



St. Johns River Water Management District

Kirby B. Green III, Executive Director • David W. Fisk, Assistant Executive Director
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On the Internet at www.sjrwmd.com.

March 30, 2009

Mr. James A. Stivender, Jr., P.E., P.L.S.
Lake County Department of Public Works
437 Ardice Avenue
Eustis, FL 32726

**RE: Hartwood Marsh Road – Phase II
Application No. 40-069-114354-1**

Dear Mr. Stivender:

The St. Johns River Water Management District is in receipt of your Standard Environmental Resource Permit application (ERP). Upon preliminary review of the proposed project, the following technical information is required to sufficiently review the possible impacts the project may have on the surrounding area. This information is being requested pursuant to the authority vested in the St. Johns River Water Management District under subsection 373.413(2), Florida Statutes, and sections 40C-4.101 and 40C-4.301, Florida Administrative Code (F.A.C.).

To expedite the review of your application, please use the application number referenced above on all correspondence and submit three (3) copies of all requested information unless otherwise indicated by a specific information request.

1. In demonstrating that Pond 3, which consists of interconnected Ponds 3A and 3B, will recover the required treatment volume within 72 hours and storage capacity for the 25-year, 96-hour storm event within 14 days, please address the following:
 - a. The water quality calculations are based on a drainage basin area of 27.51 acres and an impervious area of 15.14 acres. The sub-basins that will drain to the pond as shown on the Post Development Areas figures have a total area of 48.68 acres. The impervious areas for each sub-basin, as shown in Table 2 of the report, indicate a total impervious area of 20.17 acres. Accordingly, please clarify the basin area and impervious area for this basin. Provide revised water quality treatment and recovery calculations, tables and Post Development Areas figures, as necessary, for consistency.
 - b. Verify the stage-area input parameters assumed in the PONDS recovery analyses. The values currently assumed are inconsistent with those shown in the stage / storage calculations.
 - c. Verify the soil parameters currently assumed in the PONDS recovery analyses. Please consider the following:

GOVERNING BOARD

Susan N. Hughes, CHAIRMAN PONTE VEDRA	W. Leonard Wood, VICE CHAIRMAN FERNANDINA BEACH	Hersey "Herky" Huffman, SECRETARY ENTERPRISE	Hans G. Tanzler III, TREASURER JACKSONVILLE
Douglas C. Bournique VERO BEACH	Michael Ertel QUERO	David G. Graham CORTEZ	Arlen N. Jumper CORTEZ
			Ann T. Moore CORTEZ

1. According to the plan view on Sheet 29 of the plans, the existing grade in the vicinity of Pond 3A is approximately 98 feet. The pond was designed with a bottom elevation of 113 feet; thus, fill will be required to construct the pond. The Section A-A detail for Pond 3A, shown on Sheet 96 of the plans; however, indicates that excavation will be required to construct the pond, which is inconsistent with the plan view. Accordingly, please clarify whether fill or excavation is proposed to construct the pond. Revise the Section A-A detail, as applicable.
2. If excavation is proposed, verify whether the soil properties currently assumed in the PONDS recovery analyses are appropriate for Pond 3A for which the majority of the runoff from the road will be conveyed to. Borings AB-P8 and AB-P9 were utilized in the recovery analyses for Pond 3 and are located in the vicinity of Pond 3B. The unsaturated vertical and horizontal saturated hydraulic conductivity rates of 13.33 feet/day and 20 feet/day assumed are based on testing results for Boring AB-P8. Borings were not obtained in the vicinity of Pond 3A according to the geotechnical report prepared by Ardaman & Associates, Inc., dated September 3, 2008 and that the report is preliminary pending results of additional exploration after the pit has been filled. Include all supporting documentation, as part of your response.
3. If fill is proposed to construct Pond 3A, please include specifications for the fill material on the plans for consistency with the calculations, including percent fines and permeability rate.

Provide revised calculations and plans, as necessary. [40C-4.301(1)(a),(b),(c),(e),(i),(k); 40C-42.026(1), F.A.C.; Sections 10.3, 10.4, 11.7, A.H.:MSSW]

2. In demonstrating that Pond 5 will recover the required treatment volume within 72 hours and storage capacity for the 25-year, 96-hour storm event within 14 days, please address the following:
 - a. Verify the stage-area input parameters assumed in the PONDS recovery analyses. The values currently assumed are inconsistent with those shown in the stage / storage calculations.
 - b. The design of the pond is based on total retention of the 25-year, 96-hour storm event. The volume of 13.36 ac-ft currently assumed in the PONDS recovery analysis provided; however, does not appear to be the entire runoff volume for this storm event. Accordingly, provide a revised recovery analysis, based on back to back storm events, demonstrating that the pond will not overtop. In addition, provide a revised stage-area-volume table for the pond that includes a cumulative volume column so that the pond capacity at varying stages may be easily verified, as part of your response.
 - c. The construction of a portion of the road and Pond 5 within Basin 5 will require the placement of fill in the 100-year flood plain for John's Lake. Insufficient information

Hartwood Marsh Road – Phase II

March 30, 2009

Page 3

was provided; however, to determine whether impacts to the 10-year floodplain will occur and whether compensating storage will be needed. Accordingly, please provide additional calculations and/or documentation demonstrating that the proposed work will not cause a net reduction in flood storage within the 10-year floodplain pursuant to Section 10.5, Applicant's Handbook: Management and Storage of Surface Waters (A.H.:MSSW).

Please be advised that compensating storage volume is based on the volume between the 10-year floodplain elevation and the seasonal high water table (SHWT) elevation. Accordingly, please verify the floodplain encroachment calculations and cross-sections for consistency with this criteria. Include supporting geotechnical information for the seasonal high water table elevation in the vicinity of the proposed compensating storage area, as part of your response.

Provide revised calculations and plans, as necessary. [40C-4.301(1)(a),(b),(c),(e),(i),(k); 40C-42.026(1), F.A.C.; Sections 10.3, 10.4, 10.5, 11.7, A.H.:MSSW]

3. In demonstrating that Pond 6 and Pond 7 will recover the required treatment volume within 72 hours and storage capacity for the 25-year, 96-hour storm event within 14 days, please address the following:
 - a. The seasonal high water table (SHWT) and base of aquifer (BOA) elevations of 98 feet and 97 feet, respectively, currently assumed in the recovery analyses for Pond 6 appear to be inconsistent with Soil Borings AB-P15 and AB-P16 located in proximity to the pond location. Based on the soil logs, it appears that the SHWT and BOA elevations are approximately 15 feet and 17.5 feet below grade, respectively. Because the existing grade within the footprint of the pond bottom is approximately 120 feet, on average, it appears that the SHWT and BOA elevations are approximately 105 feet and 102.5 feet, respectively, on average. Please provide revisions for consistency with the site specific information.
 - b. Please clarify the basin area for Pond 7. The water quality calculations were based on a basin area of 15.72 acres; however, the AdICPR volumetric analysis was based on a basin area of 14.11 acres. Provide revisions for consistency.
 - c. The SHWT and BOA elevations of 140 feet and 139 feet, respectively, currently assumed in the recovery analyses for Pond 7 appear to be inconsistent with Soil Boring AB-P19 located within the footprint of the pond bottom. Based on the soil log, it appears that the SHWT and BOA elevations are approximately 15 feet and 20 feet below grade, respectively. Accordingly, please verify the aquifer parameters currently assumed for consistency with the site specific information. In addition, please provide supporting geotechnical information for the unsaturated vertical infiltration and horizontal saturated hydraulic conductivity rates of 13.33 feet/day and 20 feet/day currently assumed. The geotechnical report provided, dated

September 6, 2007, did not include permeability information for Boring AB-P19; thus, the permeability rates assumed cannot be verified.

Provide revised calculations and plans, as necessary. [40C-4.301(1)(a),(b),(c),(e),(i),(k); 40C-42.026(1), F.A.C.; Sections 10.3, 10.4, 11.7, A.H.:MSSW]

4. Sheets 61-66 of the plans indicate that fill up to a depth of approximately 20 feet will be required to construct the road between Stations 173+00 and 200+00 through the sand mine area. Accordingly, please address the following:
 4. The Mine Section Dropoff Buffer details, shown on Sheet 21 of the plans, indicate that the road banks will have side slopes of 2:1 (horizontal: vertical) to match grade in the mine area. Please clarify how the steep side slopes will be stabilized. Provide details, as necessary.
 5. Provide sufficient grading information and details on the plans clarifying how the proposed Pond 3 contours will match grade in the mine area.
 - a. Amend the silt fencing locations, shown on Sheets 204-208 of the plans, to encompass all areas proposed for grading. The silt fencing, as shown, does not appear to encompass all work within the mine area.
 - b. Revise Page 2 of Section A of the application to reflect the correct project area for consistency with the limits of construction, as delineated by the silt fencing.
 - c. If the project area will exceed 100 acres in size, an Individual ERP will be required for the project and an additional application fee of \$3,000.00 will be needed. Provide the additional fee, as applicable

[40C-4.301(1)(i); 40C-42.025(1); 40C-4.900(1); 40C-1.603(5), F.A.C.]

5. The proposed retention system will be constructed on property not owned by the applicant. Accordingly, please provide sufficient legal authorization, as appropriate, prior to permit issuance for stormwater management systems which propose to utilize offsite areas to satisfy the requirements in subsection 40C-42.023(1), F.A.C. [40C-4.301(1)(i),(j); 40C-42.023; 40C-42.025(6), F.A.C.]
6. Please provide the following revisions, clarifications and information on the construction plans:
 - a. Provide an overflow device for each pond ensuring that pond overflow will be controlled and will not result in adverse impacts to adjacent property. Please include acceptable reinforcing measures in the design of the weir if an earthen overflow weir is proposed. Provide details, as necessary.

Hartwood Marsh Road – Phase II

March 30, 2009

Page 5

- b. The Section A-A detail for Pond 5, shown on Sheet 97 of the plans, indicates pond side slopes of 3:1 (horizontal: vertical). Please be advised that dry retention ponds designed to impound more than two feet of water shall be fenced or otherwise restricted from public access, or shall contain side slopes that are no steeper than 4:1 (horizontal: vertical). Accordingly, please provide fencing or a revised design that meets this criteria.

Provide revised sheets, as applicable. [40C-4.301(1)(i); 40C-42.025(3), F.A.C.]

7. Pond 5 is located next to a wetland delineated by SJRWMD Permit #4-069-95265-3. The edge of the wetland is less than 25 feet (in some cases less than 15 feet) at several locations along the northeastern portion of the pond. The current land use is a pine plantation with little disturbance from light, noise, dumping, etc. Removal of the trees and construction of the pond will introduce increase maintenance of the area that will secondarily impact the adjacent wetland. Please provide reasonable assurance that the proposed pond and activities associated with the pond will not adversely impact the adjacent wetland. If you cannot provide reasonable assurance that secondary impacts will not occur, please provide mitigation to offset the adverse impacts to the adjacent wetland. [40C-4-301(1); 40C4.302(1), F.A.C.]

In addition, the proposed project is located in the District's Lake Apopka Hydrologic Basin. Projects located within this special basin must not cause an increase in phosphorous load pursuant to Section 11.7, Applicant's Handbook: Management and Storage of Surface Waters (A.H.:MSSW). Because the retention system design was based on total retention of the 25-year, 96-hour storm event, and not on the results of a site-specific pollutant loading analysis for phosphorous, water level monitoring in the retention system will be required for 10 years following the construction of the project, pursuant to Section 11.7(b)(2), A.H.:MSSW. Please be advised of this additional monitoring requirement.

If the applicant wishes to dispute the necessity for any information requested on an application form or in a letter requesting additional information, he or she may, pursuant to section 373.4141, Florida Statutes, request that District staff process the application without the requested information. If the applicant is then unsatisfied with the District's decision regarding issuance or denial of the application, the applicant may request a section 120.569, Florida Statutes, hearing pursuant to Chapter 28-106 and section 40C-1.1007, F.A.C.

Please be advised, pursuant to subsection 40C-1.1008, F.A.C., the applicant shall have 120 days from receipt of a request for additional information regarding a permit or license application undergoing review by the District to submit that information to the District. If an applicant requires more than 120 days in which to complete an application, the applicant may notify the District in writing of the circumstances and for good cause shown, the application shall be held in active status for additional periods commensurate with the good cause shown. Any application which has not been completed by the applicant within the given time period following a request for additional information by the District shall be subject to denial. Denial of an application due to failure to submit requested additional information shall be a denial without prejudice to the applicant's right to file a new application.

Hartwood Marsh Road – Phase II

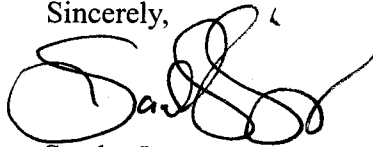
March 30, 2009

Page 6

In addition, no construction shall begin on the proposed project until a permit is issued by the St. Johns River Water Management District. This is pursuant to subsection 40C-4.041(1), F.A.C., which states in relevant part, "unless expressly exempt an individual or general environmental resource permit must be obtained from the District under Chapters 40C-4, 40C-40, 40C-42, 40C-44 or 40C-400, F.A.C. prior to the construction, alteration, operation, maintenance, removal or abandonment of any dam, impoundment, reservoir, appurtenant work or works...."

If you should have questions, please do not hesitate to call us at (407) 659-4800.

Sincerely,



Sandra J. Joiner, P.E.
Department of Water Resources



Steve Williams, Regulatory Scientist
Department of Water Resources

cc: RIM/RAIL(1), Margie Cook

Melinda S. Fischi, P.E., HNTB Corporation
300 Primera Blvd., Suite 200, Lake Mary, FL 32746