

‘Like Groundhog day’: New report has same old findings on how to save Biscayne Bay

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There’s a new plan to save ailing Biscayne Bay, and it looks a lot like the old plan — and the one before that.

For decades, scientists and environmentalists have done more than plead with politicians to protect South Florida’s crown jewel: They’ve written studies, held summits and presented action plans.

County managers and environmental agencies issued report cards for the bay, with traffic-light indicators and lists of priorities. Alarms were sounded to warn policy-makers about the slow death of the bay as contamination from crumbling sewage pipes and failing septic tanks, stormwater runoff, overfishing, a warming ocean, marine debris and the ever-growing pressure of development increased the risks for the ecosystem that many consider a liquid reflection of Miami-Dade’s soul.

Yet even with climate change and sea-level rise adding [a sense of urgency](#) to the search for long-term solutions, nothing truly transformative has happened. Reports were shelved, programs that were working were sunsetted and political attention went elsewhere.

Now, environmentalists are hoping the grim images of thousands of fish floating belly up along seawalls and in shallow areas of north Biscayne Bay this month will revive efforts to actually do something to protect the fragile marine environment in Miami’s backyard.

“What’s wrong with the bay? Everything. Whose fault is it? Everybody’s. And we already know most of the answers,” said Irela Bagué, chair of the Miami-Dade County Biscayne Bay Task Force. “Talking about solutions for Biscayne Bay is like Groundhog Day. I just hope that this fish kill will get everyone talking and that we’ll find the political will to get things done.”

THE SAME OLD PROBLEMS

The most recent task force assembled a nine-member interdisciplinary group in 2019 to address the bay’s woes. Its report, which has been sent to Miami-Dade County Mayor Carlos Gimenez, said a key problem is chronic pollution and that the bay had reached a tipping point. The document is expected to be presented to commissioners at their meeting on Monday, Aug 31.

The report focuses on water-quality restoration and recommends the creation of a new entity called the Biscayne Bay Watershed Management Board to manage the bay, complete with a chief officer to oversee and share information. The goal is simple, and isn’t new: creating

policies to address the [multiple sources of yucky stuff](#) that has been polluting the bay for decades.

Among the recommendations are massive infrastructure projects, like connecting thousands of homes to the sewer system and eliminating stormwater discharges into the bay, and easier goals, like a homeowner educational program to raise awareness about the importance of mangroves. The report concludes with a handy list of actions that can be taken immediately or in less than one year, between one and three years, and in more than three years.

But the new plan doesn't propose anything that hasn't been suggested before, and activists say there are plenty of additional steps the county and cities could have taken to improve water quality. Complying with existing agreements to upgrade the sewage infrastructure is one example, said Rachel Silverstein, executive director of Miami Waterkeeper.

“And how about approving a county ordinance prohibiting the use of fertilizers? And also just stop deferring maintenance on infrastructure projects that we all know need to get done,” she said. She also believes upgrades to Miami-Dade's sewer infrastructure could have been done faster, and connecting thousands of homes from septic to sewer should have been figured out by now and in the works.

Scientists said what killed the fish was [low dissolved oxygen](#) due to higher salinity levels and water temperature that was at least six degrees higher than the average at this time of year — especially in shallow areas.

But the root cause of the widespread fish kills are still under investigation. Fish and wildlife researchers didn't find evidence of toxic algae blooms — although that did happen after the kills, likely sparked by all the decaying marine life.

Heavier-than-average rain in July meant more stormwater runoff through the canals that feed the northern part of the bay — and more fertilizer, dog poop and other organic material running into the near-shore waters.

“The stage was already set for that to happen, with a high nutrient load going into the bay,” said Florida International University geochemist Henry Briceño. “We have a big nutrient pollution problem.”

The bay has also been struggling with a worsening seagrass die off since 2013, [further cutting oxygen levels](#) in areas and leading to spiraling problems.

BAY DETERIORATES UNDER DEVELOPMENT AND POLLUTION

Researchers also point to repeated failures by policy-makers and county managers to do more to address the key causes of Biscayne Bay's issues — nutrient pollution. There has been plenty of data collected on its damage over the decades.

Historically, stormwater runoff, sewage spills and septic-tank malfunction have been key parts of the equation, and researchers have been warning against septic tanks (especially in coastal areas) since the 1970s. Back then, Miami-Dade was among the nation's fastest-growing counties,

installing tens of thousands of septic systems, which can leach into ground and bay waters. It was common for outfalls to empty directly into the bay.

As far back as 1975, a report from the U.S. Department of the Interior advocated for a reduction in septic tanks in the county, especially in northern coastal areas. Groundwater quality and the bay suffered in areas of more density, the report said.

County environmental staff responded with the Biscayne Bay Management Plan, an in-depth study with extensive recommendations, including the creation of an oversight body. The Biscayne Bay Management Committee was formed in 1981, with representatives from all the governmental agencies that had a stake in regulating the bay.

They met regularly and were able to implement most recommendations of the Plan: extensive replanting of mangroves and sea grasses, improving fish stocks, extensive building of buffering rip-rap (rocks that are placed to protect from flooding) along the shoreline and the creation of the Shoreline Development Review Board to influence development decisions impacting the bay. Biscayne Bay experienced a renaissance later that decade thanks to many of those well-coordinated initiatives, said Susan Markley, who led Miami-Dade's natural-resources division and retired in 2014.

But the committee was phased out in 1992 — underlining that while there have been temporary rebounds, politics and shifting priorities often get in the way of the sustained health of the bay.

In 1999, the Florida Legislature created the Biscayne Bay Partnership Initiative, with a mission to develop “an open and inclusive, community-based forum to survey public and private sector activities and programs affecting Biscayne Bay, and to provide recommendations for actions to protect, improve, and enhance the bay's resources, its social, economic, and natural values, with its ecological health as a priority.”

But the bay's health deteriorated anyway, especially after 2005 when two hurricanes hit the area, triggering harmful algae blooms that smothered seagrass meadows and weakened the bay's coral reefs.

THREE SOURCES OF TROUBLE

In recent years, advocates have sought to sharpen the focus on the main suspects that have worsened water quality across the bay: aging sewer lines, leaky septic systems and polluted water flowing from canals filled with high levels of nutrients.

Activists like Waterkeeper say the county needs to do a better job to comply with a federally mandated order to repair its decaying sewer system to reduce the nutrient load going into the bay.

The county is under a \$1.6 billion federal court order issued in 2014 to replace pipes and treatment plants that often fail, spilling millions of gallons into streets and waterways. The sewage almost always end up in Biscayne Bay. As of the most recent status report published in March, the county met only eight out of 18 interim deadlines for projects and only two out of five final construction deadlines during the reporting period from July to Dec. 2019.

And then there is the septic issue. Conversion of leaky septic tanks to sewer is another ambitious project that has been proposed several times as a key solution for the bay's woes since the 1970s. The county itself said two years ago that it's [a major problem](#), exacerbated by rising seas.

Nearly 6,000 septic tanks in the county are [already vulnerable to compromise](#) in storms or floods. By 2030, that could rise to more than 67,000.

There is even a law saying that Miami-Dade has to convert any septic tank that's close enough to a county sewage line, but the high price tag and political unpopularity of forcing private residents to pay for the upgrade have led to thousands of exemptions.

Once again, it's included in the most recent Biscayne Bay Task force report: "Increase compliance with existing laws on septic systems so that they are fully enforced, resulting in the connection of 12,000 properties to the sewer system and reducing the number of new septic systems in coastal/waterfront areas."

So why hasn't all this been done?

"We are deferring maintenance on our environment, we are not using best practices, the can has been kicked down the road for so long, on pump stations, on sewer lines. I'm sure everyone here has drafted a report at some point but nobody acted on it," said state Sen. Jason Pizzo, who organized a Zoom meeting with a who's who of Biscayne Bay science, policy, regulation and advocacy a few days after the fish kill this month.

It included Noah Valenstein, the head of Florida's Department of Environmental Protection; Lee Hefty, Miami-Dade's director of the Department of Environmental Resources, an agency best known as DERM; Todd Crowl, director of Florida International University's Institute of the Environment; and others.

They all agreed on the urgent need for a system to put all the pieces of the puzzle together to create a long-term plan for a more resilient bay. Hefty agreed that there is a nutrient problem but said things are more complicated than that: for many years, there were nutrients going into the bay and that wasn't a huge problem. Now, there are many other factors contributing to the bay's lack of resiliency.

"What we really need is behavior change in all of us, in the way we fertilize our lawn, when we wash our cars, when you see the lawn guys blowing clippings into the street, where do you think it goes? It goes in the storm drain and ends up adding nutrients into the bay," Hefty said.

SOLUTIONS IGNORED, SCIENCE OVERLOOKED

But it's not always easy to get county commissioners to listen. Just a few years ago, when the alarm was raised about dying seagrass, no meaningful action was taken. After the 2017 seagrass die off, concerned bay watchers brought the County Commission a plan to create a Biscayne Bay Restoration Initiative modeled off a successful 2008 effort for the Lake Worth Lagoon.

The initiative would have put all the groups that have a stake in the bay at one table and focused on improving environmental quality by finding funding for restoration projects and monitoring programs.

In Lake Worth, the initiative used grants to upgrade the neighborhoods with the leakiest septic tanks onto sewer, as well as create 70 acres of new habitat, including mangroves, oyster beds and artificial coral reefs. From 2008 to 2012 alone, the Lake Worth Lagoon Initiative brought in [\\$26.3 million](#) for restoration projects.

When the Miami-Dade group — including representatives from Miami Waterkeeper, the South Florida Water Management District and the Florida Inland Navigation District — took the idea to commissioners in 2017, nothing happened. A few commissioners appeared interested in the drafted resolution, which called for the commission to fund one full-time staffer to assist the initiative, but some refused to even meet with the bay watchers.

“We presented that to the county and the county did not believe that it was a solution and so they decided not to move forward with it,” said Spencer Crowley, an attorney for Akerman and a Miami-Dade commissioner for FIND. “Unfortunately, that’s what happened, and now we’re seeing the results of that inaction.”

“In 2017, we were worried about seagrass die offs, but now we have fish kills,” he said. “Those fish kills could have been avoided if we had a structure and a process that was functioning and we had members of all these different organizations communicating about issues with the bay.”

Instead, the county created another task force that year, like the Partnership Initiative funded by the legislature in 1999. That initiative last updated its “action items” [list in 2010](#). Those action items were mostly about coordinating agencies or finding opportunities to present about the bay to politicians or scientific meetings.

Even the chair of the current task force admits that there is a lot of data and science that has been overlooked and perhaps wasted because of a lack of coordination. Bagué, the chair of the Miami-Dade County Biscayne Bay Task Force, is hoping the new report will help connect all interests together, and that the fish-kill momentum will last long enough to spur real action.

“Everybody is doing great work, producing research, filing bills, passing ordinances, but it’s not done in a collective manner. Nobody is coordinating with anybody, even internally at the county,” Bagué said. “Whatever we create now, it must be permanent. The bay has enormous value, without the bay there is no local economy.”

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