Stormwater Inquiry Form

District: 4

Initiated By: Meghan Murphy

Contact Info: 407-590-3902

Site Address: 330 Oak Haven Dr., Melbourne

Relayed Through: Jennifer Thompson

Date Received: 3-9-24

Concern: Reinspection of stormwater system with attention to erosion and pond health

Investigated By: Jennifer Thompson (JT)

Date Investigated:3-18-24

Action Taken: JT conducted an inspection of the subdivision's pond and pipes/structures with JoAnn M., Liz R., and Meghan M. Several aquatic plants installed by residents previously were killed along the shoreline due to spraying (approximately six months prior to the inspection).

Erosion has increased along the northeastern shoreline beside the pool, carving out the bottom portion of the soil and creating an unsafe walking area along with slanted sidewalks. Most areas around the detention pond have 90 degree drops into the water instead of the original slope of 1:4, allowing for a littoral zone of growth. JT recommended looking into more erosion control (more plants, expanding the jute and riprap modules, and possibly manufactured options like ShoreSox). The aquatic vegetation and western revetment area is an improvement from previous inspections, but the entire pond still needs more to protect and stabilize the soil.

Naturally growing vegetation (groundcover) used as a buffer zone has started to hold the bank together. This should also further minimize erosion, however JT recommended the buffer be at least two feet from the water's edge and about twelve inches tall to be more effective. There was an immense diversity of wildlife in the pond; ducks, small fish, wading birds, and juvenile dragonflies were seen during the inspection. The ducks were actively eating submerged vegetation during the 60-minute inspection. If large vegetation is going to be planted around the pond, JT recommended planting vegetation where the root system grows horizontal and to not plant too close to the shoreline (this will disturb the soil and potentially cause erosion). Furthermore, JT recommended residents plant Florida-friendly plants to reduce the need for fertilizer and frequent watering. Overall, the pond health is better than in July 2022. The water column has turned a slightly darker color but is clear, indicating growth instead of just sediment, another indicator the water quality is increasing. JT recommends not spraying,

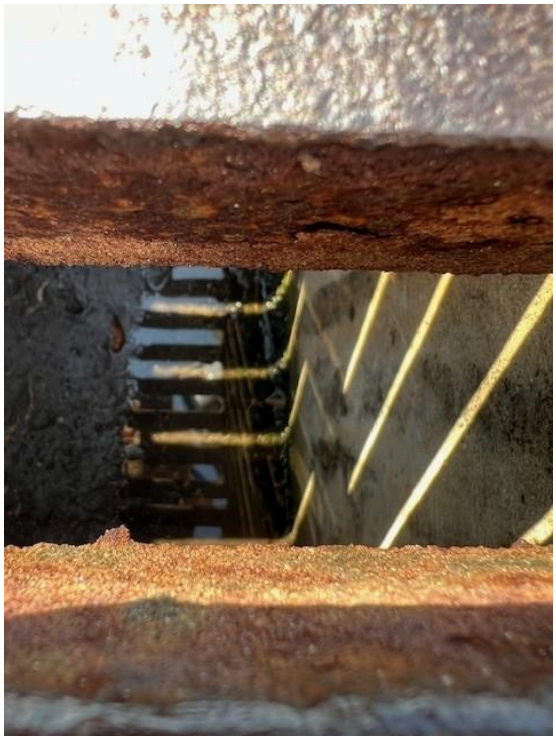
especially when new plants have been installed, and reassess the health after at least 3 months when temperatures rise and invest towards erosion control. Several agencies like The IRL Council, FWC and Save Our IRL have small grants for communities to implement erosion control and plant aquatic vegetation to help water quality. Measuring water quality before submitting for a grant is helpful, especially phosphorus and nitrogen, so the grant agency knows how much of an impact could be made. Residents raised concerns about a parking area on the south side of the detention pond. JT agreed that permeable parking should not impact the pond or erosion with Truegrid Grass Pavers as presented, though she did not have first-hand knowledge of projects using this material.

As for the stormwater system in general, everything is maintained and properly functioning. Trench drains had some sediment build-up, however it was not impacting water flow. The sediment traps/structure boxes beside 201 and 273 Oak Haven Dr. had some debris and sediment inside, however the depth did not impair the water flow. The structure box behind 201 Oak Haven Dr. had a substantial elevation change as JT approached the grate, indicating either an intentional or unintentional topographic change, and highly recommended watching for future changes. JT also highly recommended budgeting for a replacement grate here; the grate was very corroded and will need to be replaced soon.

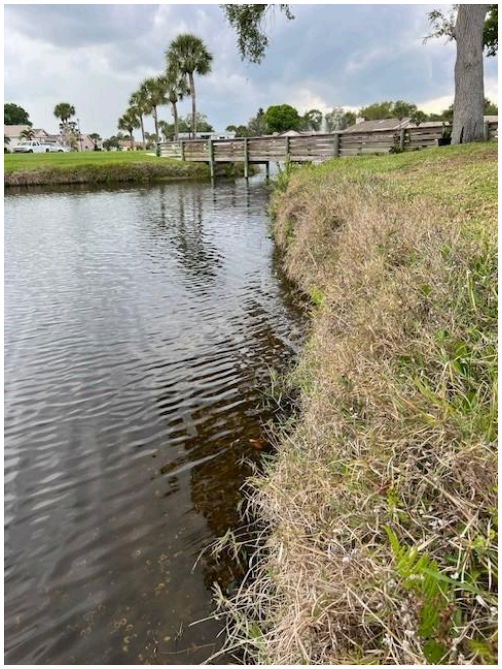
Below are photographs taken 3/18/24:



Outfall chamber behind
273 Oak Haven Dr. (some sediment)



Trench drain (some sediment)



Bank erosion along north bank
and evidence of spraying (dead grass)



Detention pond from the east headwall