

From: [Joe Gilio](#)
To: [Lisa Wichser](#); [Michelle Cullum](#)
Cc: [Clyde Dulin](#)
Subject: Water quality improvements in dredged retention lakes/mining
Date: Monday, June 7, 2021 11:54:03 AM



Dear Lisa and Michelle,

A brief introduction, I have been a resident of Martin County since 1973. After teaching limnology , oceanography, etc. as an assistant professor at FIT-JB, I started and ran Wetlands Management, Inc.[WMI] until its sale in 2006. A major part of my work through WMI was to establish retention lakes as close to natural as possible within the constraints of ordinances, HOA's etc. Retention lake aquascaping featured emergent aquatic vegetation [EAV] and submergent aquatic vegetation [SAV] as net sinks for phosphorus and nitrogen inputs both natural and man-introduced as pollutants. To my best knowledge, no WMI aquascaped lake that retained SAV and EAV habitats has ever experienced a hazardous algae bloom.

In the intervening 40 yr. interval for which neither I nor the new owners Wetlands Management, LLC have been involved, the SAV+EAV combination have withstood the test of time. The most important SAV installed is *Vallisneria americana*, *tapegrass*. This native SAV supplemented with native SAV *Characters/Nitella* have competed with and reduced the exotic SAV *Hydrilla*. Most WMI aquascaped lakes meet the 40-60% criteria of natural Florida lakes by UF scientists. As such, the lake management techniques developed, employed and continued by developer or owner concerns have reduced biocide application rates for filamentous algae.

Water clarity as measured by Secchi disk have allowed SAV extention to 10- 15 foot depth with excellent bass and bream populations as well as mosquito larvae consuming native *Gambusia affines*, as biocontrol.

Some of my lake work is on www.joegilio.com. I would be glad to discuss my recommendation that all new retention lakes/ ponds in Martin County be aquascaped with tapegrass in the-1ft. control depth in the upcoming amendments to the Excavation and Fill regulations.

Respectfully,

Joseph L. Gilio, PWS Emeritus [o] 772-220-2298, [m] 772-631-1157

Michelle Cullum

From: Lisa Wichser
Sent: Tuesday, June 8, 2021 8:43 AM
To: Joe Gilio
Cc: Clyde Dulin; Michelle Cullum; Shawn McCarthy; Darryl Deleeuw
Subject: RE: Water quality improvements in dredged retention lakes/mining

Mr. Gilio –

Thank you for reaching out to Martin County and sharing your experiences.

At this time, we are amending Division 8 of Article 3 pertaining to Excavating, Filling, and Mining. We are removing the littoral planting standards from this Division and moving them to Division 9 of Article 5 pertaining to Stormwater Management where they are more appropriate.

In the future, we will review and amend Division 9 and will consider your recommendations at that time.

Lisa A. Wichser, P.E., CFM
County Engineer
Public Works Department
Martin County Board of County Commissioners
772-223-7945 (office)

From: Joe Gilio <jlgilio@mac.com>
Sent: Monday, June 7, 2021 11:54 AM
To: Lisa Wichser <lwichser@martin.fl.us>; Michelle Cullum <mcullum@martin.fl.us>
Cc: Clyde Dulin <cdulin@martin.fl.us>
Subject: Water quality improvements in dredged retention lakes/mining

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