army Corps of Engineers wash all those nutrients to the coastlines to feed algae blooms.

This is not rocket science, folks. We could put men in space in 1960 -- in the 1960's, but fifty years later we can't figure out how to correct our water problems? Go back to mechanically harvesting vegetation to remove these nutrients from the water and then send that cleaner water south. Stop putting billionaire sugar growers above the health of our children and the health of (inaudible to applause).

MR. ENGLE: Thank you.

MS. DAINA KAROL: Good evening. My name is Daina Karol. Approximately two years ago my husband and I moved here and initially we were thrilled to have found our paradise. My husband could fish year-round and I could enjoy our beautiful waterways, beaches, and oceans. However, that changed when we experienced what happens when toxic and polluted water from Lake Okeechobee is allowed into our once pristine waters. It was shocking to learn that the discharges were causing human health problems and fish kills. Manatees, dolphins, and turtles were suffering, and beaches were declared unsafe and had to be closed.

My husband and I have many questions. Like is the human health and safety of the people living on the east coast as important as the human health and safety as those living south of Lake O? I have attached several articles about how toxic the recent discharges were. Articles that state the water discharged had blue-green algae, cyanobacteria, that was fifty times more polluted and toxic than the levels considered to be safe. How is that even legal?

We are so concerned about the waters that my husband now travels out of the area to fish and I just don't go near the water any more. We are already thinking of moving because we seriously fear the water around us is unsafe and a hazard to our health. We feel the health concerns of citizens living on the east coast are not being considered.

We are also concerned that the toxins and pollution from the discharges may even be worse and may even be more of a health hazard than we're being led to believe. All Floridians, especially our children, deserve better.

Thank you. (Applause.)

MR. ENGLE: Next Todd Weissing, then Gayle Ryan, and Dr. Michele Libman.

MR. TODD WEISSING: Good evening. My name is Todd Weissing, I live in Lighthouse Point, and I represent Lighthouse Point on the River's Coalition.

I have a copy of a slide which is titled "Problem." The problem is it has a picture of warning signs from the Martin County Health Department to avoid contact with our local waters. Also listed are the number of years that these signs have been posted for extended periods of time.

Over the last 15 years, the Martin County Health Department, which is responsible for the health of our citizens, has posted the signs to stay away from your waters in 2004, 2005, 2006, 2010, 2012, 2013, 2016, 2017, and 2018. That's nine of the last 15 years or 60 percent of the time. Something is wrong. Something is wrong.

By the way, we've had -- if you think it's a septic issue, we've had septic tanks 100 percent of the time. We've had releases all those years. So it is not a septic tank issue.

(Applause.)

Why does the Army Corps of Engineers release water from Lake Okeechobee to St. Lucie? When the water level of the Lake is considered dangerously high. So the Army Corps of Engineers releases water 60 percent of the last 15 years due to dangerously high water levels in the Lake. Since these are indisputed (sic) facts, and I will deliver this to you, it's indisputed (sic) fact, is it practical to look at the level of Lake Okeechobee? Is Lake Okeechobee, is the Regulation Schedule too high?

I'm not a scientist. I think it is. Logic shows that the Lake is maintained too high. You want the measure of success, how would I measure success? Don't discharge to the east. Lower the Lake level. Thank you.

(Applause.)

MS. GAYLE RYAN: I'm Gayle Ryan, Stuart, Florida. I'm a retired teacher from Chicago. I came here to enjoy myself and the water and retire. And I haven't been able to do that since I got a rash in 2013. So now I have 30 pages on Facebook spreading the word about these discharges on the east and the west coast. And it never stops.

I also have been happy enough to get involved with a lot of experts. So I had an expert write my speech today.

In 2000 the State passed -- oh, sorry -- in 2000 the State passed the Lake Okeechobee Protection Act, or LOPA, which established a December of 2015 deadline for achieving compliance with the total maximum daily load, or TMDL, for phosphorus-reducing limits incrementally beginning in 2001. If the goal had been fully implemented, we might not be speaking today about the problems with cyanobacteria. But the local limits were bypassed in 2016 when Representative Matt Caldwell introduced HD-7005 making the LOPA limits voluntary. The result was the largest amount of nutrient loading ever coming into Lake Okeechobee in 2017.

The Corps was charged by Congress in 2018 to find solutions in controlling harmful algae blooms, HAB's. To do that, we must control the nutrients to control the bloom. Control the nutrients to control the bloom. To control the blooms, the Corps is encouraged to work with the newly formed Florida Harmful Algae Bloom Task Force and provide eventual solutions. Please be mindful as to the impact on the agricultural, human, animals, communities and other interests in terms of higher cost to meet reduction of nutrients, the cause of the algae blooms.

Thank you.

(Applause.)

DR. MICHELE LIBMAN: Hello, I'm Dr. Michele Libman. I'm a medical doctor and owner of Treasure Coast Urgent Care and Treasure Coast Primary Care. I'm honored and blessed to be the medical provider for all the first responders here in Martin County. I take care of the police officers, the firefighters, and our lifeguards.

I would like to discuss the effects of red tide. Florida's red tide produced more than 2,000 tons of dead marine life and cost our local businesses more than eight million dollars in lost revenue. This summer, the most destructive red tide in a decade, persisted longer than anticipated due to the constant source of nutrients provided by the discharges from Lake Okeechobee.

Here in Martin County, the beaches were closed on and off between August and October. I can tell you that I personally had to take approximately 35 percent of our lifeguards off duty due to their respiratory symptoms from red tide. One patient, who had underlying asthma, was extremely symptomatic and actually missed several weeks of work. Algalized red tide is a known respiratory irritant that is causing inflammation in the lungs of people exposed to it.

Now, I don't work in the ER more, so I'm not seeing the sickest of the sick, but everyone seen in our office was symptomatic enough that they all required nebulized medicine for their lungs. We may never know the lasting effects on the health of those people exposed, but it can be prevented and it starts right now with you.

Ask yourselves if you're okay with your son or daughter training to become a first responder to save lives, only to have them come home one day covered in a rash or suffering from some respiratory and breathing problems.

And if the answer is that you're not okay, then do the right thing and start fixing the problem now before it's too late. We only have one life. Let's make it count.

You ask for some questions, and I have five for you that I'll be submitting for the record. One of them is if there's any data tying the recent glioblastoma outbreak to the blue-green algae, as it has been

reported that several of the recently diagnosed people were avid freshwater fishermen, including the latest patient who was only 19 years.

I want to know what the long-terms effects of inhaling the dinoflagellates, the source of the red tide.

What is considered an acceptable level of cyanotoxins in our drinking water?

For people who were in the water before the County issued their warnings, what complications can these people expect to develop?

And for people who have had to vacate their homes and businesses due to the high level of blue-green algae in the water, how long does it take for the algae to dissipate before it's safe for them to return home?

Thank you for your time.

(Applause.)

MR. ENGLE: Thank you. Ben Lovelace, Mary Clare Ahearn, and Seth Johnson.

MR. BEN LOVELACE: Hi, my name is Ben Lovelace, I'm just a person. I appreciate Colonel Kelly coming to see us and listening to our problems.

I talked about this at the last meeting I attended from the Corps of Engineers. I just want to read their mission statement. "Deliver vital public and military engineering services, partnering in peace and war to strengthen our nation's security, energized economy and reduce risk from disaster."

Nowhere in that statement does it say anything about the environment, conservation, anything like that. You'd think with all the ditches, dams, dikes, guns, nuclear weapons you could get, it's not going to save us if the environment goes to hell.So I would encourage you, I would encourage our Representative Mast to work with our Government to set your mission statement, you know, update it so that those things are taken into account.

Thanks.

(Applause.)

MR. ENGLE: Thank you. After Mary Ahearn, Seth Johnson, Gary Goforth.

MS. MARY CLARE AHEARN: So I'm Mary Ahearn. And you know what? It's been said so well, I really can't add to it.

MR. ENGLE: Thank you.

MR. GOFORTH: Good evening, I'm Gary Goforth. I want to thank the Corps of Engineers for being here asking for input. I'm truly humbled by the eloquent and passionate comments and questions that you have provided. I will do my best to maintain that standard.

I am a father. I moved here 25 years ago with my kids. We swam, we fished, we kayaked, we surfed. I'm now the grandfather of two young boys that I will not let in the river. And that's a shame.

Since the LORS has been implemented, on average the Corps of Engineers has discharged an average of 750 million gallons per day of water to tide. This water is a precious resource in the State of Florida. It would have met 90 percent of the water supply needs of the combined Palm Beach County, Broward County and Miami-Dade County.

So one question. How will the Corps calculate the economic loss of this precious resource, water discharged to tide in the development of LOSOM?

How will the Corps quantify the effect of selorise (phonetic) and the benefits to coastal wellfields by sending this water south and recharging the water instead of wasting it to tide.

There's so much to say in such a short amount of time. Let me read you one comment that made it very clear on the effects that we are all facing. This is from a recent scientific report. "Based on the microcystin content here in the St. Lucie River, it is a reasonable prediction that the citizens exposed to this 2016 cyanobacteria bloom may experience an increased lifetime risk of liver cancer and/or hepatic dysfunction requiring hospitalization or transplantation."

The Corps of Engineers has an opportunity to correct these wrongful discharges by establishing a plan that minimizes the reduction of toxic polluted waters in the estuaries and maximizes the water to the south.

So one of many questions, the last one I'll leave you with. In the evaluation of LOSOM, will you please evaluate one alternative of the many y'all evaluate whereby no releases of Lake water are discharged to the estuary.

Thank you.

(Applause.)

MR. ENGLE: Thank you.

MR. SETH JOHNSON: Good evening, folks. My name is Seth Johnson and I live at Circle Bay. And I want you to picture this scenario, please. Imagine living on the St. Lucie River in Circle Bay and having the toxic bloom completely carpet the canal outside your home become the cover photo for one of the River Coalition's brochures. That's what we're living.

I used to be a young dog in the 1980s. Now I'm an old dog and we started with the "De-ooze it or lose it" and then the River's Coalition. We've come a long way, but not far enough.

The effects of the chronic toxic bloom caused by the freshwater discharges of Lake O manifests itself in a multitude of ways, such as not being able to sit on our balcony, not being able to use the pool, not being able to eat on our communal deck due to the noxious toxic bloom and its stench, which causes respiratory issues, irritated eyes, compromising the quality of our lives and our environment in terms of human health and safety, not to mention marine life and safety.

Imagine having to go eight miles offshore to find clean water to fish in. And I've experienced that many times.

Imagine this toxic bloom being so noxious that it blisters the gel coat on the boat in merely five days of having the boat in the water.

Imagine going outside wearing surgical masks to diminish the negative respiratory effects of the toxic bloom.

Imagine the human health and safety impacts yet to be uncovered by these chronic toxic discharges from Lake O.

Living with this toxin terror engenders the following questions that demand answers, as well as permanent corrective action: Specifically when the Army Corps of Engineers is going to solve the aforementioned issues and take corrective action.

Specifically what benefits do the St. Lucie River, as well as the Atlantic Ocean receive from toxic discharges.

With that, I'll rest. Thank you.

(Applause.)

MR. ENGLE: Thank you. Next one is Becky Harris, Jeff Sumner, Scott Martin.

MS. BECKY HARRIS: I thank you again. My name is Becky Harris, and I want to address the real concern I have of liver diseases and living on the St. Lucie River. I saw firsthand what microcystin from blue-green algae did to my dog Pandora. Her ALC values spiked to a high of 9,000 when normal levels should be closer to 15. She went into liver failure and was fighting for her life. And make no mistake, it was from the algae. Autopsy labs proved microcystin in her urine as well the dog Finn who died. Obviously the Lake O discharges affected this.

Pandora and the other five dogs are our canaries in the coal mines. We all need to be concerned about this. I looked into a lot of data, there's some research that shows animal morbidity and mortality is an indicator for human health.

Research shows 76 hemodialysis patients died -- died because the water used at their dialysis center contained high levels of cyanotoxins. They also died from liver failure. Research shows cyanobacterial toxins impact crops and accumulates to levels considered unsafe for consumption. We heard that earlier. Research shows a cluster of non-alcoholic liver disease takes place right here in Martin County, St. Lucie, Indian River and Okeechobee Counties. Research shows 100 percent of Stuart residents tested had microcystins in their nasal passageways. I have all the studies to share with y'all.

And I ask for Army Corps, please consider the health of our community, as well as all the other communities. Shared adversity needs to happen now. I think winners and losers have been picked for too long. So I ask that you please consider managing the Lake lower prior to the wet season, expedite this LOSOM process, expedite any of the STA and reservoir projects.

And please, zero discharges.

(Applause.)

MR. ENGLE: Thank you. After Jeff Sumner and Scott Martin will be Kim Streiber.

MR. JEFF SUMNER: Good evening. Thank you to the Corps for being here.

My name is Jeff Sumner, I'm an engineering consultant, and I'm also the Chairman of the Okeechobee Economic Council. I guess you could say I'm one of those people who live out in the middle where the non-critical masses are. So I'm sorry for that.

Just as a reminder, and I've said this to some of y'all before, so I'll repeat myself briefly. But LORS '08 was intended to be an interim measure while the issues with the dike were addressed, which is something that the Corps has obviously made greater strides towards. A comment was made earlier that the Water Management District will always protect consumptive uses for legal users. I can tell you as a member of the community in Okeechobee, that is not the case. When LORS '08 was put in place and the resulting impacts to -- you know, potential for violations of the Lake O minimum flow and level, the District promulgated rules that found that Lake Okeechobee was not compatible for potable use, it was deemed an incompatible use by rule.

Our community has counted on that Lake for a potable supply since the early 1920s, since long before the dike as we know it now, since long before any of the Lake Regulation Schedules.

So I can tell you for a fact that our use of that water is not always protected. So not only were we affected, obviously there was a decrease in level of service for all legal users on the Lake, not only agricultural use south of the Lake, agriculture north of the Lake, meaning the Prairie basin and users in the upper reaches.

So with that as a backdrop, I would just encourage you as you undertake this analysis to not look at LORS '08 as your base condition, but to go back to WSE as your base condition. I think what you're going to find is that WSE not only will return the consumptive use volumes to those legal users who were affected when LORS '08 was put in place, but you're going to see a decrease in annual discharges to both of the estuaries. You're going to see a decrease in months of damaging discharges. And I think you're going to see more time that the Lake is in the preferred band which is going to, you know, help water quality, which has also been addressed as a problem.

So again, I just encourage you to look at that WSE as your base condition in your analysis. Thank you.

(Applause.)

MR. ENGLE: Thank you. Next Scott Martin, then Kim Streiber, and Greg Brawn.

MR. SCOTT MARTIN: Thank you. How are y'all doing this evening? My name is Scott Martin, I live over in Clewiston and I have this raccoon face because I fish Lake Okeechobee just about every day. I've actually fished on Lake Okeechobee for the last 35 years. But I do love fishing over here in Stuart. I spend a lot of time in the summer over here enjoying the salt water, the beaches with my family. I've lived here in South Florida, grew up on the west coast. But I'm a fisherman, I spend 300 days a year traveling around the country and fishing on Lake Okeechobee and just doing everything. And I wanted to speak about Lake Okeechobee and some things that I don't hear at these meetings a lot.

Number one, I want to talk about the proposed level of a 10.5-foot lake. And I want to talk about how these are facts. These will not be a good level for Lake Okeechobee. I'm all about slowing down the

releases or stopping releases and water quality being better. I'm here, I'm a fisherman, I love all of these resources, trust me. But we have to look at the problem a lot bigger than just some magical number that we come up with. 10.5, is that all of a sudden going to solve all of our problems?

I've spoken at several of these meetings and I've been to a lot to them, I read a lot of the literature, I'm sure everybody has got literature here as well. But I guarantee you there's a piece of information that's not on any literature, that's on any of your papers, or any website you've seen that would help solve a lot of these issues.

How much submerged vegetation is in Lake Okeechobee? Lake Okeechobee, that's not a little pond, by the way. That's 30 miles across, okay?

And there's estuaries that are around that Lake that are full of filter grass, filter marshes, needs to breathe. And right now on Lake Okeechobee, when we talk about higher parts per million being released east and west, you know how much submerged vegetation we have in Lake Okeechobee right now? Does anybody know? Not much. Not much, that's right.

UNIDENTIFIED VOICE: We don't care either.

MR. SCOTT MARTIN: That will help. But I challenge -- I challenge -- because that will help. I challenge the Corps and everyone involved that's helping to make the decisions on what this water level needs to be, let's focus on the water levels that is going to promote this grass to grow back in Lake Okeechobee and create a filter for the water in Lake Okeechobee. That is going to help a ton.

I want to see reports every time we have a meeting on how much submerged vegetation is in Lake Okeechobee. No one has ever brought that up.

(Applause.)

It's a very common sense thing to know, a very important thing to know. Why will the 10.5-foot Lake not work? Okay? I'm all about making some adjustments that is going to help the solution.

A 10 -- I just spent all day on Lake Okeechobee, it was 12.7 today. All the marshes around Lake Okeechobee, the filter marshes that will clean the water in Lake Okeechobee is all about a foot and a half to two feet deep right now. A ten and a half foot lake means there is zero filtering of Lake Okeechobee water. That is a fact. This isn't made up. This isn't some lake like in Maine where we just adjust our dock. Lake Okeechobee is a very shallow, flat lake; it doesn't just drop right off to 10 foot.

However, 10.5 is above sea level. That's not a 10-foot lake like you go out in the marina and it's a 10-foot lake or you go out by the marsh and it's 10 foot deep. The marshes, the filter marshes that are in the Everglades have to have water and the Lake has to be able to breathe. So a level that is 12.5 -- like right now the water is flowing through the marshes and the grass is starting to grow and we need that. A 10.5 is going to kill it. It's going to put all the water inside the Lake and all that sea base around the Lake -- there is no sea base out there at 10.5. Zero grass will grow on Lake Okeechobee at 10.5. And every day that Lake is at 10.5 means you have zero filter of the water. These are facts.

So I encourage you, whatever this level is going to be, that we start paying attention to how much submerged vegetation is in Lake Okeechobee. Because I guarantee you it's always about the number with the Corps and it's always about 10.5 and we'll do this. We worry about water levels, but we never

really ever -- how many conversations have we had about how much submerged vegetation is in all that filter grass? It's very important, not only for the ecology of the Lake, but for the tourism.

I was on Lake Okeechobee today and there's hundreds and hundreds of people out there enjoying the Lake from all over the world. I'm talking about guys from Canada, New York. These aren't just local people that live over there on the Lake that just enjoy Lake Okeechobee like it is in their backyard, these are people spending lots of time in the State of Florida and they're also coming over and enjoying the restaurants and the golf courses over here in Stuart.

So we all have to work together. We're all local; right? I live on Lake Okeechobee and I consider myself part of y'all's family just as much as the west coast. We're all in this together.

(Applause.)

So again, I just encourage you, that's -- that's what -- when we talk about some solutions, we need to know how much acreage of submerged vegetation is there. Because that's the only thing that's going to filter the water.

Thank you.

(Applause.)

MR. ENGLE: Thank you. Next we have Kim Streiber, Greg Brawn, and Alex Gillen.

MS. KIM STREIBER: Good evening, everyone.

My name is Kim Streiber, I'm a Martin County resident, and I'm here on behalf of myself. I believe everyone here is aware that cyanobacteria produces subtle toxins. Are you aware they become more toxic when introduced to salt water? And that the toxins disperse when they die and the cells burst? The toxin commonly detected here, when we get FDEP to test, is microcystin, a known liver, kidney and reproductive system toxin. The International Agency for Research on Cancer has determined it may be a human carcinogen as well.

I stand here a survivor of three separate cancer diagnoses in the past six years to ask you how toxic is too toxic? When the documented level of this toxin is fifty times more than what the World Health Organization deems safe for recreation and people lose pets and grow ill, where do you draw the line?

At what level of toxicity will you stop sending the poison to us? This community and its issues have no impact on the poor water quality in Lake O that caused these harmful algal blooms, but heavy Lake O discharges laden with cyanobacteria have a huge impact on this community.

We have increased rates of thyroid and endocrine system issues, breast cancer, liver cancer and brain tumors. This stuff has been linked to neurogenic diseases, such as ALS and Alzheimer's. Enough is enough. I sat in a Martin County Board of County Commission meeting over the summer of Toxic '18 and listened to the Deputy of the Florida Department of Environmental Protection, Drew Barlett, state that they do not test in the middle of these blooms on Lake O because they assume it's toxic and people know to stay away. They test the edges to see how much has dispersed into the surrounding water.

I want to know if any regulating agency has ever tested the sediment in Lake O for these toxins. Have they ever tested sediment in the C-44? Has anyone ever tested sediment in the St. Lucie River? If so, what were the results? Harbor Branch tested volunteers from our community last summer and a hundred percent of them were told they were positive for microcystin in their nasal passages. They have yet to see results on paper of their blood and urine samples.

The long-term health and economy of our entire community is at stake. I do not have proof the discharges caused my cancer, but I know the toxins are in my body. It's time to protect our health and safety, too.

Thank you.

(Applause.)

MR. ENGLE: Thank you. Greg Brawn, Alex Gillen, Nora Schoenberger.

MR. GREG BRAWN: I'm Greg Brawn, Executive Director of the Guardians of Martin County, a nonprofit organization with over a thousand donors who support growth management, fiscal conservancy, and clean water.

I've also been the owner of waterfront property in Martin County for over 30 years. I'm a professional ecologist and I used to do things like seagrass surveys and go boating and fishing when it was safe to do so. Unfortunately, I now have to take that business out of the county because it's no longer safe in our area.

I'm appalled that the St. Lucie Estuary and Indian River Lagoon have been allowed to be degraded to such an extent that oysters, fish and marine life recurrently die as a result of discharges from Lake Okeechobee, and that human health is now at risk.

The Guardians will be submitting written comments with a number of specific suggestions, but overall our philosophy is that healthy conditions can best be recreated by restoring historic watersheds. The St. Lucie Estuary historically was not connected to the Lake O Watershed, so the long-term goal should be to separate the watersheds, stop the discharges, stop wasting precious water, create more storage in the system, and restore areas that have already been adversely affected.

Thank you.

(Applause.)

MR. ENGLE: Thank you. I just wanted to make one quick note. We're up to Speaker #26 of 63, I'd say -- 64 actually. We were scheduled to end at 8:00, but we're going to keep going. We have the room until 10:00. So we will stay here and listen to everyone. But we do have a hard stop at 10:00; they have to let the people who work here go home.

MR. ALEX GILLEN: Alex Gillen, Attorney BullSugar Alliance.

I agree, Mr. Martin, I don't think it's us versus the Lake, I think the question is really over the water usage and the EAA, the drainage uses in the EAA. I think that's the elephant in the room.

The 1948 Central and Southern Florida Project, the thing that still governs largely our operations today has a line at Page 16, about a 70-word sentence: "Farming in the futile but flat muck soils of the Everglades can only be successfully carried on if the fields are surrounded by dikes to prevent overflow by high-water use canals or surrounding land, and if reversible pumps are provided to pump water from the fields into the canals in the wet periods and water from the canals into the fields in dry periods so as to maintain a favorable groundwater elevation in the soil during the growing season."

What does that mean? That means that this is some of the most highly engineered land we could possibly be farming in our country, maybe in the world. The infrastructure required to provide perfect growing conditions in the EAA is massive.

And the question I have for the Corps is, you know, with an authorization of irrigation, navigation, recreation, enhancement of fish and wildlife, and flood control, why is it that you have a South Water Management District Governing Board member talking about their entitlement, their water entitlement, but we don't have an entitlement to recreation, we don't have entitlement to health and human safety, we don't have entitlement to fish -- enhancement of fish and wildlife?

So in your balancing, are you balancing their needs so far ahead of ours?

(Applause.)

In 2017 -- in 2017 during the EAA farming -- or the EAA reservoir debate, the line was "Don't take our jobs, don't take our land." Today in 2019, the line has been "Don't take our water."

So from our community's perspective, what do we do? Like how do we win? You're not going to help us build a reservoir, and you're not going to change the way we operate the Lake, so we're just supposed to bear it? I don't think so.

So I think Congress -- or the Army Corps has to do a much better job balancing. And if that doesn't work, then the Congress needs to pass a new law.

Thank you.

(Applause.)

MR. ENGLE: Thank you. Nora Schoenberger, Frederick Schoenberger, Charles Hooper.

MS. NORA SCHOENBERGER: Hi. I'm a resident of Circle Bay Condominium and I live just a few feet from the canal where the toxic algae bloom arrives. My husband has respiratory conditions to begin with. We're retired here. We're old. And I feel bad, you know, that so many young people are affected.

I'm a registered nurse. I -- I was struck by this gentleman's comment about why this started and was constructed to save lives in the 30s. Are we still saving lives?

AN UNIDENTIFIED SPEAKER: No, we're not.

MS. NORA SCHOENBERGER: Are we saving lives in Martin County? You know, I mean, the thing was started to save lives, the hurricanes; to prevent the hurricanes. So what are we doing?

I'm not going to take too long because I just think that so much technology has been presented and I'm very grateful to all the people that did all of this research.

We deserve better. Even though I'm a Navy wife, I always thought the Army was supposed to protect us.

(Applause.)

MR. ENGLE: Thank you. After Frederick Schoenberger and Charles Hooper, we have Dr. William Hudgins.

MR. FREDERICK SCHOENBERGER: I'm Fred Schoenberger. Nora just sounded off very well. From my stint in the U.S. Navy, I became a qualified scuba deep-sea diver serving with DOD explosive ordnance disposal units performing hazardous duties as assigned. When I retired to Florida, I chose the location where I could continue my boating interests at Circle Bay Yacht Club Condos in Stuart on the south branch of the St. Lucie River. I volunteered my services as a diver to check boat bottoms and props when members had problems in those areas. As time passed and the Martin County Health Department issued warnings against swimming in these waters, I had to discontinue this practice, while watching the fish and bird activity along the water clarity diminish from my window overlooking our canal to the river.

In summary, as a Florida resident and a Navy veteran, I am appalled that the organizations that have the responsibility and power to control the situation have allowed it to persist.

(Applause.)

MR. ENGLE: Thank you. After Charles Hooper, Dr. William Hudgins, and Harvey Allgood (phonetic).

MR. CHARLIE HOOPER: My name is Charlie Hooper, I'm a resident of Stuart, live on the South Fork. I'm not here to tell anybody how to fix the problem, but I would like to say how it affects me and my wife. And my wife JoAnn and I discovered Stuart, Florida, when sailing our boat from Connecticut to the Caribbean in 1997. In our minds, it was a boater's paradise. We couldn't believe the facilities and just the wonderful area for boating out of Stuart. We continued into the Caribbean and we headed back to our home in Connecticut.

But in -- excuse me -- in 1998, we purchased a home on the South Fork and it became our permanent home in 2001. We kept a boat on our dock and traveled extensively through the Florida waters, waterways down to the Keys, which was considered our ultimate dream. Four years ago we became fearful of the increased water pollution, foul odor and summertime algae. We both developed respiratory problems when on the water.

Because of the St. Lucie River pollution and health concerns, we sold our boat and stopped all water activity that we did. We purchased a summer home in the Northeast to get out of this area altogether in the summer. For this change in our way of life, I blame the Federal Government, the Army Corps of Engineers, the State of Florida, Florida Water Commission, and any other authority that influences or manages the discharges out of Lake Okeechobee.

(Applause.)

MR. ENGLE: Thank you. Dr. William Hudgins, Harvey Allgood, Michael Friedman. Harvey Allgood, Michael Friedman?

MR. MICHAEL FRIEDMAN: Michael Friedman is going to pass.

MR. ENGLE: Blair Wickstrom, Captain Benny Blanco.

MR. BLAIR WICKSTROM: I'm Blair Wickstrom, Publisher of Florida Sportsman Magazine. I was here earlier to talk about the importance of the recreational fishing and boating industries through the State of Florida, but specifically in Martin County. This summer it got more real to me in reference to how it affects us personally. I have staff here. In July, this is the view from behind our office on the Okeechobee Waterway. We -- in response to people getting sick and feeling like they really shouldn't be coming into work, I made the decision to close the office temporarily and work remotely. We were able to come back, but I didn't feel it was in the best interest long-term to keep the office on the water. We made the decision to put the office for sale and to move in town. We've been there for twenty years this August, but we won't make it to twenty years.

I think what happened to me when we put the office up for sale, our realtor brought a prospective buyer by. It was a perfect fit, he spent two hours there. He told the realtor that this was a done deal. Later that night, by trying to find out more about Florida Sportsman, the first thing he found on his online search was a news story about us temporarily closing our office. He was upset with his realtor for not telling him and canceled any further thoughts of moving into our building, buying our building.

I realized that this is why people are afraid. We would have a lot more people coming up here, business owners describing their financial issues, but they're afraid. I know marina owners that did not want to ever go public because they didn't want to be known as the toxic marina. We need zero discharges.

(Applause.)

MR. ENGLE: Thank you.

CAPTAIN BENNY BLANCO: My name is Benny Blanco, I'm a fishing guide in Everglades National Park. I also am here on behalf of a new TV show for Florida Sportsman called Waterman that is solely to tell the story of the estuaries around the state that are struggling with the issues we're talking about today.

But more personally, it affects me every single day in the sense that Florida Bay is absolutely dying. It's been dying for a long time, and it's dying because the water that we're supposed to get in the southern part of the Everglades, the Florida Bay, is coming here to ruin your estuary.

So my estuary is connected to your estuary. And I can't tell you how many people this is affecting in South Florida, south of you guys, that the stories never get north because everyone thinks that the issues are local. And they're not. We're all connected.

And so I am here to plead that we should completely stop the discharges, that we address the issue of cleaning the water and sending it south to Florida Bay.

(Applause.)

MR. ENGLE: Thank you. Jared Greenberg, Laura Schmidt, Bud Jordan.

MR. JARED GREENBERG: Hello, good evening.

What issues are important to you? I, Jared Greenberg, live on the C-23 canal. I grew up in Jupiter Farms. My brother, sister, and I, we'd take our horses and ride on large canals around the Farms. Our parents now moved to Taylor Creek that connects to the Lake.

Water is a huge part of our life and Florida in general. What study outcome do you want? I would like to promote using the Okeechobee freshwater muscle to provide -- on private docks and around the Lake to try and clean out the water quality. Use nature to help man's problems and other means to help clean the water. Start a new NEPA using the 2400 model of the large C canals so they would have locks on them so -- to provide recreational uses to the community that are inland of the water area so the inland communities can enjoy waters. You talk about an energizing for the economy. That also goes with you guys' mission statement.

Three, how would you measure success? Clean water, the ability to swim without worrying about health effects for our family members. The old saying "Bad trumps when good people stand up and do nothing."

Thank you all for coming and doing your part for being good.

(Applause.)

MR. ENGLE: Thank you. Laura Schmidt, then Bud Jordan and Peter Upton.

MS. LAURA SCHMIDT: Hi, I'm Laura Schmidt, I live in Palm City on the St. Lucie River. I've been here before, I spoke to you before. I developed asthma from the first round of blue-green algae that is right in my backyard. And this past summer I had my asthma again and this time my dog was affected and I had to bring him to the vet and he had issues because when people speed by on their boats, the water hits our seawall and water splashes into the yard and the blue-green algae gets into the yard.

But I looked at your questions and I'm not going to repeat what I said last time.

So what is important to me is clean water. I want to be able to go in my own backyard and enjoy my backyard. I want my dog to go in the backyard and be safe. I want to be able to breathe clean air in my backyard and I can't do that. Over the summer I had to leave and go to Miami Beach for a couple weeks because I couldn't breathe here.

And the other issue we have is that when we have the toxic water, the fishermen, the crab trappers were still collecting fish and crabs and feeding it to everybody. You know, I wouldn't eat fish dip anymore because I'm afraid what they're putting in it, that it comes from our river. Why would I eat that? The fish and dolphin don't even want it.

The other thing is with the outcomes, we need to look at the toxins in the water and what's affecting our people. I know Dr. Vopal was here earlier, he's a really big advocate. And we need to study the air quality from the blue-green algae.

The other thing how I measure success is no more dumping. We cannot tolerate and stand the dumping from Lake Okeechobee anymore. We can't live.

The other thing is we need to roll back our environmental protections to actually mean something. We cannot continue having our environmental protection the way it is now. It needs to roll back to the old quality. And we need to have criminal prosecution against corporate polluters because that's affecting our waterway.

(Applause.)

When you dump that blue-green algae into our estuary, I actually felt I was being attacked by my own government, because you allow that into my backyard. And I don't want that anymore. Please, please consider no dumping.

(Applause.)

MR. ENGLE: Thank you. Next we have Bud Jordan, Peter Upton, and Mona Leonard. If I call your name, please come forward so I know if you're in the crowd. Kevin Flis, Brandi Gallagher, Chris Bishop.

MR. CHRIS BISHOP: Hi, my name is Chris Bishop, I'm the senior national account manager for Yo-Zuri America. Yo-Zuri is a worldwide fish and tackle company that sells products in -- on every continent. Our headquarters is in Port St. Lucie, Florida. I live right down the street here in Port Salerno.

I'm on this water over 200 days a year. Florida is our number one market in North America. We service everything from Mexico to Canada. There's many, many companies in this area that are much like Yo-Zuri where this is their number one market in the country.

I'm not here today to speak to you of how the algae blooms or the releases have affected my health or my children's health. My family has been here for over a hundred years. I don't know the answer to that, there's a lot more qualified people in this room to answer that. But unfortunately, the information that I really need and would like to see for my personal family has not been released to us.

What I am here to talk about is how it affects the people in our industry. So companies of our size can overcome issues like we've seen over the last few years, that's not a problem. The people that cannot overcome these issues are our local fish and tackle dealers, our local shops, and our local captains and guides that are on the water every day that rely on these waters to be healthy, healthy fish populations to be able to basically feed their families.

These people -- I think there's a misunderstanding that people in the middle of the state around Lake Okeechobee are the ones that have been here the longest or are the people that are real Floridians, not -- and the outside -- everybody on the coast are a bunch of tourists from the Northeast.

And while there may be some truth to that, there are a lot of families and particularly -- and fish and tackle owners are those type of families that are real Floridians that have been here for a long time. No one is getting rich in the industry that I work in, I can promise you that. These jobs live day to day, week to week, just to keep the lights on. And every time a discharge is put out to the east or west coast, you are putting their livelihood in danger.

I saw it at the beginning of the presentation that really putting anything into effect doesn't happen until 2022. I only have one question. How many good people will you put out of business by waiting until 2022 to have real change?

(Applause.)

MR. ENGLE: Thank you.

MS. BRANDI GALLAGHER: Hi, my name is Dr. Brandi Gallagher. I'm a veterinarian and a resident of Stuart. I'm also a Diplomate of the American College of Veterinarian Internal Medicine, so I'm a specialist in this area in veterinary medicine.

You've met two of our patients tonight or the owners of two of our patients tonight, but I came here tonight to elaborate on those issues. In late August and September of 2018, seven dogs presented to our emergency room for acute liver toxicity. Six out of those seven dogs live on the St. Lucie River. They were not just sick, okay? These dogs were in critical condition. They were vomiting, they were not eating, they were jaundiced. That means they were turning yellow. They had increases in liver values that were the highest I've seen in my career. And if you're questioning how long I've been a vet, I'm working on my 15th year.

They had fluid buildup up in their abdomens and some in their chest. They had low platelets and what is called coagulopathies. That means when I used needles to get samples of blood or fluid, I would make them bleed and they didn't want to stop bleeding.

A majority -- again, a majority of these patients were considered in critical condition and more than one of them received one or multiple plasma transfusions. One dog, you saw his picture, Finn, lost the battle. The patients who survived will always need to be monitored for chronic issues, including cancer.

In our efforts, which it took a lot of effort to find people to help us figure this out, we did find the cause. We did find microcystins, the toxin produced by cyanobacteria. We found the microcystins in liver tissue of Finn. We found microcystins in vomit, urine, blood, and even hair of some of the affected dogs, and that's because those are the dogs we got to test.

By the way, we still found evidence of microcystins in some of those dogs up to two months later. You can imagine the enormous emotional and financial stress this placed on the families of these pets.

I would hope that everyone in this room would respect the lives of these pets, these companions and family members. And if that's not enough, I would like to emphasize, like others have, that dogs are sentinels for the presence of this toxin in our environment. They swim in the water, they drink the water, they eat dead fish, and they eat detritus.

So if they are exposed, we are exposed. This should worry everyone and action steps should be taken to reduce the discharge in our waterways and keep our water clean to eliminate harmful algal blooms.

I want you to know that the veterinarians of this community have already been getting together. We're still talking, we're communicating with each other, we're communicating north of us, we're communicating with Florida, and we're communicating with the American Veterinarian Medical Association, which is a national association.

Thank you.

(Applause.)

MR. ENGLE: Thank you.

MR. KEVIN FLIS: Hello, my name is Kevin Flis. I wrote something, but I'm not going to read it, because you need to know who I am and why I no longer want to live here.

I'm a marine electronics technician. I'm probably the only one in the room in the marine industry, builders or installers. This stuff affects us so negatively and we know what the negative effects are: Alzheimer's, neuro-degenerative disease, liver failure, kidney disease. These are things I have to look forward to the next fifty years of my life, am I going to come down with symptoms of these things from being exposed to it so much. When I go home at the end of the day after being in a toxic canal for six to eight hours, you know, my clothes need to come off before I go inside.

The stuff that's in the water is not only cyanobacteria and blue-green algae, what about glyphosate, what about nitrogen, what about phosphorus, what about toxic microbes, what about fungicides, algaecides, alkacides (phonetic), herbicides? You don't know. You guys don't have a clue the things that are in the Lake.

One of our great organizations, the Florida Oceanographic Society, puts out information rating the quality of our estuary. And lately it's been an A and a B. To me, that's wrong. It's a C or a D. There's still plenty of things in this water that can make you sick.

We don't go in the water. I have an eight-year-old and a 12-year-old and a wife, and we don't go in the water. We don't go to the beach, we don't go to the river. You took something I loved; fishing, the water, and it's been taken from me. It has been taken from my children. And now I have to look at health effects, "Well, what will do this do to my health?"

Now let's look at the business aspects of this, because I'm sure I'm running out of time. The business industry here for marine electronics plateaus. And when it plateaus, it leaves me no opportunity. I'm at the top of my career and I have nowhere to go.

So in order to protect my health and the health of my family, we made the decision about six months ago that we will be leaving the state. And with that, I will take all of my experience in the marine electronics industry and I will take it with me.

Thank you.

(Applause.)

MR. ENGLE: Thank you. John Whiticar, William Lepesche (phonetic), Eric Senfinick (phonetic), Rhiana Rolland.

COLONEL KELLY: Go ahead, sir.

MR. JOHN WHITICAR: Good evening. I'm a third generation born and raised in Stuart, Florida, born in September 1950. My first real job after college in Martin County was at the Environmental Studies Center. It was new, it was around 1975.

I'm going to diverge a little from the bacteria aspect of things because we've talked about it so much. It doesn't mean I don't sympathize with everybody about what's going on, I'm going at this a different direction.

We would take the students out on the river and let them full seign through the grass beds, we saw crabs, shrimp, pin fish, baby snook, sea horses, small snappers and trout, just about every adult species that was caught by fishermen in our area and grew up in these grass beds. Even some other species, like barracuda and lobsters, snappers were caught. We taught our students that the grass beds of the river were the nursery of our marine world.

My focus today deals with chemical pollutions; sediments, too much freshwater coming from the discharges from C-44, with the fact that in 2012 and 2017 something happened that killed all of the remaining grass beds in the St. Lucie River and the Indian River Lagoon. They're gone. They're dead. These nurseries for all these fish I just listed do not exist anymore, they were survived -- many surviving species in the grass beds on Sailfish Flats prior to 2002.

If you look at the photographs, you can see -- I thought maybe that there would be the photographs here today. You've seen them before, some of you, at the meetings. I've got them documented here in my report that I'm going to give to the Corps.

Another area of the lagoon that I have profound experience with is located north of Jensen Beach, Florida. It's six miles north of Sailfish Flats and is also now devoid of seagrass beds. And I'm going to pass these around. I don't know if you can see them from here. But this is pre-2012, this is 2016 grass beds, no grass beds.

I am reading the wrong thing, I'm sorry.

Okay. One other thing I just want to talk about is I have a guy by the name of Larry Rescicotti (phonetic) who fishes on the Indian River. For the last six winters, Larry, an avid fisherman, told me that he's not caught a single edible fish in the Indian River. He's also recently sold his boat and motor. What will -- will Larry rent from us next year or will he go somewhere else? All the things involved with his boating and fishing, you know, supplies at the Snook Nook, how many people won't come to visit Martin County when they talk to Larry?

So forth.

I have a lot more to say, but I'm going to have to close because of the beeper. But my concern is that the grass beds, the nurseries for green life in our area are dead, and something happened between 2012 and 2016 that killed them all.

Thank you.

(Applause.)

MS. RHIANA ROLLAND: Hi, my name is Rhiana Rolland. I grew up in Stuart, Florida, and I now live in Stuart for the past four years. My husband works in the marine industry, he works on boats. He's often in marinas where there are cyanobacteria blooms. He comes home sick from that.

And in addition to that, I've seen the seagrass die. I've worked summer camps where at certain times of the year when there are no water releases, we found plentiful life, wildlife, animals. When there are releases, everything kind of disappears. I've seen conch, seen conch plentiful on the grasses in Stuart and I've seen them a couple months later completely gone. I found a shell empty.

Just seeing the effects on our environment over the past few years with these releases is really hard for us in this community. And I mean, the issues that are most important are definitely human health.

I think without a healthy ecosystem, you can't have a healthy community. And I think that that goes for the entire State of Florida, from Lake Okeechobee to start with. You know, under like aquatic vegetation or submerged aquatic vegetation in the Lake and keeping the Lake clean and then also like continuing to send the water down to the bay and also decreasing or hopefully completely getting rid of the discharges that we get here.

I hope that you guys can address -- and I would measure success by seeing our ecosystems thrive instead of hanging on by a thread.

Thank you.

(Applause.)

MR. ENGLE: I'm going to call out about five names because I think some of these folks might have left. But Guy Calvert, Amy Perry, Carl Perry, Tony Whidden, and Ross Perry.

MR. PATRICK GUY CALVERT: Good evening. My name is Patrick Guy Calvert from Jensen Beach Christian Church. Our church was built in 1910 on the Indian River Lagoon. In 2013 I'm the first pastor in the history of this church not being able to baptize in this water. We have baptized soldiers going off to World War I, World War II, Korea, Afghanistan, Iraq, before they went off to war. We no longer can do this.

As a co-founder and co-director of one of the largest food pantries in Martin County, we feed over 300 people a week. When these discharges happen, those numbers increase to 500 people a week due to the loss of jobs in our community.

I work closely with the elderly in our community. I find that when we have these discharges, we imprison them in their own homes because of respiratory issues.

I would like to tell the Corps of Engineers that history teaches us that you cannot help one community by hurting another without repercussions on both. This year I've seen the health of our lagoon try to rebound and rebound healthfully. So that refutes the argument that it's the septic systems causing the problems here.

During rainy season, I would like to see that the Lake is lower so we don't have these discharges.

I would like -- I would like to thank Colonel Kelly for my opportunity to speak here and I pray that the Lord gives you the solution to solving this problem. But I would also like to thank Congressman Brian Mast and our newly elected Governor for their work in our community.

Thank you.

(Applause.)

MS. AMY PERRY: First I want to start by telling the Corps thank you guys so much for doing your best and listening to all of us speak and being here for us and trying to help our water.

So first I want to say my name is Amy Perry, I'm from the top end of the pink here on Lake Okeechobee in a little town called Moore Haven. Behind me is my family here and we're from a small farming family, and we have a small family farm. And I'm going to read my speech now.

We have a small family farm owned and operated in the south end of Lake Okeechobee in a small town called Moore Haven. We're surrounded by an amazing community with all kinds of people and professions.

However, we are home to many farms and a lot family-owned and operated like our own. We grow food to feed billions of people in our nation. We, without a Lake having a safe level of water, which is 12 and a half feet to 15 feet, our communities and our farms would disappear, our food supply would be greatly diminished, and this sign here (indicating), this one right here that I've seen everybody holding up, this is true. We need this. We're all here to fight the same thing. We want -- we're not solving anything by pointing fingers at each other. You're not -- you're not solving anything by calling us names and telling us that we're terrible people.

We're fighting the same battle. So instead of pointing fingers, let's get together and let's fight this together. Let's solve the problems together and use science. Not filling, science.

I'm so proud to be a farmer, and I want to be able to continue to come to each coast. Just like Stuart, I've grown up here, I've lived my whole life here. I want to come to Stuart and feel safe to tell people who I am. I want to be able to spend my money here, my little bit of money because I am a farmer, we don't make that much. I want to spend my money here on food and beaches and I want us all to get along. So that's my speech.

(Applause.)

MR. CARL PERRY: She said about what I want to say also, so I will make this really short. One of the guys said his family has been here for a hundred years. My family has been here for over a hundred years. My family started in Broward County in Hollywood, a little town, Miramar. They were a dairy family. The population came in, pushed them out, we wound up on the southern end of Lake Okeechobee, or my dad did, not me; I was not born.

Since then, she's a fifth generation, I'm a fourth generation farmer. And what -- what I want to tell y'all real fast, because I know my time is short, yes, there is a problem. Y'all didn't come out here because y'all made this up or because y'all want to. There's a problem. Okay? We all know that. We got to find a solution. There's a lot of things going on in the Lake. We don't want to -- we don't want to mess our

fishermen up. The environment in the Lake is important. There's a lot of things. Hey, I'm looking out also for the level of water for the farmers.

One of the things I want to clear up real fast, though, is as far as polluting the water, I don't know if y'all realize, there's the Everglades Forever Act, it was enacted in 1994. Since that time the -- we're required to clean up the phosphorus from our water. Our phosphorus has to be ten parts per billion. That's pretty darn clean. That's cleaner than a lot of bottled water. So when the water comes onto our farm either from the Lake or from the rain, even the rainwater can be, not always, but the rainwater can actually be more than ten parts per billion. So when it leaves our farm, it has to be ten parts or less. So we're cleaning it up.

By the way, our water doesn't flow back up into the Lake. The farmers' water still has to go south. You know, still goes south.

So what I'm trying to say, guys, we're not here to point fingers. We don't grow the water, we receive water also. When it leaves us, you know, it now becomes our water. When it gets to you guys, then it becomes y'all's water. I mean, I heard somebody say that -- not blue-green algae, the --

MS. AMY PERRY: Red tide.

MR. CARL PERRY: -- the red tide, thank you. When it -- it starts out in the ocean and comes in. It does not start from the water from the Lake. However, nutrients can -- I can't say the word -- make it worse.

People would not expect you guys to hold that water because y'all are going to make that worse. Y'all are saying hey, we got to hold the water because it's going to make y'all's stuff worse. It's all of our stuff.

UNIDENTIFIED SPEAKER: Name one thing that the Big Sugar family has done to help this problem, the sugar companies.

(Multiple persons speaking; incapable of accurate transcription.)

MR. ENGLE: Folks, folks --

MR. CARL PERRY: Give me 30 seconds, please. The County Commissioner, he said that you guys had spent 75 million dollars with 150,000 people. See what the farmers have spent with the Everglades Forever Act. It's way the heck more than 75 million dollars. In my community there's only about 13,000 people in our entire county. I tell you, we're kicking butt on getting the phosphorus out. We are doing that.

Thank you, guys.

(Applause.)

MS. AMY PERRY: Anybody that wants my e-mail to ask questions can ask me for my e-mail.

MR. ENGLE: Next we have Ross Perry, Tony Whidden.

MR. ROSS PERRY: My name is Ross Perry, this is my family up here. And I'm from Moore Haven, which is right on the mouth of the Caloosahatchee River which is one of the main exits for the Lake. I'm a District President for Florida FFA, District 11. And part of our responsibilities for FFA here is to defend farmers when they're in time of need. So as part of that, I've got a couple things.

I'm 18 and I've lived on my parents' cane farm for my entire life and I've gotten to see lots of these issues. One thing that, along with what my dad said, is farmers do use water from the Lake to irrigate our crops. However, as much as we pump out of the Lake, I have never in my life saw a pump go back into the Lake. So for us to be polluting the Lake, I don't know how that could happen.

And then I also wanted to say tonight I saw lots of people holding up the zero flow signs and I see that as we can work together on that, because the way I see it is we want the Lake water to be very high, we want it to be higher than 10.5 feet. So with y'all wanting the zero flow, that together -- a higher Lake level would prevent -- would make for less flow. So I feel like that would be a little bit of a compromise on our -- for each of us.

I'm young, so I may not understand as much as I think I do. But lastly, I would also like to say the gentleman got up here earlier and said that people in the middle of the state may not have the same -- their opinions aren't at the same level as the people on the outside of the state because of population.

And I understand what he's saying, and -- but I don't agree with that. I feel like as us all being from the same state and being in Florida, we're all neighbors and we need to work together on our issues. And that's what I've got for tonight.

Thank you.

MR. ENGLE: Thank you. Tony Whidden, John Ludnick (phonetic) and then Clayton Humphries.

MR. TONY WHIDDEN: How are you guys doing this evening? My name is Tony Whidden, I'm from Glades County. I'm just basically here to represent myself.

But one of the speakers earlier in the meeting kind of struck a chord with me when he basically named us as insignificant. I live in Glades County. I work on a farm, I've worked on the same farm for 26 years.

I've also enjoyed sport fishing on Lake Okeechobee, still do. My father was from Glades County, my grandfather was from Glades County, my great-grandfather was from Glades County. My great-grandfather actually lived on a houseboat on Lake Okeechobee for quite a few years until my grandfather was born. When he become close to five years old, they moved to Lake Worth, Florida, and built a home. We have a connection to the Lake.

You know, my voice, I feel, is as important as any others. We don't have the population. My opinion is I have the same vote as you guys. I have the same voice. I don't consider myself insignificant. That was very offensive. We do have water issues on Lake Okeechobee.

I've been fishing that Lake for years and years, as has my father and his father and my great-grandfather. We've all been on that Lake and we've seen changes. We've seen depletion in our grass beds, the natural grass filter, God's filter.

They're almost -- they're gone. I don't know what the direct cause, I've seen some of the cause firsthand, what seemingly to be back-to-back hurricanes that uprooted this grass and just depleted what used to be acres and acres of natural grass on Lake Okeechobee is now nonexistent. It's a large part of some of our water quality issues.

When this grass dies, be it spring, hurricanes, natural causes, it goes to the bottom and creates a sediment. And without the vast grass beds in Lake Okeechobee, they're no longer there. And any type of wind, this Lake is agitated, and that grass helped prevent the agitation, the stirring of sediment on the bottom of our Lake. It also acts as a big filter to clean the water that cleans our Lake.

I don't like -- I don't like how the politicians have pitted us against each other, west coast against east coast, east coast to west coast against the center. We all want the same thing. Clean water.

(Applause.)

MR. ENGLE: John Ludnick (phonetic), Clay Humphries.

MR. CLAYTON HUMPHRIES: Thank you. Last week I spoke at one of these meetings. How would I measure success? Tonight the Congressman said something in the beginning of this and said it pretty good. "Don't dump more issues on us" is what he said.

I couldn't agree more. Most people here tonight talk about discharges. And what about the discharges that Lake Okeechobee receives? 24 hours a day, seven days a week Orlando discharges into Lake Okeechobee via the Kissimmee River. It's about time they bring this up. Nobody wants to talk about it.

I'm going to bring up some key points here this evening. I'm sure I'm going to run over time.

The coastal communities are actually the second to receive this water. Once it's gone into the Lake, which is typically a little shallow, warm water, has a chance to breed these toxins, make them worse, then they get to flow out and hit your communities out here. If you think anybody in this room wants to see any of this happen, you're wrong. None of us want to see this happen. I'm an eighth generation Floridian. You guys fourth, fifth. We all grew up coming to the coast and enjoying it, too. You think we don't like to come out here and do that? We don't want to see it this way. All of you that have been sick or lost a pet or a loved one that has been sick or is, all of you who are concerned and want to see real change happen, hear this: It all started with the biggest attraction in our state. One of the reasons you won't hear about it.

I'm going to give you some quick facts. First, 208,257 people were registered as residents in Orlando in 2017. Next, also 2017, 72 million people visited Orlando. 72 million. Lastly, and this is a real kicker, Disney World alone out of all of those attractions there, has a 300-million-dollar-a-year lobbying budget. That's quite a number to wrap your head around. I feel like it would be naive to think that some of that money doesn't go to lobbying on anything that would keep everyone's attention on anywhere but Orlando.

Okeechobee's wildlife, its entire ecosystem, not just its tourism, but entire community economies suffer from what comes out of the Kissimmee River. It's been asked if the lives of the people on the coastal communities are important to those south or around the Lake, but I ask all of you tonight are not all of our lives, our health and our ecosystems and our economies as important as those north of

the Lake, as those in Orlando? We're all here to put a stop to this and we want this to end, but don't we want to do it right?

Listen, I get it; everybody here is passionate, everybody here wants this to stop. I made a similar speech last week. The Okeechobee community people, they were all tired, they had been up tilling fields, were covered in something from fixing equipment or maybe they had been fishing the Lake or maybe they had just been teaching all day. But they were there into the night, and they all agreed with what I said. If we work together to do this, we're going to come to the best solution and we're going to do it a lot quicker.

So thank you guys tonight, I hope you agree.

(Applause.)

MR. ENGLE: Thank you. Jerry Buechler, Nyla Pipes, Mark Perry.

MR. JERRY BUECHLER: My name is Jerry Buechler from Port St. Lucie. I used to love kayaking or canoeing in my Halabock (phonetic) canoe that the last couple summers I've been hesitant to get on the water.

If you're looking for solutions, I went over to west coast, there was a presentation by Mote Marine Laboratory and Aquarium. That's in Sarasota. They received 2.2 million from Governor Scott to build an oxonator machine. They tested this in dead-end canals and within a week it totally eliminated the blue -- the algae blooms and the red tide. Unfortunately, because of the tide, even though they had a berm, you know, more and more red tide and algae blooms came in. So this got me to thinking. I had seen down in Miami on the river something called the Scavenger vessel, it's a decontamination vessel. And it's used to keep the Miami River clean and the Biscayne Bay clean. And what it does, it treats 20,000 gallons of water per minute, equal to fifty 20-by-40 pools per hour with 300,000 meters of oxygen injected per hour. By comparison, the oxonator that was developed by Dr. Richard Pierce and used in the dead-end canals treated less than a thousand gallons.

This vessel right now, they built three of them because there's a similar lake, it's a reservoir lake in Central Mexico, near Pueblo, Mexico, it was so polluted with algae blooms and e-coli, they could no longer use water from that lake to irrigate the crops around that lake. They have three of these vessels now on that lake with what is called a maintenance contract. It operates 40 hours a week, you know, 9:00 to 5:00, and that lake has cleared up, it's again being used for irrigation.

I think this might be a solution. 2.2 million was given to Mote to build this ineffective oxonator, but what exists is the possibility of putting five of these for less money on the Lake to clean the water.

It might also even help the seagrass, the filtering grasses. Oxygen is a vital component for all of us, but also oxygen in the water is a vital component for the fish and the filtering grasses.

Thank you.

(Applause.)

MS. NYLA PIPES: Good evening, everyone.

My name is Nyla Pipes. And first and foremost before I get to the point I want to make about our water, I have something I need to say and it weighs heavily on my mind regarding the social side of this conversation. And you'll have to forgive me right up front because sometimes when I get a little bit angry, I'm not as good and I'm not as succinct as I should be. But when I have people that are sitting in front of me in my own community who are mumbling about how ignorant the guests who have come from out west to speak about this issue are, it makes me angry.

So before we move forward, I want every single person in this room to check yourself. Because we are Floridians. And our water is connected. We didn't do it, and we are all paying for the sins of our fathers. And for the people to make those kinds of statements but then claim that they're trying to be nice and work together, I see you. And I do not like it.

(Applause.)

A couple of points regarding the water. Because we are all connected, we have a serious issue. We do not have anywhere to put this water to stop the discharges. On the "Periodic Scientist" phone call this week or whatever they call it, the discussion was about the Caloosahatchee and the fact that although they want more water during the dry season, right now they're kind of fresh and "Please don't." Okay? So the Caloosahatchee side does not want any more water from Lake Okeechobee currently, with the Lake at 12.7. South of Lake Okeechobee right now you've got water conservation areas that all have their own regulation schedules because they all have their own environment, their own species, their own wading birds, their own nesting going on.

Those water conservation areas are nearing their level of fullness. Right? The regulation schedule says "Hey, look, you can't send much more here." South of that, getting water across the Tamiami Trail, you have the Cape Sable Seaside Sparrow nesting this time of year. And whether the people like to call it a red herring or not, it is not. It is an actual species that is trying to survive in this mess, just like the rest of us.

So where are we going to send the water, at 12.7 right now, in order to get Lake Okeechobee down to 10.5 or even 11 feet by May? Nobody has an answer for that. So while you're asking for a lower Lake level, please be careful what you're asking for. Because if the target was 10 and a half or 11 right now, the Corps of Engineers would be having to go through their decision-making process using their famous decision tree with all the lines, and they would decide to send that water to us.

Study harder, look at all sides of this, because what we're asking for right now may not be the solution you think it is.

Thank you.

(Applause.)

MR. ENGLE: Thank you. Mark Perry, then Dr. Bjornson, and finally Chris Serrube (phonetic).

MR. MARK PERRY: Mark Perry, Florida Oceanographic Society. You know, so many people today and tonight have talked so eloquently about what it's like here. And growing up here 62 years, I've also seen the river change so dramatically and it really gets me to even think about it and talk about it.

Of course there are issues. There are issues all up and down the whole system. I mean, when the system was -- the pre-drainage system as you see in the graphics used to start up at the younger chain of lakes that entered into Lake Kissimmee and the Kissimmee Valley, that 2.5-million-acre watershed north of the Lake all the way up to Orlando has all that drainage from 60-foot elevation coming down from the Lake at 12 and a half. When that used to flow, it took six to nine months to flow back down into there, a very oxbow and natural flow. But then the Lake overflowed to the south and that River of Grass used to flow down south all the way to Florida Bay.

It was mentioned earlier about the one mile every four days. That shallow river about a hundred miles long, 35 miles wide, flowed very slowly, and finally got to Florida Bay about 16 months later. That is all through the dry season that used to happen.

That River of Grass we found was just not acceptable. We wanted to drain the swamp in the 1900's and then the hurricanes came along and we wanted to dam the Lake. And we dammed the Lake and shunted it down east and west and now we discharge about 1.7 million gallons a day to the Atlantic and Gulf of Mexico, water that used to go down south into Florida Bay, but also recharged the Biscayne aquifers down in the middle of the Everglades.

We've really destroyed the system and we haven't realized what it does, the impacts. What it does impact, our estuary gets these discharges and every time our oyster beds here, about 300 plus species of little crabs and shrimp and marble fish get impacted every time. 120 days of inundation, the oysters die. The seagrass dies off, too. As you've heard mentioned before, the seagrass areas outside of the St. Lucie Estuary, documentation by the District, threatened species by the National, you know, Oceanic and Atmospheric Administration, the OAA.

But what I'm here to speak to you about is that the water can go south. The water does go south. It goes south from what is now the EAA basin south of the Lake at about -- almost 512 billion gallons last year and only 25 billion gallons of that came from the Lake. So we're using the capacity, moving the water south in our stormwater treatment areas and our STA's that we paid over two billion dollars for to treat the EAA basin runoff to clear this up. I'm saying on the new plan, we need a capacity to move (inaudible due to applause) instead of pumping into the estuary.

Our plan is to submit written comments.

(Applause.)

MR. ENGLE: Thank you. Can I get a show of hands for anyone who submitted a card and hasn't spoken yet? Please come on up.

MS. ROBYNE CAMP: Hi, I'm Robyne Camp, I live here in Martin County. My husband and I retired to Hobe Sound.

First of all, I want to thank all the people who have spoken tonight. Very eloquent, very informative. Democracy in action. I can't thank you enough.

My main point is that we live at the southern end of the most biodiverse estuary on the east coast, and it is a shame to see it go down the drain. We are fouling our nest.

Secondly, I am a person who suffers from non-alcoholic liver disease. I wouldn't wish this on anyone. It is a terrible thing and we should not tolerate this. When I say not tolerate this, I don't personally have a solution. Many interesting things were proposed tonight. We need to get to the bottom of the science and do our best to eliminate the problems.

Thank you very much.

(Applause.)

MR. ENGLE: Thank you,

MS. ELMIRA GAINEY: Good evening, my name is Elmira Gainey. I've been a member of this community, our community since 1962. Presently I'm a realtor.

And I'm not here to talk about it from the standpoint of what I could make possibly as a realtor, but the fact is that when people come to Martin County, many want to be able to live on our waterways and to enjoy our waterways and to enjoy all of the features of our county. We have a challenge that we must face in our community. Our waterways are not safe. We're having people who refuse to purchase homes on the water because of that. And again, it's not my pocketbook that I'm talking about. I want the best for our community. People are afraid to purchase homes on the water, even in the communities such as Circle Bay. I'm not talking about the million-dollar homes on the waterways, I'm talking about the very -- you know, the apartments and the nice communities for our seniors. They're very concerned because of the water issues that we're having in the community.

There have been some very -- really outstanding comments that have been made and I hope the Corps will address those on behalf of the safety and welfare of our community. Thank you for the opportunity to present that and I've enjoyed the session this evening. Thank you very much.

(Applause.)

MR. ENGLE: Thank you.

MS. APRIL RICHARDS: Hello, my name is April Richards, I am a research associate at the Ocean Research and Conservation Association in Fort Pierce, also known as ORCA.

I really should have done this earlier when there were more people here, but I am -- the main reason I'm here today is because I'm doing some research on subsistence fishers in Martin County and trying to estimate their exposure to microcystins and toxins from these algae blooms. And so I'm just trying to put it out there. If you know of subsistence fishers or if you're a fisher, I have some business cards that I would like to give you.

I'm just doing some interviews right now, but then in the future we're also looking for some health care and social services providers to help us tackle these problems, educate the community members, and help fully limit exposure and improve our waterways.

Thank you.

(Applause.)

MR. ENGLE: Thank you.

MR. NELSON HILLS: Good evening, Nelson Hills here. I wasn't going to say much tonight -- I wasn't going to say anything tonight. But I've got a question, got a game back there. Who has lived here since '62. Anybody? Okay. Well, I moved to Palm City as a ten-year-old. And you can go back and think about when there was a wooden bridge there with a turnstile. And we used to go over there and jump in the water, burn your eyes with the salt water.

Well, things started changing. It used to be clear water, used to get snook legally, and all that stuff. But it's all gone. And my dad used to tell me, big military guy, says "You know, if they'd stop doing the flows out of the Lake, this would all go away." And it's been going on, and year by year it's getting worse and worse and now it's irreversible.

I hope, and I'm asking you, Colonel, for my father's sake, go up to the high ranks, get -- you guys can do it. The Army goes in, man, they get it done.

There's a solution. Everybody is trying to make this happen. It's going to be a hard job, but I hope in my lifetime I see some salt water in there. Thank you very much. And Senator -- he's not here, Senator Mast is also doing a very good job on that. Thank y'all.

(Applause.)

MR. ENGLE: Dr. Julie Bjornson.

DR. JULIE BJORNSON: Dr. Julie Bjornson. My education is in post-graduate functional neurology, which is on brain development without drugs.

For me, the Lake Okeechobee and water problem is a chemical crisis. I've been -- I got involved when I found out that there was food full of glyphosate that was delaying the development of children's brains and so I started organizing lectures on citrus greening and found out -- when I found out that it was caused by glyphosate. But the children -- we have delayed development in children's brains right now because of the glyphosate in the food. It's in our water, that's what they're spraying the algae with, it's in -- all the citrus around Lake Okeechobee is all sprayed with glyphosate. It's public record, you can see it. It's the most concentrated of glyphosate spraying in all of Florida.

So our literacy in America right now is 30th in the world. Our children can't even pass the third-grade reading tests and affluent Martin County has got -- almost fifty percent of our children are not passing that third-grade reading test. We've got to look at what are we feeding the children, what is in the water in our schools, what is glyphosate actually doing. Not only is it destroying our environment. While it's doing that, I was recently on a five-day prayer walk around Lake Okeechobee, in the rain, in the tornado warnings, in the 35-mile-an-hour -- yeah, 35-mile-an-hour winds, and we did it in seven days around Lake Okeechobee. It was people from the Miccosukee Tribe and we were praying for the water and we were on the Internet at 6:00 in the morning and people from around the world were joining us. So it's not just here; people around the world know what is going on right now. Absolutely incredible.

So I had people come and talk about the nutrition of our food and our livestock. Our livestock are getting GMO and glyphosate-tainted food and they're getting -- it's just incredible what's going on with even our food supply. So it's not just the water, it's everything that we're touching right now. We've

got to stop this chemical crisis. But citrus greening, we've got to change that, too. We've reversed it. Cancer lawsuits are out there now.

Does that mean I have two seconds left? Okay. So all I want you to do is stop glyphosate. They say it's the worst chemical that's ever been produced. We've got to get rid of that, we've got to find alternatives. We've got to cancel the contracts with these chemical companies and stop the unrestricted chemical use. And we need full disclosure on all the chemicals that are being put in Lake Okeechobee right now and into our environment. Our government -- we deserve to know what they're doing.

Success? Get rid of glyphosate. And we've got plenty of alternatives now. Spray the weeds with alternatives. Stop the chemicals. Thank you very much. And protect the children.

Thank you.

(Applause.)

MR. ENGLE: Thank you. That concludes our public comments for tonight. Thank you very much.

Remember, if you have anything that you wanted to say or you thought of that you would like to say, you can submit by e-mail, you can grab one of our mail forms on your way out.

Have a good night.

(PROCEEDINGS CONCLUDED AT 9:00 P.M.)

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STATE OF FLORIDA)

COUNTY OF MARTIN)

CERTIFICATE OF REPORTER

I, KATHY CABRE ENLOE, Registered Professional Reporter, do certify that in the matter of the LAKE OKEECHOBEE SOM NEPA SCOPING MEETING, a Public Meeting was held beginning at the hour of 6:00 P.M. on the 19th day of February, 2019; that I was authorized to and did stenographically report the proceedings in that Public Meeting, and that the foregoing pages, numbered 2 through 118, comprise a true and correct transcript of those proceedings.

DATED this _____ day of March, 2019. _____

KATHY CABRE ENLOE

(This file has been reformatted for presentation, which has changed the number of pages.)