

Do horse rides along this Florida causeway pollute the bay? A DNA test has answers

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Leaders of environment watch group Suncoast Waterkeeper say they have new DNA evidence linking popular horseback rides in Florida's Palma Sola Bay to water pollution.

The group points the finger at horse manure, which it says is contaminating the water with potentially harmful bacteria that make it unfit for swimming. The waste can also add nutrients to the water that can help fuel harmful algal blooms. Concerns have also been raised about the [horses](#) trampling seagrass.

"The fact that we're allowing these horses to just defecate in the water is mind-boggling," Suncoast Waterkeeper Executive Director Abbey Tyrna said. "What's definitely known is that some level of our high enterococci bacteria is coming from the horses."

But the operator of one of the area's largest horse riding operations, C Ponies Horseback Rides, pushes back on claims that the horses are damaging the Bradenton bay. Owner Carmen Hanson says that ride operators keep the beach clean and remove most of the waste from the water.

Hanson claims that horse manure poses a low risk to [human health](#) and says the focus on horses is a distraction from major sources of pollution to the bay, like municipal wastewater spills and stormwater runoff.

Based on the DNA results, Suncoast Waterkeeper is making a renewed call for Bradenton officials to regulate companies that offer the rides and stop the release of horse waste into the habitat.

Bradenton officials say they want more information before taking any action.

DNA test studies horse manure

The Sarasota Bay Estuary Program, which advises Bradenton's city council on water quality issues, says a study could help determine whether horses are causing a significant enough impact on the bay to

merit regulation.

"We're not pro- or anti-horse," SBEP Executive Director David Tomasko said. "If the horses are contributing a fairly substantial percentage of the bacteria, then maybe doing something about the horses is going to make a big difference. But if it's only... .05%, you could get rid of the horses and really not change anything."

For over a decade, Bradenton's city leaders have debated whether they should ban horse rides along Palma Sola Causeway due to water quality concerns.

But previous discussions faltered after leaders disagreed about what action they should take or decided more information was needed. Questions have also lingered about whether the city has the authority to regulate activity on Palma Sola Causeway, which is maintained by the Florida Department of Transportation.

Horse rides have controversial history

Last year, Bradenton City Council consulted Sarasota Bay Estuary Program as leaders again considered whether they should pass a ban.

At the time, Tomasko told the council that more research was needed to determine how much horses contribute to pollution in the bay. He also noted that while horses may have a localized impact, the bay was in good condition overall.

The issue was once again dropped.

The Florida Department of Health regularly tests the water on the south side of Palma Sola Causeway for enterococci bacteria and issues no-swim advisories when the bacteria levels are too high. The most recent

advisory came Friday and was lifted Thursday morning. The bacteria is a potential indicator of fecal matter, and it can make people sick when ingested.

The health department does not indicate the source of the bacteria in its reports. It's unknown whether horses, which swim on the north side of the causeway, are a factor. Other sources of enterococci bacteria include human waste and plant matter.

To fill in the information gap, Suncoast Waterkeeper performs weekly enterococci testing on the north side of the causeway, where their reports often show elevated levels of bacteria.

Waterkeepers push for horse ride regulation

Suncoast Waterkeeper leaders say there is enough evidence of horses contaminating the water for officials to start regulating the industry now.

"There's enough evidence to warn people about the risk, and there's enough evidence to create and operate a permitting program to make sure that there are best management practices in place," Tyrna said.

The north side of Palma Sola Causeway is among 11 sites the group tests weekly for enterococci bacteria. After samples in April showed high levels of the bacteria, the group sent water and sediment samples from the area for DNA testing by LuminUltra.

"Both the water and sediment samples had detectable levels of horse DNA but no human DNA. This suggests that the high levels of enterococci we observed on April 8 came from horses," a recent newsletter from Suncoast Waterkeeper said.

Tyrna suggested that the horse rides could continue with new limits in

place to protect water quality, such as limiting how deep horses are allowed to go and how many are allowed in the water at once.

"There should be signage to alert people who recreate on that side of the bay to the risk due to the horse operations," Tyrna said. "Swimming around horse poop is dangerous."

Tyrna also noted that horses are just one source of bacteria in the bay, and she suspects that horses contribute more to the issue during the dry season.

She said that Suncoast Waterkeeper will continue to collect water quality data going into the rainy season for a more complete picture.

"There's horse DNA, there's human DNA and there's plant material. We'd like to know how much of each is contributing," Tyrna said.

Tyrna also commended the horse ride operators who are trying to take good care of the bay and said that some she spoke to are open to being permitted.

"They're trying to be really good stewards of the bay, which is great," Tyrna said.

Horse ride owner opposes regulation

"We thought after last year that this was finally settled," said Carmen Hanson, owner of C Ponies Horseback Rides. "But there's a handful of people that keep pushing and pushing."

Hanson called the concerns about horses "smoke and mirrors" that distract from other sources of pollution to the bay.

"Let's focus here on horses and then we don't have to focus on any of the bigger issues," Hanson said.

Hanson pointed to reports by horse advocates that claim horse manure is non-toxic and rarely transmits disease.

Scientific literature reviewed by the Bradenton Herald supported the claim that transmission of disease by horses is rare but also noted that horse manure can contain a number of pathogens that can make people sick.

Bradenton officials seek more information

"We have tried to follow reliable science on what the condition of Palma Sola Bay is, especially the north side that seems to be of larger concern," City Administrator Rob Perry told the Bradenton Herald.

Perry said the council relies on the latest water quality findings from the Sarasota Bay Estuary Program to guide its decisions. SBEP is scheduled to present to the city council again in July.

"The last report we got is that it's been better than it's been in a long time and moving in a steady positive direction," Perry said. "We're going to wait to see what the latest is, and we'll listen carefully and assess."

Meanwhile, Perry said the city's jurisdiction over the causeway remains murky.

"We've done some legal research into that and it's a novel situation because you have multiple state and local entities with jurisdiction out there. We're still looking at what options may be," Perry said.

The city administrator said he's been impressed by the horse ride

operators' efforts to keep the water clean.

"The folks that operate the horse rides have come in and pled their case, and they seem to be pretty good stewards of the coastline," Perry said.

Estuary program says more study needed

"Now that they have a (DNA) hit for horses, it shifts into a different mode of research," said Sarasota Bay Estuary Program Executive Director Dave Tomasko. "Alright, so what percentage of bacteria are due to horses?"

Tomasko said a study on the extent of the horses' impact could provide city leaders with better information to decide whether regulation is needed.

"The horses do damage to the bay," Tomasko said. "There is scarring in the seagrass meadows. But so does every boat. So does everyone who brings a jet ski. So do people who leave trash on the beach. So it's a matter of, is their proportionate impact so great that we should get rid of them?"

Tomasko said the estuary program has set money aside in its budget to help Bradenton with such a study, which he previously estimated at a cost of less than \$10,000.

In the meantime, Tomasko said one precaution he would like to see is warning signs at the beach.

"Until this works out, it might make sense to put up signs that mark the beach as not appropriate for swimming," Tomasko said.

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