



McGlynn Laboratories, Inc.

Friday, December 15, 2006

Stephen Murphy, Environmental Specialist
Submerged Lands & Environmental Resources Program

RE: File No.: 20-0263668-001-DF
Applicant: Lake Tallavanna Homeowners Association

Dear Mr. Murphy:

Following is a response to you comments letter relative to the subject project:

1. Provide a scaled and fully dimensioned plan view drawing of the project area showing existing conditions including:

- **The current mean high water line**

The current mean high water is at elevation 147.33. The mean high water is depicted on the attached existing conditions drawing.

Height of riser-does lake control

- **The location of wetlands**

The location of the wetlands is now shown on the attached "Tallavana Grading Map."

- **Existing structures**

There are no existing structures except the roadway, existing pipes and small excavated sediment pond; they are shown on the attached existing conditions drawing.

2. Describe how water flow and water levels in the creek are expected to be affected by the proposed project. Explain how this was calculated.

The creek is an intermittent stream. During normal conditions, it experiences a constant very small discharge from upstream seepage springs. During these periods, there will be no difference in flows. Water levels will pond slightly higher upstream of the roadway (behind the gabion wall); the impounded water will bleed down at a slow rate.

During periods of higher flows, discharge rates will be lower, due to greater impounding rates. The gabion wall has been designed to discharge the 100 year storm without ponding on any pedestrian or vehicular use area. Calculations are attached.

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3. Describe how the gabion wall will be maintained. How will it be cleaned and what is the expected schedule for maintenance of the device.

Gabions typically require little maintenance. The median size of the rock will be rather large. Sediment will eventually wash through the large interstitial spaces between the rocks; cleaning the wall should not be necessary. However, if clogging does occur; the baskets will be taken apart manually, cleaned, and re-assembled. The main purpose of the wall is to slow down the flow to allow sedimentation to occur in the sump upstream of the wall. When the sediment sump is half full, or sediment is 2.5 feet deep, the sump will be cleaned. The gabion wall will be inspected every six months or after each large storm for settlement, scour, damaged wire mesh, wire corrosion, and excessive growth of bushes, trees, weeds, and other vegetation. Plants and debris shall be removed to maintain channel flow capacity and prevent damage to the gabions.

4. Provide the total area of fill and/or excavation impact to waters of the state (including wetlands).

Total amount of excavation: 400 cubic yards
Total amount of fill: 225 cubic yards
Total amount of gravel for parking lot: 100 cubic yards
Total amount of lime rock in gabion: 50 cubic yards
Total amount of wetland impacted: 94 square yards*

*The total amount of wetland impacted includes the streambed. This is technically not wetland so the total amount of wetlands impacted using only the stream banks are approximately 10 cubic yards. The streambeds are sand and devoid of vegetation. They are degraded with riprap, scouring and suffocation with sand. The wetland vegetation is also degraded being mostly Wild Taro, *Colocasia esculenta*, an exotic.

5. If wetlands will be impacted please flag their location on site.

The wetland locations have been delineated by environmental biologist Sean McGlynn, PhD; they have been flagged in the field, and are shown on the plans. Wetland vegetation is minimal because the creeks run under a dense forest canopy, which shades the creek. The majority of the wetland area is composed of bare sand and riprap. The ephemeral nature of the stream also inhibits the proliferation of wetland vegetation. Erosion and sedimentation during storm events stresses the aquatic community. Wetland areas are degraded and the majority of the wetland vegetation is exotic; the dominant species being wild taro (*Colocasia esculenta*).

6. This is not a completeness item. This project will require a separate FDEP storm water permit. Please contact Michael Hogan, Stormwater Engineer at the FDEP Tallahassee Branch Office for further information. (850) 488-3704

The subject of the stormwater permit was discussed with Michael Hogan. It appears that a permit may not be necessary. The parking lot will be a permeable surface and will not provide lake access or any other function that would cause its use as a parking facility other than as access to a



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hiking trail that is proposed for Magnolia Hammock on the Common Lands owned by the Tallavana Homeowners Association. Since this is a gated community it is expected that, on average, there will be little usage of the parking lot. Rather the primary function of the parking lot is to provide access to the stormwater pond for maintenance. The existing pond is excavated annually to remove accumulated sediments. Heavy equipment is necessary for this function. The excavators currently traverse the periphery of the existing pond on the clay banks surrounding the pond. The addition of a graded gravel parking lot will minimize the impact of heavy equipment as it does damage the surroundings of the existing pond (particularly in wet weather). The primary purpose and function of the parking lot is not as a parking lot but as access to the pond for future maintenance.

7. This is not a completeness item: Based on 62-345 F.A.C., this project may require mitigation according to the Uniform Mitigation Assessment Method. Information about this rule can be located on the Florida Department of Environmental Protection website at: <http://www.dep.state.fl.us/water/wetlands/erp/forms.htm>. Blank UMAM forms are attached.

No mitigation will be required. The proposed pond utilizes the site of an existing pond and has little wetland impacts. Wetlands that are impacted are degraded, filled with rip-rap and exotics (Wild Taro, *Colocasia esculenta*, an exotic). The impacted wetland are currently subjected to scouring and excessive sediment deposition from the runoff from the existing, and eroding cattle farm which occupies most of the Magnolia Hammock drainage basin (see original application). The purpose of this pond is to minimize wetland impacts from the high nutrient runoff and sediment erosion from the upland cattle farm by slightly expanding the existing pond which has proven to be a little too small for the task.

Sincerely,

Sean E. McGlynn, Ph.D., Q.A.O.
McGlynn Laboratories Inc., Technical Director