

**City of Coral Gables City Commission Meeting
Agenda Item F-1
February 23, 2021
City Commission Chambers
405 Biltmore Way, Coral Gables, FL**

City Commission

**Mayor Raul Valdes-Fauli
Vice Mayor Vince Lago
Commissioner Pat Keon
Commissioner Michael Mena
Commissioner Jorge Fors**

City Staff

**City Manager, Peter Iglesias
City Attorney, Miriam Ramos
City Clerk, Billy Urquia
Senior Sustainability Analyst, Matt Anderson
Assistant City Attorney, Stephanie Throckmorton
Parks & Recreation Director, Fred Couceyro
Assistant Public Works Director, Brook Dannemiller
Assistant City Manager, Ed Santamaria**

Public Speaker(s)

**Tiffany Troxler
Bryan Unruh
Maria Cruz
Kelly Cox
Madeline Armstrong
Collin Schladweiler
Rachel Silverstein
Casey Dresbach**

Agenda Item F-1 [10:30 a.m.]

An Ordinance of the City of Coral Gables, Florida, amending the City of Coral Gables Code by creating Section 82-8 "Application of Fertilizer" in Chapter 82-Vegetation, Article 1- in General; providing for a repealer provision, severability clause, codification, enforceability, and providing for an effective date.

(Sponsored by Commissioner Keon)

Mayor Valdes-Fauli: And now we go to G-4. Commissioner Keon, G-4.

Commissioner Keon: Good morning. This is the...

Mayor Valdes-Fauli: Coral Gables waterway assessment.

Commissioner Keon: This is the fertilizer ordinance. I think it's all part of (INAUDIBLE) with all of the different people that we've asked to speak on this. This is the fertilizer ordinance that was presented previously, so it's here on...

Vice Mayor Lago: F-1.

Commissioner Keon: Second reading. It was done in conjunction with the Waterkeepers, with FIU, and with a number of other partners to...

Mayor Valdes-Fauli: (INAUDIBLE) waterway assessment.

Commissioner Mena: No, F-1 is time certain, right?

Commissioner Keon: I think it's all together.

City Clerk Urquia: They both are.

City Commission Meeting

February 9, 2021

Agenda Item F-1 - Ordinance of the City of Coral Gables, Florida amending the City of Coral Gables Code by creating Section 82-8 "Application of Fertilizer" in Chapter 82--Vegetation, Article 1- in General; providing for a repealer provision, severability clause, codification, enforceability, and providing for an effective date.

Mayor Valdes-Fauli: What?

Commissioner Mena: F-1 is time certain.

Commissioner Keon: It was supposed to be put all together with...

Mayor Valdes-Fauli: Alright.

Commissioner Keon: Matt Anderson was coordinating it all together as one...

Mayor Valdes-Fauli: F-1 and G-4.

Commissioner Keon: Yes.

City Attorney Ramos: And if we're going to consolidate them, if I could just read it into the record.

Commissioner Keon: Yeah, please.

City Attorney Ramos: F-1 is an ordinance of the City of Coral Gables, Florida, amending the City of Coral Gables Code by creating Section 82-8 "Application of Fertilizer" Chapter 82- Vegetation, Article 1- in General; providing for a repealer provision, severability clause, codification, enforceability, and providing for an effective date. This is a second reading item. It is a public hearing. Matt has several speakers, and then Assistant City Attorney Throckmorton is present, and she can walk you through the actual ordinance after the other speakers are done.

Commissioner Keon: Good morning. Thank you.

Senior Sustainability Analyst Anderson: Good morning, Mayor, Vice Mayor, Commissioners. For the record, Matt Anderson, Senior Sustainability Analyst, with the City of Coral Gables. The first will be a presentation from -- while they're cueing it up -- from Dr. Tiffany Troxler from FIU, to provide an initial update on the initial findings of the FIU water quality study. I just want to have everyone keep in mind this is a two-year study. We are about four to five months into that study, but we wanted to come back to the Commission and provide an update from FIU on what those initial findings are. This Commission has been steadfast in its commitment to the protection of our waterways and improving our water quality and the protection of Biscayne Bay. So I want to turn it over to Dr. Tiffany Troxler, who's the Director of Science at the Sea Level Rise Solution Center at Florida International University.

Tiffany Troxler: Great, thank you. Thank you so much and it's a pleasure to be here today to talk to you about the water quality assessment that's been underway in Coral Gables waterway in a couple of sites in Snapper Creek. And this is a collaboration among multiple institutions, which include the University of Miami, University of Massachusetts, NOAA's AOML Department, as well as Miami Waterkeeper. So as was released in the Biscayne Bay Taskforce recommendations specific to water quality, it's important to immediately assess potential sources of nutrients going into canals and resulting in known impairments so that we can start to implement activities on the land that can reduce the influence of those nutrients in our water bodies and Biscayne Bay. So the City undertook one of those key recommendations in the Biscayne Bay Taskforce to assess water quality and habitat conditions in Coral Gables waterway to inform management and restoration of water quality, and there are a number of tasks that are underway. We've designed and implemented a water quality monitoring program. We'll be working on characterizing nutrient loads into and from the watershed and feed that information into a storm water model that can help to design -- to understand what activities we can take on the land that can help to reduce nutrients going into the waterway. It also includes education and outreach materials that will be developed in collaboration with Miami Waterkeeper. And so, you know, clearly the benefits to the City will help us to develop information that can produce cost-effective management of nutrient sources and

improve water quality in the waterway as well as Biscayne Bay. So this is the water quality monitoring program. We have 17 stations that are sampled twice per month in the wet season, once per month in the dry season, and the design is intended to enable us to relate water quality to -- in subsections along the Coral Gables waterway to activities that are going on on the land so that we can improve those activities or manage those activities to reduce nutrient inflows. So, the stations are located so that, you know, we -- there's a station located at Red Road, so this would represent what's coming into Coral Gables waterway from outside the municipal jurisdiction, and stations associated with other land uses, like golf courses, the pump station south of the golf course, around -- a station at -- or a number -- actually, two stations at the Riviera Drive stormwater outflow that you all have been discussing, Blue Road, a station along US-1 underneath -- on the south side of US-1, underneath US-1, and then a number of other stations. So, you'll notice that they're positioned in locations that help us to capture different subsections of the waterway. So, some of those data that we've been collecting, so right here, I'm showing total nitrogen. We initiated a pilot project with deploying auto-samplers that allow us to collect data on higher frequency, temporal frequency than the grab sampling that I described, which is twice per month in the wet season, once per month in the dry season, and so these different colors refer to the locations of the stations. And then I've also plotted here the FDEP criteria for Biscayne Bay waters for total nitrogen. So, you know, essentially illustrating that pretty much all of our values are coming in higher than the FDEP criteria for Biscayne Bay waters. And then taking a subset of those data and showing here up at the top right are the more recent data that are being collected as part of the water quality program. And so the blue line are the concentrations coming into the Coral Gables waterway, and the orange line is around Blue Road, and the gray line, the station under US-1, and then the yellow line at the circle downstream. So, what we see here is water coming into the canal is -- the total nitrogen concentrations exceed the FDEP criteria for Biscayne Boulevard.

Mayor Valdes-Fauli: Can I interrupt? Hello?

Ms. Troxler: Yeah.

Mayor Valdes-Fauli: Let me ask you a question. I see that graph and it's very comprehensive, but how -- what is the goal or how unacceptable is that? Or what can we do to improve it? And I mean, give us some guidance as to what we can and should do, if anything.

Commissioner Keon: Well, I think the issue is, when it comes in at Red Road, we know what it is coming into the City, and then what is happening as it flows through our waterway out to the mouth of the Bay.

Mayor Valdes-Fauli: Yeah, but is that...

Commissioner Keon: That's what that graph I think is telling us, is it?

Ms. Troxler: Yeah, the graph is telling us that (INAUDIBLE)...

Commissioner Keon: The concentration as it moves along.

Mayor Valdes-Fauli: But is that acceptable? Is that bad? Is that good? Is that catastrophic? Are we going to die in two months? I mean, tell us how we should read that.

Ms. Troxler: So do you see the red line there?

Mayor Valdes-Fauli: Yes.

Ms. Troxler: The red dashed line. So, all of our data are coming in over that red dashed line, which is...

Mayor Valdes-Fauli: Right.

Ms. Troxler: Exceeding the threshold for good water quality going into Biscayne Bay. So, essentially, it's illustrating that the water coming into the canal as well as activities on the land that happen within the Coral Gables watershed are contributing to nutrient concentrations that are higher than acceptable for Biscayne Bay waters.

Commissioner Keon: So, it says it comes along the waterway, we're adding to the nutrient load...

Ms. Troxler: That's right.

Commissioner Keon: Within the City between Red Road, and by the time it gets to the Bay, we've added to the nutrient load. Is that right?

Ms. Troxler: Yes, to the nutrient concentrations. The loads will be developing for you soon after this, but yeah, the water increases in concentration as it flows through the waterway. That's right.

Commissioner Keon: Thank you.

Ms. Troxler: And so I'll just -- we see a similar pattern for phosphorus, so that red dashed line indicates the threshold criteria for Biscayne Bay water, so the waterway -- the concentrations are also increasing for phosphorus as the water flows through the waterway. And so these graphs here show some of the other information that we're collecting. So, chlorophyll -- that is Chlorophyll A, it's an indicator of micro-algae in the water, and the criteria for Biscayne Bay waters is 0.5. And I've drawn that red dashed line there again, and this is plotted with the stations for the water quality program along the bottom there. These two stations on the right-hand side of the graph, those are stations in Snapper Creek, but from that point, reading essentially from right to left is from upstream to downstream. And so in terms of chlorophyll, these -- you know, an indicator of micro-

algae, we see the stations that are south of the courses, CG-9, CG-10 coming in at higher concentrations of micro-algae. We also see micro-algae coming into the canal from outside the waterway. And here actually the CG-A-1 and A-2, that's the Riviera outfall, and so the concentrations of the chlorophyll are lower associated with those stations. And so that we know that the implications of high levels of macro algae and water reduces water clarity, reduces oxygen in the water, so when that photosynthetic -- when those tiny green plants die and decay, the bacteria that eat them consume oxygen in the water column, and we know that there's micro-algae are fueled by -- their growth is fueled by inorganic nutrients, nitrogen and phosphorus. And so what I'm showing here is essentially inorganic nitrogen. We know that -- and from these data, we see that the inorganic nitrogen concentrations tend to increase in the upper to middle part of the waterway, and that nitrate is about 15 percent of the total nitrogen concentration, so there's a lot of dissolved organic nitrogen in the water. And for phosphorus, we see also higher concentrations towards the middle of the waterway, but also a lot of dissolved organic phosphorus in that water that's contributing to those higher total phosphorus concentrations. And in this case, actually, the Riviera outfall location has the highest phosphate concentrations of -- compared to other stations along the waterway. And this is a crazy graph, but these are the live and (INAUDIBLE), so this is Maribeth and Chris Singalliano at UM conducting this work. And so part of this is people understanding the live fecal indicator bacteria that are in the water, but as soon as they're able to get back into the lab, which has been restricted because of COVID, they'll also be performing some microbial tracer work, so using DNA to try to figure out whether this fecal indicator bacteria is more human-derived or more animal derived, which gives us an idea of what the source of the fecal indicator bacteria are. And what we see here are some of the stations, so the CG-10 and CG-10-A, those are just south of the Biltmore golf course, also near the pump station there, and often a couple of samplings there reporting fecal indicator bacteria too numerous to count and then also high counts of fecal indicator bacteria toward the -- at the coastal end of the waterway. But those -- but again, those red -- you know, the red dashed line is showing what is one threshold and then a higher threshold for single values that trigger beach closures or can -- not closures, but swim advisories is the purple line. So, some of these values are coming in with -- that in other

environments would trigger a swim advisory. And then finally, this is some work being done by Dr. Gardenali (phonetic), and he uses sucralose as a fingerprint of human influence, you know, essentially, the sweetener. And so when we have higher concentrations of sucralose in water, it can indicate a mixing with some potentially wastewater. What the source of that wastewater is is unknown. We couldn't know that without linking this to the DNA work that Maribeth and Chris will do, but it gives you an indication that water coming into the waterway has high concentrations of sucralose as well as the location south of the Biltmore golf course near the pump station. So, to summarize, we've seen that water coming into the waterway as well as water flowing through the water way, exceed the total nitrogen, total phosphorus, and chlorophyll thresholds that FDEP has set for Biscayne Bay waters, and that we know that a large contribution of the total nitrogen, total phosphorus comes from dissolved organic nitrogen and phosphorus in the water. And so next steps will be -- when Maribeth and Chris are able to get back into the, you know, lab to conduct the microbial source tracing with Dr. Gardenali's complementary analysis, we'll be able to have a better idea of the sources of the fecal indicator bacteria, and then all of this information will be integrated into a stormwater model so that we can begin to start making recommendations about how activities on the land could potentially reduce nutrients and other pollutants going into the waterway.

Mayor Valdes-Fauli: Thank you very much...

Ms. Troxler: And that concludes the presentation.

Mayor Valdes-Fauli: For a wonderful presentation.

Ms. Troxler: Thank you.

Commissioner Keon: Thank you. Can you -- where -- what is the primary source of nitrogen and phosphorus in the waters?

Ms. Troxler: Well, it's difficult...

Commissioner Keon: Does it come -- primarily, where does it come from?

Ms. Troxler: Yeah, I mean, it comes from fertilizers. It can come from -- it could also come from septic tanks, but fertilizer is a big one in an urban environment.

Commissioner Keon: Okay, thank you. And it looks like we're making it worse, not better.

Mayor Valdes-Fauli: Thank you.

Commissioner Keon: Thank you.

Assistant City Attorney Throckmorton: Thank you, Mayor and Commissioners. Again, as the City Attorney said, I'm Stephanie Throckmorton, Assistant City Attorney, and we're going to go over the ordinance on second reading that's sponsored by Commissioner Keon. We have -- besides Dr. Troxler, we have Professor Brian Unruh, from University of Florida on the line, as well as Matt Anderson, Brook Dannemiller and other staff to answer any technical questions you have. But I'm going to just give a brief overview of the ordinance to remind you all since it's been a little bit of time since we did first reading. So, the state legislature has required that municipalities adopt a model ordinance for Florida friendly fertilizer use, and it allows municipalities to adopt more stringent standards when they've made certain findings and they're located in impaired watersheds. As Dr. Troxler pointed out, Biscayne Bay is an impaired watershed, so we meet those criteria. So, the -- just want to give you an overview of the main parts of the ordinance. It creates a prohibited application period from June 1 through September 30th. During this time period, you cannot apply fertilizers containing nitrogen or phosphorus. Along with the calendar dates, it also prohibits application during hurricane and tropical storm watch or warning periods. From October 1st to

May 31st, so the balance of the year, you cannot apply fertilizers with nitrogen or phosphorus within 20 feet of any canals, ponds, or waterways, or within 20 feet of a seawall. The ordinance also includes a recommendation that homeowners create low maintenance zones near waterways and canals and explains what those would be, and it has certain exemptions from the prohibited application period, though not from the application area. So, golf courses are exempt when fertilizer is applied by or under the direction of a professional with a valid certification in best management practices and applied in accordance with the applicable best management practices for golf courses. High impact areas and public parks and athletic fields are also exempt if they follow the appropriate best management practices, and also exempt are lands used for scientific research, farm operations, vegetable gardens and fruit trees. The enforcement and fine structure has been revised to create a Coral Gables Water Quality Trust Fund into which fines for violations will be paid. The first violation is set at \$150 with no warning and it increases with subsequent violation. Any fines go into that Water Quality Trust Fund and will be used for water conservation and other water quality enhancements. The ordinance also calls for an extensive education campaign, not only for our residents, but also for those landscapers who are registered with the City. So, I just want to clarify some of the things that have changed since first reading. It's the inclusion of the vegetable gardens and fruit trees and high-impact park areas in the exemption from the time period limitation. It includes now the voluntary low maintenance zones, and the prohibited application area was increased from 15 to 20 feet as was proposed in the county-wide ordinance, which you all reviewed a few months ago. The Commission heard this on first reading a while ago, so I'm happy to answer any questions about the ordinance itself, and like I said, we have the professor from the University of Florida and we have staff here to answer any technical questions about how this ordinance would affect. I also want to note that we will be incorporating Dr. Troxler's findings into the whereas clauses of the ordinance should it be adopted. So, again, we have staff and Dr. Unruh on the line. If you have any specific questions or any questions about the ordinance, I'm happy to answer as well.

Mayor Valdes-Fauli: Thank you.

Commissioner Keon: I've had some people contact us about the issue of the exemption of golf courses or fields or whatever else, and Dr. Unruh is at UF and has written the best practice manual or whatever for golf courses and those things, and so it isn't that golf courses and fields and all these things are not blanketly exempted. They're only exempted if they follow the best management practices. So, I think it's important to listen to what the best management practices are, and we have the ability to monitor whether these golf courses or fields are following best management practices. So, if they're not, they're not exempt. If they are, then they would be exempt. So, it depends on their compliance with best management practices. Matt, did you want to start the discussion with Dr. Unruh on this?

Senior Sustainability Analyst Anderson: Sure. If we can also unmute him. I did want to provide a brief introduction to Dr. Bryan Unruh. He is a professor of Environmental Horticulture at the University of Florida and the IFAS West Florida Research and Education Center. His specialty's in turf, grass science research and extension is at the forefront of improving best management practices, and he was also selected -- his team was selected to the Golf Course Superintendent of the America National BMP planning guide and template for -- with the end goal of having golf-centric BMP manuals in all 50 states by 2020, which was a goal that was achieved at the end of December in 2020. So, I don't know if he wants to speak a little bit on the best practices and let us know.

Bryan Unruh: Good morning. I assume you can hear me.

Commissioner Keon: Yes.

Senior Sustainability Analyst Anderson: Yes.

Mr. Unruh: Alright, very good. Well, I appreciate the opportunity to visit with you a little bit this morning about BMPs. Obviously, and rightly so, you're concerned about your water quality and you've worked with Dr. Troxler and the concerns that are there. And BMPs, as you've referenced in the ordinance are important. You know, they are the shared language of regulators and scientists, as well as practitioners, and we use those BMPs to drive those water quality improvements. And so, a little bit about me. I just passed my 25th anniversary with the University of Florida. I was the guy that way back in the year 2000, really brought together the industry to start the BMP process and the development. And we developed green industry BMPs in 2003. And in 2005 or so, we shifted our focus towards the golf BMPs. And we were up until three years ago, the only state in the nation that had a comprehensive Best Management Practice Guide for golf courses. In my introduction that Matt did, I think he mentioned the fact that I was selected to develop the National BMP initiative for the Golf Course Superintendents Association of America. And our goal was pretty lofty, and that was that all 50 states would develop a comprehensive manual by the year 2020, and we did meet that goal, and so all 50 states now have a BMP manual. Germane to Florida, Florida is also unique in that we are the only state in the nation that has a certification program. That certification program is under my direction, and previously it was taught live in-person and when COVID hit, we revamped it, improved it, and it is now virtual, and superintendents can log into the thing and they have 30 days to complete the training. And that certification is good for five years. And so, I'm glad to see that that is referenced in the ordinance and requiring the golf course superintendents to be certified in those best management practices. BMPs are living, they're a living document and the science -- we use the science to improve and to change those BMP practices. As we garner and gain more knowledge, we make those improvements. And so, with that -- I don't have a formal presentation. I was not asked to present as such but can definitely field any questions that you may have as it relates to the golf courses, BMPs, green industry BMPs and the like.

Commissioner Keon: Can you explain why golf courses should be exempted and what the best management practices are that protect the waterways from fertilizers? What is it about those

practices? What do they do that's different than other people, or that would not be done under those best management practices and the required certification that goes with it.

Mr. Unruh: Sure. So, the BMP manual -- and I guess I could ask the question, have you guys seen the current BMP manual that was put out by DEP?

Commissioner Keon: I've seen it, yes. I don't know that anybody else has; I have.

Mr. Unruh: Okay.

Commissioner Keon: I know the superintendent at Riviera is certified, and I've -- he's shared that with me, so I saw that.

Mr. Unruh: Very good. So, that manual was the one that was written in 2007, with subtle revisions in '09 and 2012; major revision has just been completed, and it is at the graphics designer folks right now, 250-page document that really gets into the nuts and bolts. Golf course management is really precision agriculture at its highest. You know, in reading through some of the comments from the various hearings and whatnot, I think there is a bit of misinformation that's put out there that golf courses -- our goal out there is to not fertilize haphazardly. In fact, if you understand the game, if you understand the management of those course conditions, we want to be able to -- we don't want to produce a massive amount of growth out there on the golf course. We're going to repair any damage that may be done by hacks like me, but we don't want a tremendous amount of growth, and so golf courses typically operate much more under a spoon-feeding approach where they're using low rates on a more frequent basis. And again, because again, we don't want to generate massive amounts of clippings. We don't want a massive amount of growth because vertical growth that is stimulated by a lot of fertilizer tends to slow or stifle horizontal growth of those plants. And so it's a precision management. Most golf course superintendents that you are going to interact with or that you know are rather highly educated individuals, and they have the

licensing and certifications to go along with that. And so the nutrient management section of the BMP manual is the largest chapter in the manual, and it gets down -- many of the items that you've referenced in the ordinance, many of the items that I've seen in some of the discussion, you know, again, all play into that, BMP and are all highlighted within that golf course best management practice manual. I don't know if there's a specific question there, but -- and I hope my explanation was helpful.

Mayor Valdes-Fauli: Thank you. Commissioner Keon.

Commissioner Keon: I don't know if anybody has any more questions of him with regard to what best management practices are and the rationale for exempting golf courses and athletic fields.

Mayor Valdes-Fauli: I think it makes perfect sense and is very well controlled, as you mentioned. We have an ordinance on second reading. Are there any other comments?

Assistant City Attorney Throckmorton: I'm not sure if there's any public comment, but...

City Clerk Urquia: There is.

Mayor Valdes-Fauli: There -- huh?

City Clerk Urquia: We do have members of the public who would like to speak.

Mayor Valdes-Fauli: Okay.

City Clerk Urquia: The first speaker, Mr. Mayor, is Ms. Maria Cruz.

Mayor Valdes-Fauli: Two minutes, alright? Ms. Cruz, you're on.

Maria Cruz: Okay, I'm here. It took me a little bit to unmute. I think in theory, all this has been wonderful. I think the grandstanding has gone to the max, but I have questions. Do we have anybody in the City that's certified on the best practices? Do we have anyone who's going to be responsible to monitor or enforce the rules, or is this just a symbolic gesture so we feel good about it? We say we provided some legislation, and nothing happened. I do not see -- I really have several issues with the golf course professionals being responsible to give the right thing, because as we all know, every day we hear about professionals that don't follow the rules. There are many rules in this world, and we have people that choose not to follow them, including some of our elected officials. So, how do we enforce this? How do we guarantee that it's working? Who is going to do it? I would assume since it has to do with landscaping, that our landscape -- what's his title? The Director -- Assistant Director for Landscape Services will be involved. So, is he certified on this? Does he know enough to be able to enforce it? Will he be able to enforce it while he works from home? The questions -- I have questions because in fact, this has been a wonderful exercise in theory, but how do we make that happen? How to ensure that it has taken place? How do we give people that go rouge -- when we know people that go rouge in every profession -- how to keep them from doing the wrong thing? Who's going to supervise? Are we going to have to hire somebody just to supervise because our landscape person may not be able to?

Mayor Valdes-Fauli: Thank you, Maria. Your questions are very, very clear and very precise, and we have here our Park...

Ms. Cruz: So are there answers?

Mayor Valdes-Fauli: Director to answer them. Go ahead, sir.

Parks & Recreation Director Couceyro: I can't answer the ones that are directed towards exemptions and the best management practices, and who's certified. Troy Hall, which is our superintendent in charge of our golf course and our athletic fields, he is certified. He has -- he's aware of the BMP manual and he works with it and currently. This isn't just as part of the ordinance. It is our common best practice, and it is his certification to keep up, and if he doesn't, then he stands to lose it. So, he -- we have been operating under these best management practices already.

Commissioner Keon: Yes, but in addition to that, I mean, the other courses that come under the jurisdiction of the City...

Parks & Recreation Director Couceyro: Correct.

Commissioner Keon: Or that exist in our City, the ordinance calls for them to also be certified in those best practices, and you will...

Parks & Recreation Director Couceyro: We have.

Commissioner Keon: It's my understanding that you will monitor those athletic fields, and I think -- is Brook -- are you involved in this also? It's my understanding that you are currently monitoring the certification of the people that are managing the golf courses as well as the athletic fields that exist in our City that are not our athletic fields, but belong maybe to UM or other places, and ensure that they also follow best practices, is that right?

Assistant Public Works Director Dannemiller: The golf course and the athletic fields fall under the Parks Department under Troy Hall's supervision. If we need to do anything specific on specialty turf in some of our other parks, like Lincoln Park, we consult with Troy Hall. And the same with the landscape, the shrubs and trees, we do all that in the Parks Department, so we

collaborate on all that. As far as UM and the other schools that have it, we don't have any -- currently don't have any jurisdiction over -- this will provide us the mechanism to be able to engage with them as far as making sure they follow these...

Commissioner Keon: This ordinance does?

Assistant Public Works Director Dannemiller: Yes.

Assistant City Attorney Throckmorton: Yes.

Assistant Public Works Director Dannemiller: That's because right now we don't have anything in our Code that we could approach them on.

Commissioner Keon: Right. So, if we pass this, it gives you the opportunity to ensure that everyone in the City of Coral Gables is following the best practices, and that the people that are in charge of those things are certified.

Assistant Public Works Director Dannemiller: Yes.

Parks & Recreation Director Couceyro: If they're not certified, that they won't be able to exercise the exemption, so that is a requirement. So, they wouldn't be able to do anything unless they had the certification.

Commissioner Keon: Okay, thank you.

Mayor Valdes-Fauli: Thank you.

Assistant Public Works Director Dannemiller: Thank you.

Mayor Valdes-Fauli: Thank you very much.

Vice Mayor Lago: Mr. Mayor, can I ask one -- may I ask one question?

Mayor Valdes-Fauli: Yes, please.

Vice Mayor Lago: This is to the ACM, if possible. Sorry, I'm dragging you back up here. You're standing up... What can I do? You're ready to go. Thank you, by the way, I appreciate it.

Mayor Valdes-Fauli: Go ahead, please.

Vice Mayor Lago: So, first off, I think this is a great idea. I don't have any issues with it. I just want to see the meter -- the dial move. I want to see the dial move, kind of like when we were talking before about water quality. We've been doing testing throughout Miami-Dade County when it comes to water quality and also deals with transportation issues for years, to the extent that we have spent so much money that we probably could have addressed a lot of the concerns already if we would have spent some of that money on testing. So, I think it's great. I think you'll see that a lot of residents will comply, because when you talk to residents in this community, they want to protect their water quality. So, we're testing for about another year with FIU, correct?

Assistant City Manager Santamaria: No, sir. That's far. That's...

Vice Mayor Lago: 2022, right?

Assistant City Manager Santamaria: That's our plan.

Vice Mayor Lago: Yeah, I was reading...

Assistant City Manager Santamaria: It could be extended but that's our plan.

Vice Mayor Lago: Yeah. What I'd like to see is -- that we -- that once this ordinance takes effect, I'd like to really delineate that moment in time and then come back -- maybe Matt, I see you shaking your head in a positive way -- come back in a year and see if there has been any effect -- or two years, or maybe we do it every six months; however you'd like to do it. I leave it up to you because I think that's important to come back, not just pass this legislation because it's going to be very difficult to enforce this at the end of the day. I mean, obviously, we have Code Enforcement and they're driving throughout the City and they're doing their job, but I have personally -- I don't know if any of my colleagues have -- I've never seen anybody fertilizing outside of those companies like One Two Tree, but personally fertilizing their yards. So, I think it's going to be a little bit difficult and we need to make sure that we get the word out there and tell people, listen, we're doing these for the following reasons. It's for the benefit of the water in our community, our waterways. So, I'd like to see that once we apply this piece of legislation that we actually come back in a year and say, let's look at this graph that we were just looking at right now, that really shows all the particulates, the fecal matter. I think it's important to say this is where we stand on 2020, this is where we stand on 2021, this is where we stand in 2022, and see if that legislation is even working, see if it even has -- because if it's not moving the dial, then we obviously need to find out what will move the dial. Is that going to be golf courses? Is that going to be -- we need to find out maybe the fertilizer that here locally is not the problem, maybe it's not the residents. Maybe it's coming from upstate Florida, down our waterways from the sugar industry, and we can stop saying it's local issues when it may be another part of the state that may be the biggest concern of all. What is your opinion on that, Mr. ACM?

Assistant City Manager Santamaria: Ed Santamaria, again. Mr. Mayor, members of Commission, I can tell you that from watching Tiffany Troxler's presentation, there is definitely a background that is entering our waterway with respect to phosphates and nitrates. That said...

Vice Mayor Lago: Well, she said it very clearly.

Assistant City Manager Santamaria: That said, there is a higher quantity or a higher level of those nutrients in our waterway that we are introducing from some sources, whether it's private, you know, yards or whether it's golf courses, it's a combination of the two, obviously, that's what it is. To what extent does one contribute greater than the other? That's something that we should be able to determine, and in fact, over the course of the coming year, unless the study is extended -- which I would like to see -- we can make some sort of discernment regarding how much are the exempted entities contributing, whether it be golf courses or parks, with respect to private property.

Mayor Valdes-Fauli: Okay. Shall we continue the public input?

Commissioner Keon: Yeah. That was why it was good to listen -- to hear her and we have some baseline already...

Assistant City Manager Santamaria: Yeah.

Commissioner Keon: So, you know, we have -- we can do those comparisons, so we can look at moving forward, you know, are we helping or are we just not moving the needle or whatever. So, thank you very much.

Mayor Valdes-Fauli: Thank you. Let's continue with the public input.

City Clerk Urquia: Next speaker, Mr. Mayor, is Kelly Cox.

Mayor Valdes-Fauli: Two minutes.

Kelly Cox: Good morning, Mr. Mayor and Commissioners. My name is Kelly Cox. I'm the general counsel with Miami Waterkeeper. I would like to speak in favor of the fertilizer ordinance. Miami Waterkeeper has been collaborating with the City on a fertilizer ordinance and associated nutrient reduction efforts since 2019, around the time that Dr. Troxler mentioned, we did that initial study of nutrient pollution in the waterway, and we determined, you know, that water quality was becoming degraded and there was actually an algae bloom occurring at the mouth of the Coral Gables waterway. And since then, this Commission has really taken a number of measures and made commitments to improve water quality in that area, and this fertilizer ordinance with the leadership of Commissioner Keon has been really among those commitments. We're really excited to see this come up for second reading, and we're supportive of this legislation as an initial first step to curbing nutrient pollution. Obviously, in the wake of the fish kill in Biscayne Bay this summer, it's become increasingly apparent that municipalities, especially the coastal municipalities, have to take immediate action to try to reduce nutrient loads. We know that fertilizer ordinances have been successful, particularly when coupled with education and outreach campaigns, and we look forward to working with the City of Coral Gables on a sort of multi-faceted education and outreach campaign for homeowners' associations, for community residents, for commercial applicators and for municipal managers alike. We're also excited, as Commissioner -- or Vice Mayor Lago just mentioned, to continue to evaluate the water quality in the Gables waterway, thanks to the research that was sponsored by this Commission. And we're going to be able to measure change over time in water quality thanks to that research. And of course, we believe that this fertilizer ordinance will have an effect on water quality, but we can't really stop there. There's a number of different steps that we have to take to curb nutrient pollution that's getting into the Gables waterway. So, again, Miami Waterkeeper and our membership, we're very thankful that this Commission has continued forward with this ordinance. We're very supportive of it, and we encourage you...

Mayor Valdes-Fauli: Thank you, ma'am.

Ms. Cox: To pass this on second reading.

Mayor Valdes-Fauli: Thank you. Next.

City Clerk Urquia: Mr. Mayor, the next speaker is Madeline Armstrong.

Madeline Armstrong: Hello. Thank you. My name's Madeline. I'm a resident of Miami and a grad school student here at the University of Miami. I would like to speak in favor of item number F-1. Fertilizers when applied in excess can degrade water quality by contributing to nutrient pollutions. Nutrient pollution can cause algae blooms that kill fish, like in the events that we saw in the summer in North Bay. Scientists agree that chlorophyll, an indicator for algae blooms, is found in high concentrates at the mouth of the Coral Gables waterway. This concentration is likely linked to a number of nutrient source, including land-based fertilizer. What we know now is that reducing fertilizer application is a cost-saving measure and will also benefit the environment. I support a strong fertilizer ordinance in Coral Gables and encourage this board to vote in favor of moving forward with the ordinance. Thank you so much for...

Mayor Valdes-Fauli: Could I say something to you? You're preaching to the choir. And thank you. Thank you for your encouragement.

Ms. Armstrong: Thank you.

Mayor Valdes-Fauli: And you have us all convinced. Next.

Ms. Armstrong: Thank you.

City Clerk Urquia: Yes, Mr. Mayor. The next speaker -- I only have a first name -- is Collin.

Mayor Valdes-Fauli: Collin, you have to identify yourself. Let's go on to the next one.

Collin Schladweiler: Hello. My name is Collin Schladweiler. I did send in my full name. It just hasn't been updated. Thank you for allowing me to speak this morning. Good morning, Mayor. Good morning, Commissioners. I am the Program Manager at Miami Waterkeeper, and I just wanted to echo the statements that Kelly Cox presented earlier, and just to retouch on a couple different things. That not only is this ordinance going to help prevent and mitigate a lot of these nutrients that are entering our waterways, I just want to reiterate that it is a cost-saving measure that Coral Gables can institute that is also going to save the municipality money in the long run. And just to remember that this is just the first step of many different sources -- of mitigating many different sources that are entering our waterways in Coral Gables. And I look forward to working with the Commission and Mayor in the future to try to solve the other issues that we see related to our waterways. So, in support of this ordinance. Thank you.

Mayor Valdes-Fauli: Thank you, sir.

City Clerk Urquia: Alright. Next speaker, Mr. Mayor, is Ms. Rachel Silverstein.

Rachel Silverstein: Hello, Mayor and Commission. Thank you so much for considering this item to protect the Gables waterway. Thank you, Commissioner Keon, for your leadership on this as well. Many of my staff have already spoken, and we have been discussing this issue and improvements to the Gables waterway water quality for some time now, so we're really happy to see this moving forward in conjunction with the study with Dr. Troxler. As Collin mentioned, there are many different ways that we can work to improve Gables water quality, and this is an amazing first step. It's really a win-win-win for the community. It's really targeted at reducing excess fertilizer use, not fertilizer that the plants need. So, it'll save residents time, money from fertilizer that is not absorbed by plants, but instead runs off and almost immediately becomes pollution. And so, that's what's really being eliminated here, so nothing will interfere with the City

Beautiful remaining very beautiful and having gorgeous landscaping that we're -- the City's known for. I'm also a Gables resident, and I live about a block from the waterway, and I really enjoy using it with my family, so I have a really vested interest in making sure that the waterway is protected. And we've known for some time that there's a lot of nutrients and nutrient pollution getting into the waterway and getting into Biscayne Bay from the waterway that has created this algae bloom and resulted in seagrass die off at the mouth of the waterway. So, I want to really thank the Commission and the Mayor for your leadership on this, and we look forward to working with you on this and many other measures, and for the Gables to join the over 80 other cities and counties around the State of Florida that have enacted strong fertilizer ordinances as well. Thank you so much.

Mayor Valdes-Fauli: Thank you, ma'am. Anybody else?

City Clerk Urquia: Yes. Next speaker, Mr. Mayor, is Casey Dresbach.

Casey Dresbach: Good morning, Mayor and Commissioners. Thank you for the opportunity to comment today, my name is Casey Dresbach, Miami resident and Community Engagement Coordinator for Miami Waterkeeper. And I'm here to speak in favor of Item F-1. I would like to encourage that this board pass the fertilizer ordinance that is up for second reading today as we continue to see our bay needs our help. The fish kill and pungent green algae blooms events threatened North Bay this past summer, resulting in un-swimmable, undrinkable and un-fishable water. We know this event was linked to nutrient pollution from septic tanks, sewage leaks, stormwater run-off, but most relevant for today's hearing is fertilizer runoff. When applied in excess fertilizer can cause significant harm to our waterways, contributing to nutrient pollution. And scientists agree that Chlorophyll A, an indicator for algae blooms, is found in high concentrations at the mouth of the Coral Gables waterway. This concentration is likely linked to a number of nutrient sources, including land-based fertilizer. Miami Waterkeeper, as you know, is working with FIU and other researchers to further analyze nutrient inputs into the waterway and

bay and thanks to the support from this Commission. What we know is that reducing fertilizer application -- as my colleagues mentioned -- is a cost-saving measure and will also benefit the environment. And just as Rachel said too, it's a win for our environment and a win for our wallets. Thank you for your leadership on this issue and for making public health and environment a priority. I strongly encourage this board to vote in favor of moving forward with this ordinance. And I'm a native Floridian myself, and I am so pleased that this Commission is interested in ensuring the future health of our shared waterways. Thank you.

Mayor Valdes-Fauli: Thank you. I want to tell the Miami Waterkeeper that you're preaching to the choir, as I said to the University of Miami student. You don't have to convince us because I think that -- I mean, this is an ordinance on second reading. We passed it the first time and we're very much for it. Anybody else?

City Clerk Urquia: That's it, Mr. Mayor.

Mayor Valdes-Fauli: Thank you very much. Any other comments? Do I hear a motion?

Commissioner Mena: I just had one quick question, which is, in terms of enforcement. Just so I'm clear, like obviously it's nearly impossible to enforce this in single family -- it's just very hard, you know, unless you catch somebody in the act, you know.

Assistant City Attorney Throckmorton: It will be difficult, but we will...

Commissioner Mena: But is it Code Enforcement who will be handling it?

Assistant City Attorney Throckmorton: It's a Code Enforcement matter.

Commissioner Mena: And then as to parks and golf courses, et cetera, it'll be Code Enforcement, but I guess in combination with Parks on some level because of...

Assistant City Attorney Throckmorton: Yes.

Commissioner Mena: You know, the certification.

Assistant City Attorney Throckmorton: And just to note, that certification that's required for those athletic field and golf course superintendents should be evidenced to the City annually, which is a way for us to easily verify that each year.

Commissioner Mena: Yeah. I mean, look, the thing that gives me some peace of mind is what is what the Vice Mayor mentioned earlier, which is, hopefully we can look at the results based on the water study we're doing, so I'm glad we had that presentation today because it'll be good to see if there's really an impact being made because there is -- you know, everybody wants to do what's right for the environment, but there is an inconvenience obviously to people associated with it. And if it's not doing anything, then what are we really doing? And if it is doing something, then fantastic. So, the good news is we'll get to an answer on that, in I would say in about a year or so. We already have sort of a control period of data from this last -- from what's already being done on the water study, and we can sort of compare it and see if we see any improvement, so I think that's a good idea, and then let's see what it says.

Assistant City Attorney Throckmorton: The ordinance becomes effective immediately and the first prohibited application period would begin this summer in June, so that will be...

Commissioner Mena: Alright.

Assistant City Attorney Throckmorton: During the time of our ongoing study, so we will cover that time period.

Commissioner Mena: When did the FIU study start? Sorry, only four months, right?

Commissioner Keon: Well...

Senior Sustainability Analyst Anderson: Their first sampling -- well, they took some preliminary samples before, but the actual study kicked off late September.

Commissioner Mena: After summer, right. So, we don't have a summer control period.

Senior Sustainability Analyst Anderson: Yeah. And the study's for two years.

Commissioner Mena: Although that's a good period though because that's right after the summer, so if you go through...

Senior Sustainability Analyst Anderson: Yeah.

Commissioner Mena: The end of the year and we're not having fertilizers over the course of the summer, then if you compare September to December to September to December this last year, you should hopefully have some insight.

Senior Sustainability Analyst Anderson: Yeah. And the idea behind the study too is -- the reason why we chose two years in talking with FIU is to get two different hydrologic cycles, looking at both wet and dry seasons to be -- for that comparison.

Vice Mayor Lago: Matt, do you...

Mayor Valdes-Fauli: Thank you.

Vice Mayor Lago: Recommend that -- I echo the sentiments of Commissioner Mena, but can we also -- if we're going to do this, let's at least notify -- let's use my landscape ordinance...

Senior Sustainability Analyst Anderson: Yeah.

Vice Mayor Lago: The one that we wrote a few years ago. We have that information, and the landscapers had given it to us. That way, we can send the information out in regards to what's appropriate...

Senior Sustainability Analyst Anderson: Correct.

Vice Mayor Lago: When and where. And number two, let's try to contact those firms, like those entities that come and spray your yard, those professional outfits, One Two Tree. What is the other one? Not One Two Tree, I'm sorry. They do -- that does actual landscaping. The ones that come and they put a stake in your yard because they...

Commissioner Mena: Yeah, lawn...

Commissioner Keon: Those are -- yeah, pesticides.

Vice Mayor Lago: But they also -- but like besides pesticides, they also do fertilizer because my neighborhood has -- my neighbor has that.

Commissioner Mena: Yeah, they do.

Vice Mayor Lago: So, it's a -- they can -- they aerate, they do pesticides, and they also do fertilizer.

Commissioner Mena: I think -- yeah, I think to his point, there needs to be an education component of this that's, you know...

Vice Mayor Lago: Don't catch people off guard.

Commissioner Mena: Lets people know that this is in effect...

Senior Sustainability Analyst Anderson: Yeah.

Commissioner Mena: And what they can and can't do because, you know, we can't expect people to be...

Vice Mayor Lago: Watching this meeting.

Commissioner Mena: You know, watching every move we make or on our Facebook page, you know, looking for every single rule that's out there.

Vice Mayor Lago: Yeah.

Commissioner Mena: Unless you let them know and you let the vendors, to his point.

Senior Sustainability Analyst Anderson: And that's the plan is with the existing landscaper registration list, which I think is really different from other cities that don't have something similar to that, we have that advantage, and that was one of the reasons why we put that in place, is when there's legislation like this that comes about, we have direct communication with them. Also, working with our Communications Department on all the different venues that we're able to do

that, we'll be able to put forward -- and I do want to mention too, we've already been doing some education campaigns over the last couple of years with regards to just encouraging the reduction of fertilizer use in partnership with Miami Waterkeeper and done a few educational videos and education campaigns on that. So, now it's really continuing that effort throughout.

Commissioner Keon: Right. I think as part of the ordinance, it asks for -- it calls for an education campaign. So, the education campaign will come through Matt Anderson's group, and I'd like you to work with Martha Pantene as to how we put that out. And you don't necessarily have to come back here to present what that is, but if you could let everyone know...

Senior Sustainability Analyst Anderson: Absolutely.

Commissioner Keon: When you have that plan put together as how you're going to particularly notify those waterfront communities and the residents that live actually along the waterway, so it's not just them because it's everybody who fertilizes because when it rains, it eventually goes into our storm drains and eventually into our waterway. But the ones closest to the waterways are -- it's just higher concentrations in the waterfront communities also. So...

Senior Sustainability Analyst Anderson: And I believe we have contact information for the various HOAs that we can then also provide...

Commissioner Keon: You do, so...

Senior Sustainability Analyst Anderson: That information with as well.

Commissioner Keon: If you could put together a really extensive educational campaign that will help and just let us know what that is, and if there's an administrative order that deals with the enforcement of this, I would like to see that also.

City Manager Iglesias: We can do that, Commissioner.

Commissioner Keon: And you could just provide it to us. You don't have to come back with it, just provide us that information. And to the Clerk, if you could forward this to Commissioner Eileen Hagen, she's the one in the County that is now working on the County ordinances, so -- to provide her with, you know, the ordinance and the results of our (INAUDIBLE).

City Manager Iglesias: I think that we have very good data now, and I think that with...

Commissioner Keon: Yes.

City Manager Iglesias: With the sampling locations we can remove the background response coming from 57th Avenue to try to isolate the response that has happened. It's just on the Coral Gables canal -- or waterway.

Commissioner Keon: And you know...

City Manager Iglesias: And so, I think we have very good data that we can look at now, historical data, and see how removing that background response from 57th Avenue, seeing what we're actually -- what's actually happening within our waterway. So, I think this is excellent and we'll be happy to work with that and get some information and look at -- see if our initiatives are working or not.

Commissioner Keon: That's right. And we can also coordinate -- continue to coordinate with FIU and all of those partners to look at, you know, how we do things in order to make this better. So, thank you, and I'd...

Mayor Valdes-Fauli: Commissioner, you want to make a motion?

Commissioner Keon: Like to move the item.

Mayor Valdes-Fauli: It's your issue. You want to make a motion?

Commissioner Keon: Yes, I'd like to move the item.

Mayor Valdes-Fauli: Is there a second? Second?

Commissioner Fors: I'll second it.

Mayor Valdes-Fauli: Will you call the roll, please?

Commissioner Keon: Yes.

Vice Mayor Lago: Yes.

Commissioner Mena: Yes.

Commissioner Fors: Yes.

Mayor Valdes-Fauli: Yes.

(Vote: 5-0)

Commissioner Keon: Thank you to...

Mayor Valdes-Fauli: Thank you.

Commissioner Keon: Stephanie. Thank you to Matt. Thank you to all the staff that worked so hard and so long on this. Thank you.

Senior Sustainability Analyst Anderson: Thank you.

Assistant City Attorney Throckmorton: Thank you.