



## MANGO PARK HOMEOWNERS ASSOCIATION, INC.

**DATE:** Monday, November 2, 2020

**Topic:** The Pond

**NOTES**

### **The Pond**

*History Mac Carraway*

The pond is an HOA asset made for water protection. All Mango owners have an interest in its construction and management. Violations were sited in 2018. The HOA Board hired a professional engineer to bring the pond into compliance with South West Florida Water Management District (SWFWMD) requirements. SWFWMD was cooperative by giving Mango time extensions and working with the Mango contractor through many collaborative conversations to examine available options. These options are very limited.

*Permit Modification Gary Bethune, P.E., Mango Consultant*

The permit from the original construction of the pond was sited for two independent violations: 1) the pipe in the old system was failing and 2) the bank requires maintenance and appropriate ground cover.

Regarding the pipe, the District has developed a new option that Mango will adopt to maintain the purity and quantity of the water. It is cheaper than repairing the old pipe system which has the least quality and is the most expensive approach. The historic water level was 4 feet NWL as established in the original documents. The quality of the water depends on the calculated acres that filter the water. The Mango pond is .1 acre short of the requirement. Wetland plants around the pond would meet the filtration needs. The plan calls for them to be planted around the entire perimeter of the pond. These plants are 2 feet below the water level. This may or may not be the case – we won't know until we get maintenance quotes.

The north side is by far the largest and most expensive problem. It is overgrown because of lack of maintenance for most of the life of the pond.. It should be improved to eliminate invasive species such as Brazilian Pepper and Australian Pines. Oaks and other natives may remain. In addition, ground cover is required which can be a complete weed mat, sod, etc.. Sod is not a specific required as a ground cover according to Gary Bethune.

Notching the weir is straight-forward. Installing the notch requires the concrete to be cut and a notched metal plate put in to provide for drainage to the NWL

The new system will maintain the water at 4 feet, the right level, which will not be a dramatic change to the appearance and should control flooding. The bank has a 6 inch vertical slope of exposed bank. The littoral planting bed will all be submerged. Pickerel Weed and other similar aquatic plants are recommended. This approach uses mother-nature to clean the water.

Gary stated the following cost estimates: weir (\$3,000-4,000); plantings (\$6,000-7,000) (in stages); and maintenance of the plants and cleaning up the north bank (no estimate – see comments below).

SWFWMD generally accepts a good faith effort to comply with the regulations. Mango has received the permit to adapt the weir. The weir work is to be completed and certified within 90 days. The certification will be for a wet detention system and appropriate water level. Maintenance of the north bank and the littoral plantings is inherent in the permit. It was discussed that the maintenance of the north bank will require a significant effort that could

take several years to complete, allowing for amortizing the significant cost of that work over a period of time. Issues related to the necessary easements/permissions needed to access the north bank for maintenance, how the cleared material will be removed, whether any "self-help" is achievable to reduce costs, etc. will have to be investigated further. Bids for this work will be needed eventually. The system is inspected by an engineer every 5 years to keep the permit in compliance.

One fourth (1/4) of the littoral zone plantings around the edge of the pond should be done in Phase I. Plantings of this type are similar to plugging a lawn, and caretaking is needed during the establishment period to ensure these plants "take" to their new setting.

Mango has a grounds(?) pond maintenance contract now. However, the purpose of that contract is not necessarily consistent with maintaining the wetland plants in the edge-of-pond littoral zone. Bids for the revised scope of work will be needed. Whether to let one company do all or the have two is a question for the HOA once the work has been discussed and/or bid with suitable contractors. The overall cost of maintenance is very likely to be higher. Torpedo grass is an aggressive weed that can grow from the lot side over the top of the littoral plantings and will need to be controlled to protect the new plantings. There are herbicides targeted to torpedo grass which are commonly used in this type of setting.

Please see attached notes for the Engineering Report.

1. **New Business**
2. **Homeowner Comments (3 minutes each) see below**
3. **Next Meeting Date(s)** – Friday, November 6<sup>th</sup> at 1pm via conference call. Annual Membership Meeting, Monday, January 25<sup>th</sup> at 6pm via conference call, in person location TBD.
4. **Adjournment:** With no further business to discussed, the meeting adjourned at 4:58pm.

Prepared by: Nicole Banks For the Board of Directors

## Take Aways from this Meeting

### The Pond

- notch weir within 90 days from date of permit (have until Jan 21, 2021)
- engineer inspect and certify for wet detention system and water level

### North Bank

- permit requires maintenance and proper ground cover
- stability of ground most important-is stable now
- need to trim canopy; remove invasive species; allow/encourage healthy ground cover to vegetate (could be weeds, other, not necessarily sod)
- annual maintenance
- erosion question- "as built" says it was constructed that way

### South Bank

- permit says wetland plantings around entire pond
- water level will be lower, exposing 2 feet of ground (beachfront)
- water plants planted in water
- exposed land could be planted or sodded
- suggestion to make all consistent along homes
- how do owners maintain beach and yard (no weed wacker, two companies?)

### Australian Pines and Brazilian Pepper

- permit says they must go
- how to remove-cut from top, crane, other

- easement issues, north side neighbor
- need a game plan
- can be done over a period of time but HOA must show good-faith progress from the outset

#### To Do List

- look at Perico and Lakewood Ranch
- owners meet with Mac and Gary to make a plan

#### **Owner Discussion and Q&A on Pond Permit and Report (item 7 above)**

*Carl:* Are water plants restricted from migrating? Could remove the tree canopy from the water by barge.

*Gary:* The water depth restricts.

*Mac:* The extent of clearing on the north bank could be pulling the overhead back and removing invasive species. The trees can stay except for invasive species as indicated

*Gary:* Earthen dams had sod no trees. Weeds or other ground cover works. The north bank has a 5 feet elevation. If there were to be a breach it would send 3.5 million gallons of water downstream. Need a healthy ground cover, but not necessarily sod.

*Bob E:* The canopy and ground cover need annual maintenance.

*Larry:* It's important to keep the invasives away.

*Donna L:* On the south shore are the plants in the water

*Gary:* Yes. Plants around the entire pond. Planting out with an 8 feet slope. Trim the north shore.

*Nick:* Thanks. Four different types of plants. How are these squeezed into 8 feet?

*Nick:* 4-1 ratio. With a lower water level, 2 feet of land will be exposed.

*Gary:* The water levels vary with wet/dry season.

*Gary:* It takes 3 days for the water to recede.

*Gary:* Aggressive ground cover. Naturally vegetate. Sod is an instant solution.

*Nick:* A 2 feet drop, homes will have beachfront. Do Australian pines need to be removed on one side?

*Gary:* Yes, the Australian Pines have to be removed. Have to figure out how to do it.

*Nick:* Last tree down the line is in the pond now.

*Mac:* Could look at climbing the tree to cut from the top or a crane. There are questions about the easement and the neighbor to the north for access.

*Gary:* This requires a game plan that can be done over a period of time.

*Scott:* Is there a schedule? Dormant in winter; plant in June-September. Shorter growing season. This is a contractor discussion.

*Gary:* Could be installed now, don't need to wait. Cost of installation is \$6,000-7,000. Maintenance of plants.

*Fred:* Could Australian Pines be grandfathered in? Has our pond been compared to others? Could infiltrate yard.

*Gary:* On the permit it is specific to remove Australian pines. Removal of invasives like this is non-negotiable.

*Mac:* Has there been any grandfathered in anywhere?

*Gary:* I have no knowledge of any exception. There are cases of ponds not in compliance.

*Mac:* How do we get this done with minimal impacts?

*Gary:* SWFWMD is conscious of economic hardships

*Fred:* What about the pines on the island beach. SWFWMD didn't have those taken down. Clear cutting is the most expensive part.

*Gary:* In one situation a vendor quoted \$150,000 to correct a violation immediately.

*Mac:* There are alternate approaches. The maintenance can be spread out.

*Alexandra:* We need dollar numbers and costs.

*Gary:* Abandon exfiltration and just have bushes planted.

*Bob E:* The north side of the Perico pond should be examined.

*Gary:* That is something to follow up on.

*Nick:* What if trees are planted in buffer zone?

*Gary:* It's how he sees it. Most important is stability of the ground. P 14 of the buffer planting permit is old. Need to do yellow buffer zone on P13. Trim the canopies and remove the invasive trees and bushes and the ground will be stable.

*Fred:* Point 3. How is our pond relative to others and come back in 5 years.

*Gary:* District has knowledge about storm water run off from streets and lawns. The district allows plan to do if water is clean-not polluting. More money than presumption of quality.

*Mac:* Bank management will cost \$\$\$.

*???:* Is north bank eroded?

*Gary:* As built says it was constructed that way.

*Fred:* Erosion doesn't exist on north bank. it is on the south side.

*Jamie:* No erosion on north side of pond. no gradation/was precipitous/non gradual slope.

*Sean:* 3 outfall shapes. 4-1 grading. memory sketchy

*Gary:* Didn't see structures. Appendix P8 is the control structure. Uphill is 4-1 slope on structure. The shelf is 3-1.

*Sean:* Slope of structure is not the same as the slope of the bank.

*Gary:* It's not at odds with SWFWMD.

*Mac:* North bank erosion is questionable. Extent of required maintenance on bank.

*Gary:* *There is some latitude in what is meant by erosion on the north bank. Didn't say all erosion needs to be fixed by returning it to a 4-1 slope.*

*Gary:* The bank is stable. If it rains 8 inches in an hour, don't want a failure. The focus is on the groundcover.

*Mac:* On Fred's Q4, Gary will have to visit the site.

*Bob E:* On Google earth in Feb 1994 there were no trees and the slope was there.

*Nick:* many obstacles, options. Need a meeting with Gary and Mac.

*Bill:* What systems can Mango to look at?

*Gary:* Lakewood Ranch. Good point about what they look like. 0-2 feet deep littoral shelf. Use perimeter around the water's edge. Lakewood has plants clustered around the outfall structure. Have to fill dirt in around structure. Trucking in the necessary fill dirt to create a single littoral zone would be very costly and disruptive to the neighborhood. Easier and less costly to put around entire pond.

*Bill:* Homes have lawn maintenance companies. The beach will be difficult to maintain.

*Gary:* Right. Weed wack is bad for the shelf. Erosion will cause the stair to turn into a slope.

*Mac:* Homes on pond could be planted or sodded.

*Gary:* Correct.

*Bill:* With lower water level and ??

*Mac:* District has rights up to the water. The beach can be restored.

*Gary:* In the permit, the bank of 4-1 includes the beach and yard. 4-1 slope in history in Florida. Consider other options. Yard has step or not.

*Nick:* There is a 10 feet easement along the pond. Owners could come up with a common solution and plan similar look along the pond.

*Bill:* Agrees

*Jamie:* Gary should come out to the pond.

*Gary:* Agreed.