



City of Marco Island
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CITY WILL CONTINUE TO FOCUS ON CANAL WATER QUALITY

(January 19, 2023) At the January 9, 2023 City Council meeting, the City Council took the position that nitrogen and phosphorous from the City's reclaimed water is not the fundamental cause of degraded water quality in our canals. This decision was based on the information provided from Task 1 of the Jacobs Engineering Group report, which "did not find a compelling rationale for improvements to the RWPF (Reclaimed Water Production Facility)" and the recent water quality reports that showed a reduction in the level of nutrients (both nitrogen and phosphorous) in the City's waterways. Reclaimed water is highly treated wastewater and it is reused for irrigation on golf courses, public medians, public rights of way, condominium landscape areas, and City parks, to meet irrigation needs on Marco Island. Single family residential properties on Marco Island do not use the City's reclaimed water. For more information on what "nutrients" are in regards to water quality, see these resources:

<https://extension.usu.edu/waterquality/learnaboutsurfacewater/propertiesofwater/nutrients> or
https://lakewatch.ifas.ufl.edu/media/lakewatchifasufledu/extension/circulars/102_NUTRIENTS_FIN_AL_2004copy.pdf

A recent study performed by Environmental Research and Design (ERD) and a follow-up report by the Jacobs Engineering Group both indicated that phosphorus is not a nutrient of concern for the Marco Island waterways. The Jacob's Engineering Group report further stated, "Jacob's review of the ERD Report shows there is little direct evidence to claim that applying reuse water for irrigation purposes results in a significant impact in waterway water quality degradation." To read these reports see: <https://www.cityofmarcoisland.com/publicworks/page/city-water-quality-report>

Additionally, City staff has collected groundwater samples and the results showed that the phosphorous and nitrogen levels in the groundwater where reclaimed water is applied, were both below the amount allowed by the Florida Department of Environmental Protection (DEP). Most recently, in December 2022, Advanced Environmental Laboratories tested water quality at 14 sites and nitrogen was undetectable at all 14 sites. A map of the 14 testing site locations is attached to this release.

The majority of reclaimed water applied in Marco Island is used along Collier Blvd. in condominium landscape areas. The discharge of this water after it percolates through the ground, flows toward the Gulf of Mexico, rather than into the City's internal canal system, further supporting the argument that reclaimed water is not the cause of degraded water quality in the canals. A map showing the reclaimed water connection locations is also attached.

Going forward City staff will continue to focus on water quality in our canals by concentrating on increasing tidal flows and circulation on dead-end canals as well as conducting a canal aeration pilot project. In December 2022, City Council approved an aeration pilot project as a legislative priority and is seeking State funding for 2023-2024. The project aims to increase oxygen in the water to improve water quality. This issue continues to be a top priority for the Marco Island City Council and staff.