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December 23, 2020

Angelica S. Hoffert, P.E.
Section Leader, Environmental Resource Bureau
South Florida Water Management District
2301 McGregor Blvd.
Fort Myers, Florida 33901d

Re: **Collier County Comprehensive Watershed Improvement Project**
Request for Additional Information – Responses
Application No. 200829-4157 Collier County

Dear Ms. Hoffert:

We are in receipt of the September 30, 2020 letter requesting additional information on the subject application. The requests from the district pertaining to the previously submitted version of the subject application have been presented in plain text below; our responses have been presented in **bold text**.

1. A site inspection with District staff has been tentatively scheduled for October 2020 to review current field conditions for the newly proposed access road area. Depending on the results of the site inspection, additional information may be necessary in accordance with Section 10.0, Vol. I. Please note that the proposed wetland functional assessment and corresponding mitigation will also be reviewed at this time and that the functional assessment and UMAM scores will not be finalized until after the site visit takes place.

A site inspection with Justin Hojnacki was conducted on October 21, 2020. While Justin concurred with the proposed UMAM scores, he suggested adjusting the mitigation area such that it will encompass more monitoring wells. As a result, the mitigation area and accompanying UMAM scores have been revised. See Attachment 10: Revised UMAM Analysis. A subsequent site inspection with Kim McNeely was conducted on December 16, 2020, though elevated water levels prevented access to much of the site. A follow-up site inspection with Kim McNeely has been scheduled for January 20, 2021.

Note: Due to prolonged elevated waters at the proposed Access Road location, a field investigation has not been fully conducted for this location and FLUCCS information largely relies on aerial interpretation. Following field investigations to be conducted as soon as conditions allow (tentatively mid-January), the FLUCCS information for the access road will be finalized an any final revisions will be made to the UMAM analysis at that time. However, the UMAM submitted with this RAI represents the highest quality estimate and any revisions would result in a reduction in mitigation.

2. Please note that the application fee of $13,125 that was paid by the applicant under Application No. 200214-2805 has been applied to this application (200829-4157). No additional application fees are required at this time (Rule 62-330.071, F.A.C.).

Acknowledged.

3. The submitted documents do not provide the required reasonable assurances needed by Staff to determine if the proposed activity meets the conditions for issuance of a permit in accordance with Rules 63-330.301 and 62-330.302, F.A.C., and the Applicant's Handbook. Applications for a conceptual approval permit are also evaluated for the information required in either Rule 62-330.055 or 62-330.056, F.A.C., as applicable. Additional comments may be required upon receipt of additional documents and a complete application. [Section 5.5.3.1, Vol. I]

Acknowledged.

4. Pursuant to Application No. 200427-3318, Permit No. 11-103609-P for the Collier County Sports Complex and Event Center, it appears that direct and/or secondary wetland impacts may have already been assessed and mitigation provided for the areas including Impact 1, Impact 2, and potentially Impact 3 proposed under this project. Please overlay the wetland impacts authorized under Application No. 200427-3318 onto an impact map that depicts proposed Impacts 1-3 and compare their locations to confirm if any of these impacts have already been assessed and mitigated for. Please revise the functional assessment and associated mitigation accordingly (Sections 10.2.1, 10.2.7, and 10.3, Vol. I).

Please see Figure 32 provided in Attachment 3: Revised Application Figures for the requested map. As depicted in Figure 32, no secondary impacts have been previously accounted for. However, portions of the direct impacts proposed for this project have previously been mitigated for during permitting for the Collier County Sports Complex and Event Center.

For this project, impact areas have been split to represent those areas not previously assessed and mitigated for, those areas previously assessed and mitigated for as a direct impact, and those areas previously assessed and mitigated for as a secondary impact. Areas previously assessed and mitigated for as a direct impact have been removed from the UMAM analysis. UMAM scores for areas previously assessed and mitigated for as a secondary impact have had the starting UMAM scores adjusted to reflect the final UMAM scores identified for those corresponding areas during permitting for the Collier County Sports Complex and Event Center. UMAM scores for areas not previously assessed have not been adjusted, only associated acreages. Please see Attachment 10: Revised UMAM Analysis.

Note: The proposed mitigation area has been revised to account for both the updated impact acreages and the need for additional monitoring wells that initially proposed.

5. Please revise the Uniform Mitigation Assessment Method (UMAM) Summary table to include the appropriate FLUCCS Codes within the assessment area descriptions (Section 10.3, Vol. I).

Please see Attachment 10: Revised UMAM Analysis for the requested information.

6. Please provide the following regarding the proposed mitigation area:

- Please provide consistent information regarding the total acreage of wetland mitigation proposed for the project. The wetland mitigation map depicts 527.70 acres; however, the UMAM information indicates a total of 615.90 acres. Please revise the applicable maps and/or UMAM sheets (Section 10.3, Vol. I).

Revised as requested. Please see Attachment 10: Revised UMAM Analysis.

- Please provide proof of ownership for the proposed mitigation area. Based on the submitted information and discussion with District staff, a conservation easement will not be required if the mitigation area is located entirely on state-owned lands. If the mitigation area is not owned by the State of Florida, the applicant must provide reasonable assurances that the proposed preservation/mitigation areas will be legally protected in perpetuity (e.g. a conservation easement will be required) (Section 704.06, F.S. and 10.3.8, Vol. I).

  The proposed mitigation area is located entirely on state-owned lands. See Attachment 17: Mitigation Area Property Ownership Details for proof of ownership.

- Please provide a mitigation, maintenance, and monitoring plan and associated work schedule specifically for the proposed mitigation area (Section 10.3.3.2, Vol. I). The information provided in the submittal covers the entire watershed and is not specific to the mitigation area. The plan should include the proposed success criteria that reflects the one- point lift in hydrology included in the UMAM scores. In addition, please include more monitoring wells across the mitigation area than the three currently proposed.

  The mitigation, maintenance, and monitoring plan will be provided as soon as possible after the mitigation area has been finalized. As stated above, following field investigations to be conducted as soon as conditions allow (tentatively mid-January), the FLUCCS information for the access road will be finalized an any final revisions will be made to the UMAM analysis at that time. At that time, the mitigation area size and boundaries will be finalized.

  The mitigation, maintenance, and monitoring plan and associated work schedule will specifically address the proposed mitigation area. The plan will include the proposed success criteria that reflects the one- point lift in hydrology included in the UMAM scores. Additionally, the proposed mitigation areas include a total of 6 wells (twice that currently proposed).

- Please identify the appropriate entity to operate the mitigation area into perpetuity as it appears that the mitigation area is owned by the State of Florida, but the applicant is Collier County. If the State of Florida will operate and maintain the mitigation area, it may be appropriate to have the State of Florida as a co-permittee.

  The county is coordinating with the Florida Forestry Service and Florida Department of Environmental Protection to determine a legally appropriate and acceptable method of ensuring long term management and mitigation within state-owned lands.

7. Please provide reasonable assurances that the proposed project will not jeopardize the abundance and diversity of wildlife and listed species and their habitats pursuant to the Environmental Criteria in Section 10.2.2, Vol. I. Please demonstrate that the proposed project will not adversely affect/jeopardize listed species. Please provide management plans for any affected species, and provide

any correspondence received from the Florida Fish and Wildlife Conservation Commission (FWC) and the U.S. Fish and Wildlife Service (USFWS). District staff acknowledges the copy of the Draft Biological Assessment provided under this submittal, but correspondence from FWC has yet to be received.

Per the RAI response package previously submitted with the permit application as Attachment 16 please see the Draft Biological Assessment (BA) as also submitted to the USACE and USFWS for the requested information (Permit Application Attachment 15). The Draft BA has also been submitted to FFS. Coordination with these agencies is ongoing.

The BA, originally submitted to USFWS and USACE in April, was revised prior to submittal to SFWMD to include the results of the Bonneted Bat surveys done for the majority of the impact areas and to include information regarding the proposed access road. Note: A bonneted bat survey and site visit has not yet been conducted for the proposed access road due to prolonged elevated water levels, only desktop investigations. These field investigations will be conducted as soon as conditions allow (tentatively mid-January).

See the USFWS pre-application meeting notes for a summary of the pre-application meeting held with Kim Dryden, USFWS on December 5, 2019. This attachment has been provided within the permit application package as Attachment 9, Appendix 2.

Correspondence from FWC was received on October 21, 2020. Responses are included as Attachment 18.

8. The Picayune Strand Restoration Project (PSRP) is located east of the proposed project. The PSRP is a project component of the Comprehensive Everglades Restoration Plan and is permitted under the Florida Department of Environmental Protection Comprehensive Everglades Restoration Plan Regulation Act (CERPRA) Permit No: (FDEP File No. 0221670-015) issued to SFWMD for operations of the pump stations. The South Florida Water Management District is the local sponsor of the PSRP. The U.S. Army Corps of Engineers is the federal sponsor and the USACE is currently constructing remaining features of PSRP. Please ensure the proposed project does not adversely affect the construction and operations of the PSRP project. [Rule 62-330, F.A.C.]

Please see Attachment 19: Section 408 Memorandum. Per Attachment 19, the Engineering Division of the US Army Corps of Engineers does not object to issuance of the permit for Collier County CWIP as the proposed project will not impact the federal project.

9. Please provide assurances the resulting additional discharges to the upstream canal system will not impact the design capacity of the Faka Union Pump Station and operational criteria. [Rule 62-330, F.A.C.]

Please see Attachment 19: Section 408 Memorandum. Per Attachment 19, the Engineering Division of the US Army Corps of Engineers does not object to issuance of the permit for Collier County CWIP as the proposed project will not impact the federal project.

10. Please demonstrate that the project will not have an impact on any historical or cultural resources. Correspondence from the State Division of Historical Resources (DHR) was received on April 8,

2020 for Application No. 200414-2805 and noted twenty-four (24) recorded archaeological sites within the project area. They recommended a professional cultural resources assessment survey (CRAS) for the project area. In addition, their office noted that the referenced project entails ground-disturbing activities and changes in hydrology within the Picayune Strand State Forest. As the proposed project will occur on state lands, it will require a 1A-32 permit. District staff acknowledges that the applicant is currently working with a Cultural Resources Management (CRM) firm to draft the survey protocol, which will be approved by all appropriate agencies prior to conducting the investigation. Per the DHR letter, a meeting has been requested between the applicant, the applicant's CRM firm, DHR, and the permitting agencies prior to commencing the investigation, at which point all applicable parties will finalize the survey protocol in order to ensure no additional investigations are needed. Be advised that additional issues may need to be addressed and/or resolved as a result of comments from the DHR, and that this application will not be deemed complete without the approval from DHR (Section 10.2.3.6, Vol. I).

Per the RAI response package previously submitted with the permit application as Attachment 16, Florida Department of Historic Resources (DHR) has requested a cultural resources assessment survey (CRAS) be conducted over the entire project footprint per a letter dated April 8, 2020. Collier County is currently working with a Cultural Resources Management (CRM) firm to draft the survey protocol, which will be approved by all appropriate agencies prior to conducting the investigation.

At this time, Collier County is coordinating with DHR to define the necessary field sampling to ensure avoidance, minimization, and/or mitigation for unavoidable impacts of the CWIP project to cultural/historic resources. The necessary activities on areas within the construction footprints (ground disturbing areas) and for high-probability areas (of encountering cultural resources) have been defined. The necessary field survey work for low-probability areas of the project is under evaluation. Collier County has provided DHR all requested information regarding the project and project hydrologic effects, which it is now reviewing in order to make the necessary recommendations.

11. According to the application documents, Collier County will submit evidence of real property interest with each construction permit application. Please explain how construction will be phased so that the construction activities of each phase will not adversely impact property that is not yet owned by Collier County. [Section 4.2.3(d), Vol. I]

The county is working with landowners to obtain real property interest for all properties within the project area as described in the application prior to project construction. That said, the county has the authority to pursue real property interest through eminent domain should other means of resolution not be available. Operation of the project will not occur until all structures have been constructed and all properties within the project area are owned by either the state or county.

12. As indicated in Section A of the submitted application form, Conceptual Approval of proposed works, activities, and/or a stormwater management system which includes construction or alteration of a stormwater management system serving residential, commercial, transportation, industrial, agricultural, or other land uses, requires the information requested in Section E. Staff acknowledges the August 28, 2020 letter submitted by the applicant which provides responses to comments from staff in the March 13, 2020 RAI letter issued for the project during the review of the

previous application (200214-2805) which was subsequently withdrawn. Please provide the construction level detailed plans as requested in the previous RAI letter

Collier County has coordinated extensively with SFWMD staff following issuance of this RAI. The application materials have been revised to provide the level of detail agreed upon during that coordination. See Attachment 1: Revised Permit Drawings.

13. The submitted plans and drainage calculations were not signed and sealed by a registered professional per electronic signature requirements. Along with the scanned copy of the physical signed and sealed registered professional signature document, the electronically signed and sealed engineering documents must include the required license information and text indicating an electronic signature is being used. Please also provide water quality calculations signed and sealed by a registered professional. Alternatively, third-party digital signatures are acceptable, or one set of physical signed and sealed plans and calculations can be submitted via regular mail. [Section 4.2.3(b), Vol. I]

See Attachment 1: Revised Permit Drawings and Attachment 7, Hydrologic and Hydraulic Narrative. The calculations and drawings have been digitally signed and sealed. Water Quality calculations, found in Section 1 & Section 2 of Attachment 13: Revised Water Quality analysis, are also signed in sealed. Section 3 uses those data in a model of ecosystem assimilation of nutrients and contaminants and is not associated with calculation of water quality, and therefore not signed and sealed.

14. Provide clear construction level detailed plans for the system. The plans must be signed and sealed by an appropriate registered professional as required by law. These plans should include all appropriate information including the following:

Collier County has coordinated extensively with SFWMD staff following issuance of this RAI. The application materials have been revised to provide the level of detail agreed upon during that coordination. See Attachment 1: Revised Permit Drawings.

A. Project area boundary and total area, including distances and orientation from roads or other landmark. [Form 62-330.060(1)2.1. a.]

Project area boundaries have been provided on all applicable figures within Attachment 1. The construction footprints associated with the project encompass 89.74 acres. See the table below for a tabular breakdown by project location. The project also anticipates the rehydration of approximately 9,000 acres of forested wetlands within the PSSF.

Project Area	Acreage
North Belle Meade Flowway	11.109
South Belle Meade Flowway	29.588
Sanders Boulevard Property	3.838
Pedestrian Path	0.401
Access Road	6.250
Sabal Palm Road & Triple G Loop Improvements	38.55
Total	***89.74***

B. Existing topography extending at least 100 feet off the project area. All topography shall include location and description of benchmarks, reference to NGVD 1929 or NAVD 1988 along with the conversion factor. [Form 62-330.060(1)2.1. b.]

C. Proposed site plan with acreage, including the following: [Form 62-330.060(1)2.1. c.]
- A plan view of proposed development, including impervious surfaces and water management areas; - land cover and natural communities; wetlands and other surface waters;
- undisturbed uplands;
- aquatic communities;
- proposed buffers;
- proposed impacts to wetlands and other surface waters, and any proposed connections/outfalls to other surface waters or wetlands, (if applicable); and
- onsite wetland mitigation areas.

D. Paving, Grading, and Drainage Information, which includes, but not necessarily limited to, the following: [Form 62-330.060(1)2.1.d.]
- Existing topography;
- Boundaries of wetlands and other surface waters and upland buffers;
- Plan view of proposed development;
- Proposed elevations and/or profiles, including:
  - roadway, parking, and pavement grades;
  - floor slabs, walkways, and other paved surfaces;
  - earthwork grades for pervious landscaped areas;
  - perimeter site grading, tying back into existing grades.
- Location of all water management areas, including elevations, dimensions, side slopes, and design water depths;
- Location, size, and invert elevations of existing and proposed stormwater conveyance systems;
- Vegetative cover plan for all on-site and off-site earth surfaces disturbed by construction; and
- Rights-of-way and easements for the system, including all on-site and off-site areas to be reserved for water management purposes (including access), and rights-of-way and easements for the existing drainage system, if any.

E. Stormwater detail information, including but not necessarily limited to, the following: [Form 62-330.060(1)2.1. e.]
- Cross section of all stormwater management areas, including elevations, dimensions, side slopes, and proposed stabilization measures (with location of the cross section(s) shown on the corresponding plan view);
- Detail of all proposed control structures, including elevations, dimensions, and skimmer, where applicable; and
- Details of proposed stormwater management systems, such as underdrains, exfiltration trenches, vaults, and other proposed Best Management Practices (BMPs).

F. Location and description of any nearby existing offsite features (such as wetland and other surface waters, stormwater management ponds, and buildings or other structures) which might be affected by or affect the proposed construction or development. [Form 62-330.060(1)2.1. f, F.A.C.]

15. Provide pre-development and post-development drainage map(s) that include drainage patterns and basin boundaries with acreage served by each hydraulically separate system, showing the direction of flows, including any off-site runoff being routed through or around the system; topographic information; and connections between wetlands and other surface waters. [Form 62-330.060(1)1.1. a.]

Per the RAI response package previously submitted with the permit application as Attachment 16 because this is not an application for new development, there is no "post-development" condition. See Appendix 4, Permit Application Attachment 16 for an exhibit showing existing overall drainage basins, which will not change as a result of this project. The detailed drainage basin boundary for the section of I-75 that will be treated within the proposed treatment flow-way south of I-75 is also included in Appendix 4.

16. Please provide paving, grading and drainage plans and details, including details of all stormwater management related structures and perimeter berm cross sections. The plans are to be signed and sealed by an applicable State of Florida registered Professional as required by law. [Section 4.2.3(b), Vol. I]

Collier County has coordinated extensively with SFWMD staff following issuance of this RAI. The application materials have been revised to provide the level of detail agreed upon during that coordination. See Attachment 1: Revised Permit Drawings. The plans have been digitally signed and sealed.

17. Provide calculations and documentations demonstrating that the project, as proposed, meets the applicable design criteria as indicated in the District's Applicant's Handbook, Vol. II. Typically, the information would include, at a minimum, but is not necessarily be limited to, the following:

Collier County has coordinated extensively with SFWMD staff following issuance of this RAI. The application materials have been revised to provide the level of detail agreed upon during that coordination. See Attachment 7: Revised Hydrologic and Hydraulic Modeling Narrative.

Per conversations with Jon Wadas, SFWMD, this comment (parts A, B, and C) was a "catch-all" to cover any instances where new paved roads are proposed. Because no new paved roads are proposed, these comments do not apply. All model input and output files were provided to the Fort Myers SFWMD office in May 2020.

A. For projects requiring pre-development analysis, provide an analysis of the pre-development peak rate of discharge and / or volume of runoff, for all design storm events. Account for all onsite depressional storage and offsite contributing area. Please refer to the Applicant's Handbook, Vol. II for the design storm events that apply to the project. [Form 62-330.060(1)1.3. a.]

B. Provide an analysis of the post-development peak rate of discharge for the design storm events. Account for all onsite storage and offsite contributing area. These analyses should include:

- Runoff characteristics, including area, runoff curve number or runoff coefficient, and time of concentration for each drainage basins in the pre-development and post-development condition;
- Design storms used including rainfall depth, duration, frequency, and distribution; - Runoff hydrograph(s) for each drainage basin, for all required design storm event(s);
- Stage-storage computations for any area such as a reservoir, closed basin, detention area, or channel, used in storage routing;
- Stage-discharge computations for any storage areas at a selected control point, such as control structure or natural restriction;
- Flood routings through on-site conveyance and storage areas;
- Water surface profiles in the primary drainage system for each required design storm event(s);
- Runoff peak rates and volumes discharged from the site for each required design storm event(s);
- Design tailwater elevation(s) for each storm event at all points of discharge (include - Pump specifications and operating curves for range of possible operating conditions (if used in system).

C. Provide a description of the engineering methodology, assumptions and references for the parameters listed above, and a copy of all such computations, engineering plans, and specifications used to analyze the system. If a computer program is used for the analysis, provide the name of the program, input and output data, justification for model selection, and, if necessary, a description of the program. [Form 62-330.060(1)1.3. b.]

18. Provide a construction schedule, and a description of construction techniques, sequencing, staging and equipment. This information should include, as applicable, the following:

Collier County has coordinated extensively with SFWMD staff following issuance of this RAI. The application materials have been revised to provide the level of detail agreed upon during that coordination.

1. Access and staging of equipment; [Form 62-330.060(1)3. a, F.A.C.]

   Per the RAI response package previously submitted with the permit application as Attachment 16 information regarding access to each of the project construction areas has been included in Section A, Part 1 (I), as provided in the permit application.

   While a stabilized parking area has been proposed for the South Belle Meade Flowway and is included on the permit drawings (Attachment 1, Figure 9), staging areas for the other project construction areas has not been determined at this time. Staging areas will be provided when Collier County submits an application for project construction.

   At the present time, it is anticipated that permanent access to the pump station south of I-75 will be accessed via a proposed dirt or gravel (pervious) road starting at the corner of Beck Blvd and Benfield Road, and running due east along the south bank of the I-75 south canal. Portions of this dirt road will follow the alignment of an existing jeep trail through the forest as shown on the revised permit drawings (Attachment 1, Figure 7).

2. Location and details of the erosion, sediment, and turbidity control measures to be implemented during each phase of construction and all permanent control measures to be implemented in post-development conditions. [Form 62-330.060(1)3. b, F.A.C.]

   See Attachment 1: Revised Permit Drawings for the requested information.

3. The location of disposal site(s) for any excavated material, including temporary and permanent disposal sites. [Form 62-330.060(1)3c, F.A.C.]

   Suitable granular excavated material will be used in construction of maintenance and access berms. Excavated material structurally unsuitable for berm excavation will most likely be used as cover in the Collier County Landfill.

4. Methods for transporting equipment and materials to and from the work site. [Form 62-330.060(1)3. f, F.A.C.]

   Per the RAI response package previously submitted with the permit application as Attachment 16 equipment and materials will be transported to and from the work site via truck.

19. Please revise the submitted plans to include a sediment and erosion control plan and a turbidity control plan that specifies the location (in plan view and on cross sections), installation, and maintenance of best management practices to prevent and control erosion and sediment loss at a

construction site as well as reasonable assurance that water quality standards are not being violated during construction of the project. [Section 11, Vol. I]

See Attachment 1: Revised Permit Drawings for the requested information.

20. Please provide a stand-alone report or other document that includes specific details for maintenance and operation of the stormwater management system. The maintenance and operation report should address all aspects of the project from the maintenance of pump stations and conveyances at the north end of the North Belle Meade Flow-way to Weir 2 discharging to U.S. 41 (Tamiami Trail) to a perimeter berm inspection and maintenance program in between. Please provide a map to aid the operation and maintenance program review and implementation as well as a matrix or table of all operational scenarios for the pumps and gate structures for the specific conditions for operations such as water levels at the various locations. Also provide a decision point in the operation matrix that takes into account canal water levels and year to date annual discharges at HC1 to ensure no adverse impacts to flood control level of service or the amount of water discharged from HC1 is no more than historical, is appropriate for that time of year, accounts for antecedent conditions, and anticipated hydrologic conditions based on forecasts.[Form 62-330.060(1)4, F.A.C.]

See Attachment 12: Revised Operations and Management Plan for the requested information.

21. Please revise the plans included in Attachment 1: Permit drawings, or provide clarifications, to address the following: [Form 62-330.060(1),2, F.A.C.]

Collier County has coordinated extensively with SFWMD staff following issuance of this RAI. The application materials have been revised to provide the level of detail agreed upon during that coordination. See Attachment 1: Revised Permit Drawings for the requested information.

1. Provide unique identifications (consistent with all other supporting documents) for all existing and proposed drainage structures and conveyances.

   Acknowledged.

2. Depict and label (with acreage) the project area, permit area, and total land area boundaries on all plans views, as applicable.

   Per the RAI response package previously submitted with the permit application as Attachment 16 project area boundaries have been included on all plan views, as applicable. Acreages for each of the project construction areas has been included in the table above for 14(A).

3. Depict and label the boundaries of the various forests, preserves, developments, agricultural lands, conservation and mitigation areas, and other areas discussed in the other application documents on Figure 2.

Per the RAI response package previously submitted with the permit application as Attachment 16 this information has been included within Attachment 3 as Figure 31.

4. Provide construction level details of the "Proposed Roadway (By Others)" shown in Figures 3, 4, and 5.

   The "Proposed Roadway (By Others)" has been permitted separately and is not part of this project (SFWMD Permit No. 11-103609-P). Therefore, this information has not be included within the permit drawings for this project.

5. Provide construction level details for the pump stations, intake pipes, and discharge pipes on shown on Figures 4, 9, and 10.

   See Attachment 1: Revised Permit Drawings for the requested information.

6. Provide existing topography to show how perimeter site grading is tying back into existing grades on Figures 8, 10, 12, 13, 14, 15, 16, and 17.

   See Attachment 1: Revised Permit Drawings for the requested information.

7. Provide construction level details for the 4'x6' discharge box culvert shown on Figure 5.

   See Attachment 1: Revised Permit Drawings for the requested information. The box culvert will be constructed per FDOT Standard Index drawings.

8. Revise the cross sections on Figure 6 to show construction level details of the "Proposed Roadway by Others" and reconstruction of White Lake Blvd.

   Per the RAI response package previously submitted with the permit application as Attachment 16 the "Proposed Roadway (By Others)" has been permitted separately and is not part of this project. Therefore, this information will not be included within the permit drawings for this project. Refer to Individual Environmental Resource Permit No. 11-103609-P Issued July 20, 2020.

   See Attachment 1: Revised Permit Drawings for the requested information regarding the reconstruction of White Lake Blvd.

9. Revise the cross sections to include WSWT elevation or control elevations, vegetative cover, right-of-ways, easements, limits of construction, erosion control measures, and property boundaries, as applicable.

   See Attachment 1: Revised Permit Drawings for the requested information.

10. Provide construction level details for the "Discharge Culvert" on Figure 6.

    See Attachment 1: Revised Permit Drawings for the requested information.

11. Provide construction level details for the "Proposed Underflow Gate" and "New Gravel Road" on Figure 7.

    See Attachment 1: Revised Permit Drawings for the requested information.

12. Provide cross sections with sufficient existing and proposed details of all construction and modifications in the I-75 north and south canals shown on Figure 7.

    See Attachment 1: Revised Permit Drawings for the requested information.

13. Provide construction level details and cross sections for the reconstructed horse trails and horse trail crossings shown on Figure 8.

    The horse trails are not part of the proposed project and have been removed from the drawings as agreed between Collier County and SFWMD.

14. Provide additional construction details for access of personnel and equipment to construct, operate and maintain the spreader swale and concrete spreader weirs on Figure 8.

    See Attachment 1: Revised Permit Drawings for the requested information.

15. Provide a cross section with construction level details of South Belle Meade Pump Station intake pipes in the I-75 South Canal shown on Figures 8 and 9.

    See Attachment 1: Revised Permit Drawings for the requested information.

16. Provide construction level details and cross sections for the culvert crossing for Sabal Palm Road shown on Figure 10.

    See Attachment 1: Revised Permit Drawings for the requested information. The project will rely on existing culvert crossings.

17. Identify the locations of all discharge structures in the area of the proposed improvements shown on Figure 11 and 12 that may be affected by the proposed project and include reference to Permit Nos. authorizing the discharge structures.

    The project will not affect existing discharge structures. Refer to Attachment 7: Revised Hydrologic and Hydraulic Modeling Narrative for details.

18. Provide construction level details and cross section(s) for the Pedestrian Path shown on Figure 12.

See Attachment 1: Revised Permit Drawings for the requested information.

19. Provide construction level details and cross sections for Weir 1, Weir 2, and Weir 3 shown on Figure 12.

See Attachment 1: Revised Permit Drawings for the requested information.

20. Demonstrate all perimeter containment berms are constructed on lands owned or controlled by the operating entity.

Per the RAI response package previously submitted with the permit application as Attachment 16 perimeter containment berms, such as that shown for the Sanders Boulevard property, are no longer proposed. The County is working with all affected property owners to acquire the necessary rights to properties that are not currently owned or controlled by the state/county through the TDR process outlines above and in Attachment 6: Revised Private Landowner Coordination as submitted with the initial conceptual permit application package.

21. Provide the minimum perimeter berm elevations of adjacent developments, with reference to the Permit No., on the cross sections, where proposed works abut an existing SWM system.

See attachment 1, Figures 13 through 16 for the Naples Reserve and Winding Cypress developments. The perimeter berm elevations were referenced from the permitted construction drawings for that development.

22. Regarding Attachment 2: Project Overview, please address the following: [Form 62-330.060(1).1.2, F.A.C.]

See Attachment 2: Revised Project Overview for the requested information. The revised project overview has been digitally signed and sealed.

1. Sign and seal the document.
2. Provide a summary of the nutrient loading calculations methods and results.
3. Provide naming and identification of structures, pump stations, and areas or locations consistent with the plans and other documents.

23. Regarding Attachment 3: Application Figures, please address the following: [Form 62-330.060(1),2, F.A.C.]

See Attachment 3: Revised Application Figures for the requested information. Note: Perimeter containment berms, such as that shown for the Sanders Boulevard property, are no longer proposed and as such the corresponding figures have been removed from the figure set. That said, the applicant

is currently in the process of revising those attachments that were not revised as part of this RAI response package to remove impacts associated with the Sanders Blvd property. They will be submitted as soon as possible.

1. Please clarify the indicated proposed construction footprint on the Sanders Blvd. Property in Attachment 3.
2. Please indicate the proposed construction footprint of the Sanders Blvd. and Triple G Loop improvements in Attachment 3.
3. Please add acreages to the boundaries shown on Figures 29 and 31 of Attachment 3 to aid in the review of the project.

24. Regarding Attachment 7: Hydrologic and Hydraulic Modeling Narrative, please address the following: [Form 62-330.060(1).1.2, F.A.C.]

1. Provide input and output reports for the models.

   Per the RAI response package previously submitted with the permit application as Attachment 16 model files have been shipped on 5/8/2020 in a hard drive (Address: SOUTH FLORIDA WATER MGT. DIST 2301 MCGREGOR BLVD. FORT MYERS, FL 339013353 US). The delivery confirmation was received on 05/11/2020.

2. Provide a node diagram(s) with all basins, nodes, links, or other model elements that include identifications that correspond to the proposed plans and other documents.

   The MIKE SHE model has a 2-D overland flow model and does not rely on basins. Separated overland flow areas and 1-D Node locations are provided in Attachment 7.

3. Please clarify the state of the pumps and operable gate structures in the lead up to and during the analysis of the design storm events.

   This is discussed in Attachment 12: Revised Operations and Management Plan and Attachment 7: Revised Hydrologic and Hydraulic Narrative. Design storm events included the higher antecedent surface water and groundwater levels expected from the forest rehydration. Pumps were simulated to be turned off at the start of the design storm event. The operable structure in Henderson Creek will be fully opened whenever the pumps are off.

4. Please provide the 2-year, 5-year, and 10-year design storm conditions with and without the proposed project.

   Please refer to the results of the 10-year continuous simulation in Attachment 7. Any information that can be gleaned from the requested design storm results can also be inferred from the long-term model results.

5. The report shows an increase in flooding depth over Sabal Palm Road during the 100- and 25-year storms. Please provide the flooding depths changes in 2-, 5-, and 10-year storms. How will this increase in flooding depth be mitigated with proposed project?

   Per the RAI response package previously submitted with the permit application as Attachment 16 the County has spoken with the Florida Forestry Service and is proposing to elevate Sabal Palm Road by approximately 2", which would offset the increase in flood depth. This was added to the conceptual design drawings (Attachment 1).

25. Regarding Attachment 13: Water Quality Analysis, please address the following: [Form 62-330.060(1).1.2, F.A.C.]

1. Please provide assurances the Average EMC Values used in the water quality analysis are representative of the actual site conditions. Many of the highways noted in this table are in higher density urban areas and may not be representative of the I-75 corridor. Additionally, data within this table are over 20 to almost 40 years old. Based on growth in the areas noted, are values shown in Table 6 different today?

   See Attachment 13: Revised Water Quality Analysis for the requested information.

2. Clarify whether the nutrient data presented represents a snapshot or does it include post-storm events?

   See Attachment 13: Revised Water Quality Analysis for the requested information.

3. How will the added nutrient load affect the ecosystem in the project area in terms of plant diversity and animal habitat?

   See Attachment 13: Revised Water Quality Analysis for the requested information.

4. Given growth in the areas highlighted in Table 6, please provide assurances that the project adequately addresses the water quality of discharges entering the downstream receiving waterbodies.

   See Attachment 13: Revised Water Quality Analysis for the requested information.

5. The report indicates that the detention area must remain wet in order to be operational. During times of drought, what will the impact be to this detention

pond? Will rehydration of the area be sufficient in order to bring effectiveness back to within operating range, or will other maintenance be needed prior to discharge?

Water flows through the detention area only while the pumps are operating. The system operates only when the discharge of GGC at the withdrawal point meets minimum requirements outlined in the Hydrologic and Hydraulic Modeling Narrative provided as Attachment 7 to the permit application. No water flows when the pumps are not running. Therefore, all water that enters the Picayune Strand State Forest will receive treatment in the detention area.

6. Provide any modeling conducted to review the impacts of influent nutrient loads to the proposed project?

See Attachment 13: Revised Water Quality Analysis for the requested information.

7. Has an analysis been performed on the potential contaminants from the landfill site that may enter the project area through groundwater and surface water? Please provide a water quality analysis for other potential contaminants in addition to the nutrient loading calculation.

Per the RAI response package previously submitted with the permit application as Attachment 16 the lined landfill and the stormwater treatment system that captures the runoff from that landfill have been authorized by the State of Florida (Permit No: 11-0202438-001 through -006). The water discharged from the treatment system meets Class III freshwater standards. We assume that the treatment system remains in compliance with the authorizations. See below for a detailed description of the stormwater treatment within the landfill per specific condition 4(a) within the original permit (Permit No: 11-0202438-001) and all subsequent modifications:

Water quality treatment is provided by two means. First, stormwater runoff from the existing and proposed landfill cells (not to include any leachate) is collected and routed to the landfill perimeter ditch located along the base of the landfill. The landfill drainage system, as permitted under the Solid Waste Permit, consists of a system of sheet flow, intercepting swales, down chute pipes and down chute receiving structures, which discharge into the perimeter ditch. This perimeter ditch provides dry retention/detention pretreatment for water quality of the stormwater runoff before discharging to the surface water detention pond or to one of the two cypress preserves.

Secondly, stormwater runoff that discharges from the landfill perimeter ditch into the Surface Water Detention Pond (Pond) receives the next step in the treatment train by wet detention. Discharge from the Pond is through the Discharge Structure to the I-75 drainage ditch and eventually to the Henderson Creek Canal.

The balance of stormwater runoff, which is discharged from the landfill perimeter ditch, enters one of the adjacent Cypress Preserves (onsite wetlands). No surface water that has not been treated for water quality is discharged to the adjacent onsite wetlands. There is no proposed direct discharge from the Preserve areas into the Surface Water Detention Pond for the 25-year, 3-day design storm event. This provides further treatment by retention.

8. The roadway analysis only looked at TN, TP, and TSS, but if roadway water is to be included in the water quality analysis, other constituents should also be evaluated for potential impact to the downstream areas of the project.

See Attachment 13: Revised Water Quality Analysis for the requested information.

26. Regarding the North Belle Meade Flow-way, please revise the plans to include details of the roadway authorized under Permit No. 11-103609-P. It appears this permit also authorizes a roadway would cross the proposed flow-way and it is unclear how this will be addressed. Please also provide additional details in the plans to show how access, during construction and upon completion of the project, will be provided for operation and maintenance. The submitted plans also indicate a proposed roadway by others on the southern part of the North Belle Meade Flow-way providing a connection to White Lake Blvd on the remaining roadway that is not authorized under another permit. Please revise the plans to provide construction level details for the remaining portion of the roadway and submit additional documentation, such as calculations and modeling, to provide assurances District criteria contained in the Applicant's Handbook Vol. II is met. [Form 62-330.060(1), F.A.C.]

The plans have been revised to show how the proposed maintenance and access berm for the northern flow-way will tie into the previously authorized detention swale berm for the roadway authorized under SFWMD Permit No. 11-103609-P. The southern section of the proposed roadway is not part of the CWIP or the previously authorized road and has been removed from the drawings.

27. The proposed access road along the south side of I-75 may require construction of a SWM system. Please revise the plans to provide construction level details for the access road and submit additional documentation, such as calculations and modeling, to provide assurances District criteria contained in the Applicant's Handbook Vol. II is met. [Form 62-330.060(1), F.A.C.]

The proposed access road will be pervious and will not require construction of a separate SWM system. Refer to Figure 7 of Attachment 1. Details have been added to show the GeoWeb construction, which will be filled with #57 stone (poorly graded and highly porous). Even in the event rainfall overwhelms the percolation rate of the porous road, the section has an inverted crown designed to retain the first ½ inch of runoff.

28. Regarding Southern Flow-ways area and construction of the ditches around Naples Preserve and Weir 1, 2, and 3, please revise the plans to provide additional details showing how access will be provided during construction and upon completion of the project for operation and maintenance. [Form 62-330.060(1), F.A.C.]

See Attachment 1: Revised Permit Drawings for the requested information.

29. Please provide additional details in the plans for the proposed improvements and existing conditions along Sable Palm Road and the Triple-G Loop. Staff is unable to determine the impacts of the proposed improvements to these roads based on the submitted information. How does increasing road height without additional conveyance under the roadway mitigate flood depths? Provide construction details and routine maintenance details that will be required to maintain a 2-inch increase with crushed rock on a frequently flooded roadway. [Form 62-330.060(1), F.A.C.]

Please refer to Figure 10 of the revised Attachment 1 for details of the proposed changes to Sabal Palm Road.

30. Please provide additional details in the plans for the proposed improvements and existing conditions along the perimeter of the project where berms or dykes are containing runoff generated by the proposed project. It is unclear how the applicant proposes to construct and maintain the perimeter berms required for the project and Staff is unable to determine the impacts of the proposed improvements to the adjacent properties. [Form 62-330.060(1), F.A.C.]

This is not a runoff-generating project. No perimeter berms are proposed.

31. Please submit a separate Individual ERP Modification application for modifications to the FDOT I-75 SWM system. These applications will be reviewed concurrently, pursuant to Section 5 of Volume II. [Rule 62-330, F.A.C.]

A construction permit application with this information will be submitted with the construction permit application package for the remainder of this project.

32. Please demonstrate the design assumptions for the surrounding SWM systems that have a potential to be affected by the proposed project will be maintained upon completion of the project. If design assumptions (such as tailwater elevations used in the design of the surrounding residential SWM systems) cannot be maintained and modifications to existing SWM systems are required, submit a separate Individual ERP Modification application for modifications to the affected SWM systems. These applications will be reviewed concurrently, pursuant to Section 5 of Volume II. [Rule 62-330, F.A.C.]

A response to this comment was provided previously. Design assumptions will be maintained. Our modeling analysis indicates that the bridges under U.S. 41 were overdesigned and can easily accept the additional flows associated with the CWIP. The following table provides a comparison of 25-year design discharges rates with simulated 100-year "With CWIP" discharge rates:

Structure	Description	Designed Discharge Capacities (cfs)	Simulated 100yr Discharge (cfs)
U.S. 41 Bridge S-400	(2) 5' H x 12' W Box Culverts	440 (25-yr Flood)	**240**
U.S. 41 Bridge S-500	(3) 4' H x 11' W Box Culverts	480 (25-yr Flood)	**360**

Because the culverts and bridges in the downstream Fiddlers Creek development would have been designed to handle the flows through these U.S. 41 bridges, it follows that design assumptions for the canals and structures conveying U.S. 41 discharges through Fiddlers Creek would not be violated.

33. The proposed North Belle Meade Flowway connects the Golden Gate canal (through a pump station) to I-75 canal. The flowway in the project plan is actually a manmade, approximately 5,000-foot canal & levy combination and it will cut through the existing wetland area. The east side of flowway is close to the Collier County landfill. Please provide an analysis of the flowway to both local groundwater and surface water to evaluate the flowway impact. [Rule 62-330, F.A.C.]

Per the RAI response package previously submitted with the permit application as Attachment 16 per a review of the drawings associated with the 2003 permit for the adjacent landfill (Permit No: 11-0202438-001), the landfill is lined. Therefore, there can be no groundwater inflow from the landfill to the northern flowway. The stormwater management area for the landfill discharges to the I-75 north canal; the North Belle Meade Flowway will not accept direct runoff from the landfill. Further, per the most recent permit modification (Permit No: 11-0202438-006) associated with the landfill, the 'modification is not expected to result in any adverse environmental impact and water quality degradation'. Therefore, the addition of water from the landfill into the I-75 north canal is not expected to adversely affect any portion of the project area. See below for a detailed description of the stormwater treatment within the landfill per specific condition 4(a) within the original permit (Permit No: 11-0202438-001) and all subsequent modifications:

Water quality treatment is provided by two means. First, stormwater runoff from the existing and proposed landfill cells (not to include any leachate) is collected and routed to the landfill perimeter ditch located along the base of the landfill. The landfill drainage system, as permitted under the Solid Waste Permit, consists of a system of sheet flow, intercepting swales, down chute pipes and down chute receiving structures, which discharge into the perimeter ditch. This perimeter ditch provides dry retention/detention pretreatment for water quality of the stormwater runoff before discharging to the surface water detention pond or to one of the two cypress preserves.

Secondly, stormwater runoff that discharges from the landfill perimeter ditch into the Surface Water Detention Pond (Pond) receives the next step in the treatment train by wet detention. Discharge from the Pond is through the Discharge Structure to the I-75 drainage ditch and eventually to the Henderson Creek Canal.

The balance of stormwater runoff, which is discharged from the landfill perimeter ditch, enters one of the adjacent Cypress Preserves (onsite wetlands). No surface water that has not been treated for water quality is discharged to the adjacent onsite wetlands. There is no proposed direct discharge from the Preserve areas into the Surface Water Detention Pond for the 25-year, 3-day design storm event. This provides further treatment by retention.

34. The overland depth difference maps during wet season months on pages 123 -124 indicate the proposed project impact area extended to PSRP area. Show that there are no impacts to the PSRP project including the Southwest Protection Feature. The monthly groundwater level difference map

of August (page 129) indicates that the project will cause groundwater level increases in some residential areas and again outside the project boundary. [Section 10.3 Vol. I]

The performance of the PSRP (in particular the Southwest Protection Feature), was evaluated with and without the CWIP using the results of the Hurricane Irma simulation embedded in the long-term model. Hurricane Irma is generally thought to be on the order of a 25-year event within the Big Cypress Basin, although in the eastern portions of the basin it was closer to a 100-year rainfall event (Ref: Taylor Engineering, November 2020. BCB Miller and C-1 Connector Canal Improvement Project Task 4.0 & 4.1– Irma Calibration, Updated FPLOS and 2016 Existing Conditions Model Comparison). The results of this comparison are provided in Section 2.4.2 of the revised Attachment 7: Hydrologic and Hydraulic Modeling Narrative. The results show that the CWIP will result in no increase in peak flows in the PSRP Southwest Protection Feature canal and de minimus increase in stages.

Furthermore, the USACE Jacksonville District has reviewed the technical information prepared in support of the CWIP and concluded, as part of their Section 408 review, that the CWIP will have no adverse impact on the PSRP (Attachment 19: Section 408 Memorandum). Per Attachment 19, the Engineering Division of the US Army Corps of Engineers does not object to issuance of the permit for Collier County CWIP as the proposed project will not impact the federal project (PSRP).

The increases in groundwater levels have been accounted for in the 25-year and 100-year design storm simulations. Those simulations show no adverse impacts in flood stages will occur in the neighboring residential subdivisions or other areas outside the project boundary.

35. In order to evaluate the impact and change of the flooding protection level of service by the CWIP compared to the current condition, please provide the max overland water depth difference maps for the LSM domain for 5-year, 10-year, 25-year and 100-year simulations. [Rule 62-330, F.A.C.]

Per the RAI response package previously submitted with the permit application as Attachment 16 max overland water depth difference maps for the LSM domain have been provided for 25-year and 100-year simulations in Attachment 7 Appendix E.

36. In order to evaluate the impact of CCWIP to PSRP under normal yearly hydrologic condition, please provide the monthly average groundwater elevation difference maps for the LSM domain for a water year in the simulation period for the following conditions: (PSRP + CCWIP) – PSRP. [Rule 62-330, F.A.C.]

Per the RAI response package previously submitted with the permit application as Attachment 16 the average monthly overland difference maps between PSRP+CWIP and PSRP Conditions are shown for the year 2014. The year was selected to represent normal conditions. The maps have been included in Attachment 7 Appendix D. However, groundwater elevation maps have not been included for the PSRP case scenario, as it has been established that the impact of the PSRP is insignificant in the CWIP areas of interest.

37. In order to evaluate the impact of CCWIP to PSRP under design storm conditions, please provide the max flooding water difference maps for the LSM domain for 100-year, 25-year, 10-year and 5-year for the following conditions: (PSRP + CCWIP) – PSRP. [Rule 62-330, F.A.C.]

Per the RAI response package previously submitted with the permit application as Attachment 16 design storm models were developed only for the current and with CWIP conditions and not for the PSRP conditions. From the maps developed in response to comment number 36 above, it is evident that the CCWIP will have no impact outside the project area.

As an additional assurance, the performance of the PSRP (in particular the Southwest Protection Feature), was evaluated with and without the CWIP using the results of the Hurricane Irma simulation embedded in the long-term model. Hurricane Irma is generally thought to be on the order of a 25-year event within the Big Cypress Basin, although in the eastern portions of the basin it was closer to a 100-year rainfall event (Ref: Taylor Engineering, November 2020. *BCB Miller and C-1 Connector Canal Improvement Project Task 4.0 & 4.1– Irma Calibration, Updated FPLOS and 2016 Existing Conditions Model Comparison*). The results of this comparison are provided in Section 2.4.2 of the revised Attachment 7: Hydrologic and Hydraulic Modeling Narrative. The results show that the CWIP will result in no increase in peak flows in the PSRP Southwest Protection Feature canal and de minimus increase in stages.

Furthermore, the USACE Jacksonville District has reviewed the technical information prepared in support of the CWIP and concluded, as part of their Section 408 review, that the CWIP will have no adverse impact on the PSRP (Attachment 19: Section 408 Memorandum). Per Attachment 19, the Engineering Division of the US Army Corps of Engineers does not object to issuance of the permit for Collier County CWIP as the proposed project will not impact the federal project.

38. In order to evaluate the impact to the existing primary canal system and operation, please provide:

1. The stage and flow hydrographs of current and with project condition at GG1, GG2, GG3, HC2, and HC1 for long-term simulation

   Per the RAI response package previously submitted with the permit application as Attachment 16 the stage and discharge hydrographs have been included in Permit Application Attachment 7. Please see Figure 1.9 on page 14 and Figure 1.20 on page 15 for GG1, GG2 and GG3. For HC1 and HC2, please see Figure 2.23 on page 66.

2. The stage and flow hydrographs of current and with project condition at GG1, GG2, GG3, HC2, and HC1 for 5, 10, 25, and 100-year design storms.

   Per the RAI response package previously submitted with the permit application as Attachment 16 the Golden Gate Canal is not included in the local scale design storm models because during flood events the CWIP pumps will be shut down and hence no impact is anticipated on GG canal water levels. The requested information is therefore only shown for the Henderson Creek Canal structures.

Stage and flow hydrographs for current and with project conditions have been included for 25-year, and 100-year simulations in Permit Application Attachment 7. Please see Figure 3.7 on page 86-87.

The 10-year continuous simulation model described in section 2 of Permit Application Attachment 7 is sufficient to demonstrate system response for higher frequency storm events (refer to Figure 2.21) and hence 5- and 10-year return period storms were not included in the design storm models.

3. The max water surface profile with and without project along Golden Gate Main and Henderson Creek canal for 5, 10, 25 and 100-year design storms

Per the RAI response package previously submitted with the permit application as Attachment 16 max water surface profiles with and without-project conditions along Henderson Creek canal have been included in Permit Application Attachment 7 Appendix E.

39. Provide additional assurances that the project has no adverse impact to the regional watershed in both surface water and groundwater. [Rule 62-330, F.A.C.]

Per the RAI response package previously submitted with the permit application as Attachment 16 Collier County has provided reasonable assurances that the project will have no adverse impact to the regional watershed in both surface water and groundwater. This is demonstrated through:

a) Application materials in the original submittal,
b) Supplemental material submitted with this RAI response,
c) The extensive surface and groundwater monitoring program, and
d) The Adaptive Management Plan (as included within Attachment 2: Project Overview provided with the original permit application and now also provided in Attachment 12 Operations and Management Plan).

The adaptive management plan includes close, regular coordination with agency stakeholders to regularly review monitoring data and evaluate further optimization of project performance.

40. The GG3 structure is operated based on known or anticipated hydrologic conditions and canal levels upstream of the structure. GG3 weir elevations are adjusted to maintain certain upstream canal levels. The structure is not operated to maintain a certain flow rate through the structure. Why is the withdrawal of water from Golden Gate Main not based on upstream canal levels similar to all other canal water users throughout the system? Please address the following: [Rule 62-330, F.A.C.]

Per the RAI response package previously submitted with the permit application as Attachment 16 because this is a hydrologic restoration project, it is most appropriate to divert water during times of high flow in the canal, when water would have historically discharged into the Belle Meade flow-way from the north. Because flow is dependent not just on headwater but also on weir levels (and potentially also tailwater levels at times), it would not be appropriate to base operations only on headwater stages.

1. GG3 is operated to maintain certain canal levels, but also in response to anticipated or existing hydrologic conditions or short-term maintenance or potentially equipment failure. A very high flow rate may be in advance of a storm or during already saturated conditions in Bell Meade. The flow rate at GG3 could possibly be used as proposed if Golden Gate canal levels and BCB operations are considered in the revised matrix.

   The decision matrix in Attachment 12 has been expanded to include a low-stage threshold in GG3, which will trigger pump-off conditions in the event of equipment failure.

2. Revise pumping plan so it is based on Golden Gate Main canal stage and flow. Show canal water level impacts upstream and downstream of GG3 watersheds.

   Per the RAI response package previously submitted with the permit application as Attachment 16 the pumping plan is effectively based on Golden Gate Main Headwater/tailwater stage, and weir level. Pumps will be on when those levels combine to produce the flow ranges described in page 1 of Permit Application Attachment 12 of the permit application.

3. How will increased ground and surface water from the project be managed in downstream flow-ways to provide flood protection and operational flexibility before, during, and after flood events and hurricanes?

   Per the RAI response package previously submitted with the permit application as Attachment 16 refer to Permit Application Attachment 12: Operations and Maintenance Plan. An additional monitoring point, near Winding Cypress and Naples Reserve, has been added to the decision matrix. Pumps will be turned off when water levels exceed 7.0 ft. NAVD88 at Well #21. That stage is 0.5 feet below the lowest edge of pavement in Winding Cypress and can be adjusted during final design or in the adaptive management phase.

4. Show that the existing flood protection level of service in all areas affected by the project can be re-established if pumps are secured when the 72 hr. QPF exceeding 5 inches as proposed. Local rainfall of 5 inches is not uncommon during wet season, even if published 72 hr. QPF if much less.

   Per the RAI response package previously submitted with the permit application as Attachment 16 the long-term simulation did not include shutting off the pumps when QPF exceeded 5 inches, which is a very conservative modeling assumption for flood levels. Even so, negligible increases in flood levels are predicted outside the forest.

41. The project has a potential for impacting primary canal systems. How and at what frequency will project be monitored/operated? What is response time for equipment failures and issues

(i.e. response time if 2nd pump doesn't activate correctly but 1st pump keeps pumping, or Henderson Creek gate malfunctions?)

The response time is anticipated to be 15 minutes or less, once an issue has been identified.

42. The 10-year average discharge increments (pages 63 and 64) should include a full duration comparison (not just when pumps are operating). Diverted water will continue to sheet flow through new flow-way and be intercepted by canals even if pumps are secured. Please show that the diverted additional freshwater moving through HC1 does not have an adverse effect on downstream Rookery Bay receiving body. Previous studies have shown additional wet season flows through HC1 are not beneficial. Please also show that the diverted additional freshwater moving through Fiddler Creek's flow- ways do not have an adverse effect on downstream receiving bodies. [Rule 62-330, F.A.C.]

Per the RAI response package previously submitted with the permit application as Attachment 16 a full duration comparison is shown below at HC1. The additional flow through HC1 is caused by groundwater seepage and is a small percentage of total flow at this location:

Annual average:
Current Conditions = 23.82 cfs
With CWIP = 25.90 cfs
Diff. = 2.1 cfs

Wet Season average:
Current Conditions = 52.70 cfs
With CWIP = 57.02 cfs
Diff. = 4.32 cfs

The additional freshwater proposed to be discharged to Rookery Bay via Fiddler's Creek will offset the wet-season freshwater deficit shown to occur.

43. The water availability and water quality analysis does not account for any type of flood event and seems to assume pumping will occur during all flood events and hurricanes. The pumping analysis and volume of water pumped needs to reflect the actual flows and known flood events of the long term model in order to adequality describe the amount of water diverted from the Golden Gate canal to the restoration area and then to Rookery Bay. [Rule 62-330, F.A.C.]

Per the RAI response package previously submitted with the permit application as Attachment 16 we agree that a full accounting of all hydrologic flows would provide a complete theoretical hydrologic accounting product. However, for this conceptual project development and authorization, the assumption that pumping would occur during flood events is a conservative assumption for the water quality and seasonal hydrologic change analyses. When construction plans are submitted for authorization, the county will reassess this assumption and as appropriate and in consultation with stakeholders conduct further hydrologic evaluation and analysis. This reassessment is part of the county's ongoing adaptive management of the CWIP; as more data and project detail are developed, the operation and management of the project can be refined and improved. The county is committed

to providing a safe and successful project from conceptual planning and design through implementation.

44. Show that Collier County owns, operates, and maintains the east-west embankment preventing restoration sheet flow moving south onto privately owned farmlands. Provide a seepage analysis to show no adverse impact to the private canals south of the project boundary. Provide proof of rights to flow restoration water through existing canals throughout the private property south of the restoration project. [Rule 62-330, F.A.C.]

As discussed in our December 3rd meeting between Collier County, its consultants, and SFWMD staff, the east-west embankment is privately owned but will not be adversely impacted by the CWIP. Seepage will be a relatively minor consideration, resulting in 6 to 8 additional pumping days per year required to maintain dry conditions on the farms. Refer to email correspondence from John Loper to Melissa Roberts dated December 4, 2020, for details. Easements for the flow-ways around Naples Reserve are either in the process of being acquired by Collier County or are already in the County's possession. Refer to Figure 12 of Attachment 1 for the existing easement information.

Sincerely,
ANCLOTE CONSULTING, PLLC.

John Loper, P.E.
Project Engineer

C: Gary McAlpin, Collier County
David Stites, Taylor Engineering, Inc.
Michael Weston, Florida Forest Service