

City of Coral Gables City Commission Meeting
Agenda Items H-17
May 19, 2026
Public Safety Building, CMR
2151 Salzedo Street, Coral Gables, FL

City Commission

Mayor Vince Lago
Vice Mayor Rhonda Anderson
Commissioner Melissa Castro
Commissioner Ariel Fernandez
Commissioner Richard D. Lara

City Staff

City Attorney, Cristina Suárez
City Manager, Peter Iglesias
City Clerk, Billy Urquia

Public Speaker(s)

Paula Davalos, Ardurra

Agenda Item H-17 [Start: 12:15 p.m.]

Comprehensive Citywide Septic to Sewer Master Plan Presentation.

Mayor Lago: Time certain agenda item H-17.

Commissioner Fernandez: Mr. Mayor, since it's a septic issue, can we take a septic break before?

Mayor Lago: Five minutes. Five-minute break. We'll be back at 12.13. All right, let's get started.
Item H17. Mr. Director, how long are we looking at in regard to this presentation?

Public Works Director Diaz: 15 minutes tops. Okay, we'll try to make it a little faster.

Mayor Lago: Can we do it in 10?

Public Works Director Diaz: All right.

Mayor Lago: Thank you. No pressure. How are you?

City Manager Iglesias: Through the Mayor.
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Mayor Lago: Yes.

City Manager Iglesias: Thank you very much. Thank you, Commissioner. I just want to be very, very clear that we're not proposing septic to sewer. This is a study that was funded by the state that really is going to help us with our knowledge of our system and actually help us if there's any state or federal monies later on that we can use. So, I just want to make very clear that this is not a proposal for septic to sewer. This is a study of our city that will help us in case those monies become available.

Mayor Lago: Okay, thank you very much.

Public Works Director Diaz: Well, we'll do our best to be brief. So, before we start, I'd like to, as a model introduction, Paula Davalos on behalf of the Ardurra and the 300 Group, who prepared this Master Plan. There's a planning level, data-driven roadmap, so that we can proactively plan for the future and pursue funding opportunities when they become available. Billy, if you could please put up the presentation.

Paula Davalos: Okay, good afternoon, Mr. Mayor and Commissioners. We're very happy to be here to present the Citywide Septic to Sewer Master Plan. The objectives of today are to present our key findings, our overall technical analysis that we did, and how this will be prioritized for the future, and discuss results of public outreach efforts, as well as receive any feedback from the City Commission. So currently, about 50 percent of the city is serviced by septic tanks, that's approximately 7,655 properties. Many of these do not meet the current standards. The purpose of the Citywide Septic to Sewer Plan is threefold. One is protecting water quality, protecting Biscayne Bay and local waterways, as these are major tourism industry for Miami-Dade County. And we are looking forward to reduce pollution and degradation of the waterways. In addition to address aging and failing septic systems and provide a more resilient and robust centralized sewer system and provide a phased roadmap for implementation for the future once funding becomes available or for the next steps of this program. On this legislative side, both on the state level and on the county level, there are certain regulations that promote addressing septic areas and providing centralized sewer system. We have House Bill 1379, which requires that any, this one requires the conversion of septic to sewer for environmentally sensitive areas, including Indian River and other counties, as indicated on the slide. So, it really focuses on any vulnerable regions within the state. Additionally, there's another House Bill, which became effective July 1st, 2025, that allows utilities to use existing sewer revenues for system expansion, such as septic to sewer. On the county level, one important thing to note is that conventional septic systems or type one systems are no longer permitted for new installations or full replacements. In other words, if a septic tank reaches the end of its useful life, that one would have to be replaced with an advanced nutrient removal system, which is a lot more expensive. It can cost upwards of \$65,000 or more per property. Currently within the city, we have on the left shown little dots that you might not be able to see on

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the slide, but that represents where the septic tank locations are. Additionally, the city's sewer system is composed of 35 sewer basins and pump stations, many miles of gravity mains, enforcement, and a robust infrastructure to convey all the wastewater from these areas to a point of connection with Miami-Dade Water and Sewer Department for ultimate disposal and treatment, as Coral Gables is a volume sewer customer of Miami-Dade County. For the public, some of the main benefits of this program are that there will be no future maintenance costs for their septic tanks, and the property owners wouldn't have to bear the cost to repair or replace their septic systems. And additionally, it allows everybody to pitch in their grain of sand and better protect the environment and human health. There are some key reasons why septic tanks are not the best for Florida, and they were originally installed throughout South Florida because of rapid growth of our areas. However, the main issues are that we have a limestone bedrock that is porous and does not facilitate the natural degradation of contaminants. We have a high groundwater table, so that doesn't give enough space within the soil for those contaminants to break down. And we have issues with flooding, which can cause septic tanks to overflow, and then we have risks to the environment and public health. The distance between the ground elevation and where the septic tank is located is a very key aspect. There is a minimum of 42 inches of separation that is needed for effective treatment. However, when that amount of space is not available, that leads to system failure and reduced treatment efficiency. Additionally, sea level rise, it further reduces this separation over time, which increases the vulnerability. So, part of our study was looking at many years' worth of data as far as certain contaminants and parameters that are linked to septic tanks. We found that nitrogen and phosphorus were found in levels that are above the parameter limit threshold. Additionally, something that we found very interesting was that we found the presence of sucralose in the Coral Gables waterways. And what's interesting about that is in the case of phosphorus and nitrogen, you could attribute that to runoff or to fertilizers or to other things. But in the case of sucralose, the only way that that could be present in the waterways is through human consumption and human waste, as it does not occur naturally in the environment. So, this shows us that there is an impact of septic tanks from Coral Gables, and it's not just a localized impact. We also did a travel time study that indicates that these nutrients, these contaminants can travel up to 1,900 feet in one year. So that shows that there is a broad impact of what these septic tank failures could cause. So as part of our study, we have preliminarily developed 19 new sewer basin areas. And what a sewer basin is pretty much just an area that you're going to collect all of the sewer to a central pump station, and then that's going to pump the wastewater to a forced main system. So, as I mentioned, half of the city currently has 35 pump stations. What we're proposing for the other half is 16 new basins, as well as six expansions of the 35 existing basins. So, it's really an optimal way to treat and to collect this wastewater. And you see that all the areas are different shapes and sizes. It all has to do with very specific considerations of the topography and the best way to collect that wastewater. So furthermore, we have a full detailed prioritization plan and ranking system where each of these new basins and basin expansions were evaluated based on specific environmental vulnerability criteria, including the proximity of each septic tank to surface

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water, the vulnerability to failure, flood risk, soil drainage, nutrient loading, and then that, along with some weighing factors specific to the impact of each of these were implemented to see what is the ranking of which areas should maybe need attention first, if that's the case. Now, this is not necessarily the way that things need to be done. It's just based on vulnerability and environmental criteria. Here we have an example of our conceptual layout for one of the basins, one of the 16 basins. But since you want to keep it to 10 minutes, I won't show you all 16. But basically, these conceptual layouts are in a very detailed engineering planning level analysis. They have information as far as the recommended pipe sizes, the hydraulic slopes, the confirmation of minimum coverage, the cover of pipes and laterals. So, there is a detailed analysis that went into this. For each basin, we also have a planning level cost estimate and a distribution of the infrastructure that would be needed within the right-of-way. This is an example of a basin expansion. The existing basin includes the area, the properties that are highlighted in yellow. So, by extending the pipe system, we can cover a larger area and be able to service many more properties at a lesser cost than it would be to develop a new basin as a pump station itself typically, it increases the cost quite a bit of one of these sewer projects. Here we have just an example of what a sewer pump station could look like. This is an example within the Coco Plum area where we have specific hedging and aesthetic requirements that were coordinated with the community. And that's the way that typically the city does these projects is coordinating beforehand to lessen the visual impact of the location of the pump stations. And each of the proposed pump stations would be submersible with odor control systems. They're not loud, they won't be a nuisance to the community. As I mentioned, the city is a volume sewer customer in Miami-Dade County. Currently there's a single point of connection where all of the city's wastewater flows then goes through a flow meter to connect to Miami-Dade County for treatment and disposal. Currently all the city's flows are being treated and disposed of in the Central District Wastewater Treatment Plant. One big component of this master plan is the recommendation of a redundant force main point of connection to the county. This is being coordinated currently with Water and Sewer Department, but it is a very critical recommendation as it provides critical backup and reduces the risk of service disruptions during emergency conditions. We also have here what it would cost for property owners more or less. This is county averages. So, we have all of the improvements that are within the right-of-way. And then these improvements that we're showing here are what typically is involved into abandoning a septic tank and making a connection to the new sewer system within the private property. So, on county average, it's about 16,600. However, this may vary based on the specific property condition size and how the plumbing is laid out. So overall, including all the 16 new pump station basins and the basin expansions, we're looking at about \$409 million as a planning level estimate for what this would take.

Public Works Director Diaz: And Paula, if I may add, that does not include the cost of that secondary connection which is something that we're still evaluating and working with Miami-Dade County to confirm the proper location and expense.

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Paula Davalos: Yes. So, we understand it's a big number, definitely. It's very much in line with other local municipalities within South Florida and what their estimates are. So again, the point of this is to have a roadmap to have a very good idea of what it would take and then based on that, being able to pursue additional funding opportunities to reduce some of that cost. Additionally, we have two examples of, in the case, just general information of how the specific cost per parcel could be distributed over time. And we have two examples, one of them in a basin where there's, it's on the low end where the cost impact would be about \$29,000 per parcel. And then we have another example where it could be up to \$100,000 per parcel. Again, it just has to do with the infrastructure and how it's laid out. Just to give you an idea of what I mean, if there's a basin where the properties are very large, so you need to install all this infrastructure for less amount of properties, the cost per property is going to be higher when you look at it like that, rather than if there are many more properties within an area, then the distribution of the cost per parcel comes out to be lower. So, another thing, which is one of the last things that we wanted to bring up, is that we did a very comprehensive public outreach campaign as part of this septic to sewer plan. We've had 11 public meetings, many of them were held in this same room here. And we've listened to the community, listened to the feedback, to the shock, to the support, to all the different opinions from the residents. The outreach was composed of issuing resident notification flyers to each property owner prior to the public meetings. We have a septic to sewer website with links to all the meetings and information, basin lookup where any property owner could type their address and they could see what proposed basin they fall in, when the community meeting is for that area, et cetera. And we also did a survey, a survey that was available online. And we also brought physically printed copies to each of the meetings to get resident feedback. So, in a nutshell, the general takeaway is that more or less the community is pretty knowledgeable on the issue with septic tanks and what a centralized sewer system is, et cetera, but the main concern is funding. So that's the main barrier and the main concern, which is why it's so critical that we're doing this master plan is so that we can address that and have a clear understanding of what needs to be done to appease that concern. To summarize, the main aspect of this master plan is to establish a long-term roadmap for septic to sewer transition, to be proactive and aware of the legislation changes so that the city can be positioned to have this ready to go when and if the need comes, to position the city ahead of these regulatory trends and enable the city to have projects that are ready to go to pursue grants and financing opportunities. So, adopting the master plan at this time is not a commitment to implementation, it's a commitment to preparedness, responsible planning and maintaining your own control over future decisions rather than being reactive when there is a need on emergency or a future regulatory mandate. Now with that, thank you so much for your time and we'll open it up if you have any questions.

Mayor Lago: Thank you very much. I just have one question due to the time constraints that we have. And that question more of a request, Mr. Manager, can you put this on our website? I'd like to see a tab septic to sewer discussion, our tab so that people when they have questions about that,

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I'd like them to see this presentation, see what we've done, the efforts of staff, how much we've done here, and that we are looking for alternatives. We're not looking to pass the buck onto the residents. We want to find options for the future, and we are prepared for the future. We're not going to do this. We want to be the first to the table when there's financing options. So, I want to show people that this already, that we've done a lot of work, our team has done a lot of work and that again, leave it out there for outside consultants, maybe people come up with new ideas. You never know, they can use all our information to work collaboratively in an effort to find a solution for this major infrastructure issue.

City Manager Iglesias: Certainly, Mayor, we can put it on our website and what you said is absolutely correct. This is for informational purposes only. It's a preparation item that we've done planning so that that allows us to be ready in case there is any financing available. Yes.

Vice Mayor Anderson: Through the Mayor.

Mayor Lago: Yes.

Vice Mayor Anderson: I just wanted to give you a little bit of an update. I did send out a letter to the residents. One of the things that I invited people to do is reach out to me if they were interested in pursuing septic to sewer conversion and they did look on our website at their particular basins because I asked them to do that first before we moved to the next step and there are discussions about having additional sub-meetings within the residential community to determine how many people are interested in actually doing it. So, the biggest concerns that I encountered for folks are mostly for the elderly. This is a big expense and I think it's one of the things that we have to highlight in our legislative priorities to be able to provide a funding source for those folks and there are other things I think that we need to discuss with our lobbyists as far as funding sources and whether they're – I know the county has a program as well to help out folks do the septic to sewer conversion, but the reality is we have two mandates. One is the life of the septic tank. If it fails, you're going to end up spending more money on replacing that septic tank than you would on converting to sewer and there are no grant funds available for replacing that septic tank to help people out, just not, but there are grant funds available to do the septic to sewer conversion and if I had my wish come through, there would be also additional funding for folks that are of limited income who are elderly and cannot afford to handle this themselves. It is a huge problem. In addition to sucralose, throughout our waterway, starting at Red Road, comes the appearance of human fecal count. It's in the water testing. One of the reasons I started the no dog waste in the trash pits thing is because there was also dog waste indicated. People don't realize our pipes all connect to the waterway. So those are some of the points. Hope we can get these community meetings done and the Riviera Basins was one consistent area where I had more than one person contact me. There are other basins that contacted me, an individual, but that's the most vulnerable that has contacted me thus far because it's touching the waterway. Thank you.

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Mayor Lago: Thank you. Great work by our team. Thank you very much.

Public Works Director Diaz: Thank you.

Paula Davalos: Thank you.