

WATER QUALITY IMPACT EVALUATION CHECKLIST

PART 1: PROJECT INFORMATION

Project Name:	SW 10th Street Connector PD&E Study
County:	Broward County
FM Number:	439891-1-22-02
Federal Aid Project No:	
Brief Project Description:	The major improvements under the study will address local and limited access transportation needs, address safety and operational issues, enhance emergency response and evacuation, and improve system linkages and connectivity between I-95, Florida's Turnpike, and SR 869/SW 10th Street. The improved system connectivity and capacity will be achieved by widening to provide for a limited-access connector facility along the SR 869/SW 10th Street corridor.

PART 2: DETERMINATION OF WQIE SCOPE

Does project discharge to surface or ground water? ☒ Yes ☐ No

Does project alter the drainage system? ☒ Yes ☐ No

Is the project located within a permitted MS4? ☒ Yes ☐ No

Name: FDOT District 4 - Broward

If the answers to the questions above are no, complete the applicable sections of Part 3 and 4, and then check Box A in Part 5.

PART 3: PROJECT BASIN AND RECEIVING WATER CHARACTERISTICS

Surface Water

Receiving water(s) names: BCWCD#2 C-2 and C-3 Canals (*ultimate discharge to SFWMD Hillsboro Canal)

Water Management District: South Florida Water Management District (SFWMD)

Environmental Look Around meeting date: 2/15/18 - SFWMD Drainage-Permit Coordination Meeting
 2/21/18 - BCEPGMD Drainage-Permit Coordination Meeting
 Attach meeting minutes/notes to the checklist. 10/12/18 - Century Village Drainage Coordination Meeting
 10/24/18 - Toll Brothers Drainage Coordination Meeting

Water Control District Name (list all that apply): Broward County Water Control District #2 (BCWCD #2)

Is the project located within a springshed or recharge area? ☒ Yes ☐ No

Ground Water

Sole Source Aquifer (SSA)? ☒ Yes ☐ No Name Biscayne Aquifer

If yes, complete Part 5, D and complete SSA Checklist from EPA website ([Figure 11-2](#))

Other Aquifer? ☐ Yes ☒ No Name _____

Figure 11-1 Water Quality Impact Evaluation

Springs vents? ☐ Yes ☒ No Name _____

Well head protection area? ☒ Yes ☐ No Name City of Deerfield Beach Wellfield

Groundwater recharge? ☐ Yes ☒ No Name City of Deerfield Beach Wellfield

Notify District Drainage Engineer if karst conditions are expected or if a higher level of treatment may be needed due to a project being located within a WBID verified as Impaired in accordance with Chapter 62-303, F.A.C.

Date of notification: ____/____/____

PART 4: WATER QUALITY CRITERIA

List all WBIDs and all parameters for which a WBID has been verified impaired, or has a TMDL in **Table 1**. This information must be updated during each Re-evaluation.

Note: If BMAP or RAP has been identified in **Table 1**, **Table 2** must also be completed. Attach notes or minutes from all coordination meetings identified in **Table 2**.

EST recommendations confirmed with agencies? ☒ Yes ☐ No

BMAP Stakeholders contacted: ☐ Yes ☒ No

TMDL program contacted: ☐ Yes ☒ No

RAP Stakeholders contacted: ☐ Yes ☒ No

Regional water quality projects identified in the ELA ☐ Yes ☒ No

If yes, describe:

Potential direct effects associated with project construction and/or operation identified? ☒ Yes ☐ No

If yes, describe: [See Next Page](#)

Discuss any other relevant information related to water quality.


[See Next Page](#)

Figure 11-1 Water Quality Impact Evaluation (Page 2 of 5)

PART 5: WQIE DOCUMENTATION

- ☐ A. No involvement with water quality
- ☐ B. No water quality regulatory requirements apply.
- ☒ C. Water quality regulatory requirements apply to this project (provide Evaluator's information below). Water quality and quantity issues will be mitigated through compliance with the design requirements of authorized regulatory agencies.
- ☒ D. EPA Ground/Drinking Water Branch review required. ☒ Yes ☐ No
Concurrence received? ☐ Yes ☐ No
If Yes, Date of EPA Concurrence: ___/___/___ (Attach the concurrence letter)

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by FDOT pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated December 14, 2016 and executed by FHWA and FDOT.

Evaluator Name (print): Christian B. Jackson	
Title: Senior Drainage Engineer	
Signature: 	Date: 7/31/19

Potential Direct Effects Associated with Construction: The project involves construction of a depressed roadway section 40' below existing grade, approximately at upper limits of the Biscayne Aquifer. Construction of the depressed roadway section is expected to require sheet pile installation to a greater depth encroaching beyond the upper limits of the Biscayne Aquifer.

Water Quality: This project will implement stormwater BMPs to satisfy BCEPGMD and SFWMD regulatory criteria for treatment of pollutants related to transportation projects. Specifically, new wet retention ponds or expanded existing wet retention ponds (outside of the wellfield cone of influence) will be constructed to provide water quality and attenuation of roadway runoff that is proposed to discharge into the C-2 Canal within the SW 10th Street corridor.

Figure 11-1 Water Quality Impact Evaluation (Page 3 of 5)

Table 1: Water Quality Criteria

Receiving Waterbody Name (list all that apply)	FDEP Group Number / Name	WBID(s) Numbers	Classification (I,II,III,IIIL,IV,V)	Special Designations*	NNC limits**	Verified Impaired (Y/N)	TMDL (Y/N)	Pollutants of concern	BMAP, RA Plan or SSAC
BCWCD C-2 Canal	N/A	N/A	V	N/A	N/A	N	N	N/A	N/A
BCWCD C-3 Canal	N/A	N/A	V	N/A	N/A	N	N	N/A	N/A

* ONRW, OFW, Aquatic Preserve, Wild and Scenic River, Special Water, SWIM Area, Local Comp Plan, MS4 Area, Other

** Lakes, Spring vents, Streams, Estuaries

Note: If BMAP or RAP has been identified in Table 1, Table 2 must also be completed.

Figure 11-1 Water Quality Impact Evaluation (Page 4 of 5)

Table 2: Regulatory Agencies/Stakeholders Contacted

Receiving Water Name (list all that apply)	Agency's Contact and Title	Date Contacted	Follow-up Required (Y/N)	Comments
Hillsboro Canal via BCWCD C-2 Canal, and C-3 Canal	Carlos DeRojas, P.E. Section Leader-Surface Water Management Division, SFWMD	02/15/2018		See attached meeting minutes for Drainage-Permit Coordination Meeting on 02/15/2018
Hillsboro Canal via BCWCD C-2 Canal, and C-3 Canal	Barbara Conmy, P.E. Section Leader-Natural Resource Management Division, SFWMD	02/15/2018		See attached meeting minutes for Drainage-Permit Coordination Meeting on 02/15/2018
BCWCD C-2 Canal, and C-3 Canal	Jose Portillo, P.E. Engineer, BCEPGMD	02/21/2018		See attached meeting minutes for Drainage-Permit Coordination Meeting on 02/21/2018
BCWCD C-2 Canal, and C-3 Canal	Carl Archie, P.E. Engineering Unit Supervisor, BCWCD #2	02/21/2018		See attached meeting minutes for Drainage-Permit Coordination Meeting on 02/21/2018
BCWCD C-2 Canal, and C-3 Canal	Johana Narvaez, M.S.E.E. Natural Resource Specialist Senior, BCEPGMD	02/21/2018		See attached meeting minutes for Drainage-Permit Coordination Meeting on 02/21/2018

Figure 11-1 Water Quality Impact Evaluation (Page 5 of 5)

PROJECT NAME: SW 10th Street Connector PD&E Study

NAME OF SOLE SOURCE AQUIFER: Biscayne Aquifer

- Location of project:** City of Deerfield Beach, Broward County, Florida
- Project description.** The project will improve system linkages and connectivity between I-95, Florida's Turnpike, and SR 869/SW 10th Street. The improved system connectivity and capacity will be achieved by widening to provide for a limited-access connector facility along the SR 869/SW 10th St corridor.
- Is there any increase of impervious surface? If so, what is the area?**
Yes, there is a 34.74-acre increase in impervious area.
- Describe how storm water is currently treated on the site?**
Stormwater is currently treated within roadside swales that overflow to the BCWCD #2 C-3 and C-2 canals.
- How will storm water be treated on this site during construction and after the project is complete?** New offsite wet retention ponds or expansion to existing offsite retention ponds (outside the wellfield zone of influence) will be constructed to treat runoff during and after proposed construction.
- Are there any underground storage tanks present or to be installed? Include details of such tanks.** No.
- Will there be any liquid or solid waste generated? If so how will it be disposed of?** No.
- What is the depth of excavation?** The project involves construction of a depressed roadway section 40' below existing grade, approximately at the upper limits of the Biscayne Aquifer.
- Are there any wells in the area that may provide direct routes for contaminants to access the aquifer and how close are they to the project?** The project is located in the immediate vicinity of the City of Deerfield Beach Wellfield.
None of the proposed retention ponds or expansion to existing ponds fall within the limits of the wellfield cone of depression (Protection Ordinance for Zone 3), although discharge is to the C-2 Canal which runs through the cone of depression. Please refer to Conceptual Drainage/Pond Siting Report for add'l information.
- Are there any hazardous waste sites in the project area, especially if the waste site has an underground plume with monitoring wells that may be disturbed? Include details.** Please refer to the CSER PD&E Document.
- Are there any deep pilings that may provide access to the aquifer?** Yes, construction of the depressed section is expected to require sheet pile installation encroaching into the upper limits of the Biscayne Aquifer.
- Are Best Management Practices planned to address any possible risks or concerns?** Yes. In addition to the proposed stormwater BMPs which will improve water quality within the overall basin, the depressed section will be constructed water tight with a tremie seal, drainage collection and conveyance system, and pump station in order to prevent roadway flooding, as well as leakage or infiltration to the aquifer.
- Is there any other information that could be helpful in determining if this project may have an effect on the aquifer?** Please refer to Conceptual Drainage/Pond Siting Report and/or Contamination Screening Evaluation Report for more information. There are sources of contaminants within the vicinity of the depressed roadway section.
- Does this Project include any improvements that may be beneficial to the aquifer, such as improvements to the wastewater treatment plan?**
Yes, the proposed stormwater BMPs will improve water quality within the overall basin by providing significant surplus water quality treatment volume. Additionally, the proposed (interconnected) wet retention pond or expanded existing wet retention ponds will increase storage opportunities within the C-2 basin allowing for more recharge area to the aquifer and wellfield.

The EPA Sole Source Aquifer Program may request additional information if impacts to the aquifer are questionable after this information is submitted for review.

Figure 11-2 EPA Sole Source Aquifer Checklist



MEETING MINUTES



Project:	SW 10th Street Connector PD&E Study	FPID No:	439891-1-22-02
		Contract No.:	C9V60
Meeting Place:	Century Village Community 3501 West Drive Deerfield Beach, FL	Meeting Date:	10/12/2018
		Meeting Time:	3:00 PM
Participants:	See sign-in sheet for attendees		
Purpose:	FDOT-Century Village Drainage Coordination Meeting		

Project Overview

1. Robert Bostian, FDOT Project Manager, provided a brief overview and description of the project, alternatives and schedule. He indicated that the first Alternatives Workshop held in April was an opportunity for the team to show the residents and locals what the plans for the corridor are. He indicated that while FDOT owns most of the corridor right-of-way (approximately 250 feet in width), there are a few, localized areas where some right-of-way will need to be acquired. He indicated that the following alternatives workshop will be held in November and that the PD&E process will be wrapped up by next summer, moving on to final design. The project will be procured through a design-build contract and is currently funded for 2022.

Drainage Overview

2. Chris Jackson, RS&H Senior Drainage Engineer, indicated that the project extends from just east of the Sawgrass Interchange to Military Trail. He indicated that the project is located and falls under the jurisdiction of the South Florida Water Management District (SFWMD) Hillsboro Canal Drainage Basin and Broward County Water Control District (BCWCD) C-2 and C-3 Basins. He added that Century Village Community is located within the C-2 Basin.
3. Chris mentioned that the project is in the PD&E Study phase, and as part of the drainage phase for that process, is developing a conceptual drainage design and defining any offsite pond requirements in order to select the best site for the project.
4. Chris stated that good progress has been made in the Pre-Development and Post-Development analysis of the area within the project limits and that the team has already developed a draft Conceptual Drainage Report/Pond Siting Report. The report includes Drainage Maps, Calculations and Models, and the analysis has resulted in the required parcel sizes for the stormwater management facilities that will be needed to meet permitting requirements as well FDOT drainage design criteria.
5. Chris stated that drainage analysis indicates approximately 11 acres are required for stormwater management of the SW 10th Street project limits from Powerline Road to the FEC railroad, including pump stations for conveyance of roadway runoff to the receiving pond/canal.
6. Chris stated that right-of-way acquisition for offsite ponds will be required to accommodate the 11 acres and mentioned there are no undeveloped parcels within or directly adjacent to the existing right-of-way.

7. Chris mentioned that the conventional approach for stormwater management facilities are pond site alternatives located relatively close to the corridor which receive untreated stormwater runoff via piping from the roadway corridor and then contain control structures which discharge the treated overflow into the receiving waters (C-2 Canal in this case). He added that BCWCD C-2 Basin is a little different, as it is designated as a “water quality basin” which provides storage, treatment, and groundwater control for the entire basin draining to it and is controlled by one structure (S-4) at the north end of the C-2 Canal which discharges to the SFWMD Hillsboro Canal. Therefore, in lieu of new stormwater management facilities within the basin, any of the existing stormwater management facilities within the entire basin could be expanded/modified as needed to provide the required water quality, water quantity, and floodplain compensation volume for the project. He explained this provides additional flexibility from the conventional approach of collecting and conveying project runoff to an adjacent, isolated offsite stormwater management facility for treatment and attenuation prior to discharge to receiving waters.
8. Chris explained the six identified alternatives depicted on the meeting exhibit:
 - Three conventional alternatives were identified for stormwater management facilities and defined conventional as pond site alternatives located relatively close to the corridor which receive untreated stormwater runoff via piping from the roadway corridor and then contain control structures which discharge the treated overflow into the receiving waters (C-2 Canal). He noted that all three alternatives were developed, and located off-frontage within the industrial area located south of SW 10th Street, just east of Powerline Road, and would require permanent easements for inflow and/or outflow. He added that the three alternatives avoid residential relocations but impacted existing businesses.
 - Three non-conventional (water quality basin) alternatives were identified for stormwater management facilities to the north of SW 10th Street. He noted that these were located within the vacant golf course property owned by Fairway Investors LLC within the Century Village community just south of Hillsboro Blvd. Chris noted that the golf course parcels were planned to be purchased by Toll Brothers for residential development and park space.
 - Chris explained that while all of the golf parcels were certainly viable alternatives, the westernmost (19.26-acre) parcel stood out above the rest due to better access for construction and maintenance, hydraulic connectivity, and avoidance of the planned residential development by Toll Brothers.
9. Dan Johnson, Master Management Executive Director, indicated that Century Village, Toll Brothers, and Fairway Investors signed a tri-party agreement a month ago, for the four parcels that constitute the golf course property. As part of the agreement, Fairway Investors will sell Toll Brothers the entire golf course property, then Toll Brothers will transfer the two westernmost parcels to Century Village, along with a third parcel (located just east of the Century Village clubhouse) upon construction of the Toll Brother’s stormwater management facility. The easternmost parcel (abutting Military Trail) will be developed by Toll Brothers into a multi-family residential community with 201 townhomes. He added that once those parcels are turned over, Master Management plans to develop those into a park for the residents at Century Village, which will include bike trails and walkways/sidewalks. He mentioned he was unsure how the residents would react to a pond in the site rather than their anticipated park.
10. Dan inquired about the possible benefits from turning one of those parcels into a pond. Chris stated that greatest benefit to the residents adjacent to the parcel in question, would be turning their homes into waterfront sites, and compensating Century Village for the right-of-way, essentially paying for the bike trails and walkways/sidewalks improvements.

11. Chris also added that the vacant golf course parcels are known to be contaminated and that FDOT would remediate them prior to construction. Dan stated that as part of the agreement, Toll Brothers will be fully remediating the four parcels.
12. Chris mentioned that if the Department were to acquire the parcel in question, Toll Brothers would have less acreage to remediate and that whoever owns the parcel would have the right to fair market value compensation.
13. Cassie inquired about the types of contaminants that the sites will be remediated for, and whether or not any testing had been done. Dan stated that the site will be remediated per the FDEP 5.5 ppm for arsenic criteria, and that much of the site will not be built on.
14. Cassie asked Dan if they could provide the contaminants' test results reports.
15. Dan stated that Toll Brothers has to turn over those reports within the next 30 days, as part of the agreement. However, FDEP does have them on record. Dan stated that they are on their due diligence period under their agreement, in which case if Toll Brothers does not remediate the site, the agreement is void.
16. Robert stated that the required stormwater acreage could be provided within any of the parcels and still incorporate the planned aesthetic features of the park.
17. Dan inquired about the Department's proposed pond site being located in the same parcel that Toll Brothers will be using for their retention pond. Chris explained that from a right-of-way acquisition perspective, the other parcels would have been cleaner since hydraulically connected with public right-of-way (i.e. C-2 Canal right-of-way). The only hydraulic connection to the subject parcel is through property owned in fee by several different private parties. Nonetheless, further analysis will have to be done on it, to ensure that permitting requirements are met within the area that Toll Brothers will not be using for their pond.
18. Chris explained that the viability of any of these parcels is contingent upon forthcoming regional modeling, contamination assessment/mitigation, and SFWMD and BCEPGMD permit requirements. He noted that they will require that the soil is remediated to avoid exacerbating the plume.
19. Dan mentioned that onsite and offsite testing has been underway, and the results indicate that contamination was low. Testing company was encouraged with the results, as they anticipated higher contamination levels.
20. Dan stated that the Due Diligence period for the tri-party agreement still has 40 more days on it. Property transfers/closing is anticipated for November 2019 for the two westernmost parcels. The third parcel being donated to Century Village (minus the Toll Brothers pond area) is not expected to be transferred until 2021 once Toll Brothers construction is completed.
21. Chris stated that the Department's timeline is more expeditious. The Department will need to know Century Village input to move forward on any of the options that are feasible. He noted that the two westernmost parcels combined are approximately 40 acres, and the ponds could meander and be designed in conjunction with the park plans.
22. Cassie asked if current site plans/renderings/figures could be shared with the Department to be further analyzed and work in conjunction with the park design.
23. Dan inquired on the impact on maintenance as a result from the additional stormwater runoff on their site. Chris explained that no additional maintenance would be required, as the acreage required for the pond site is enough to offset the runoff volume being generated by the additional travel lanes.
24. Vallen Smikle, Master Management Director of Planned Projects, stated that Toll Brothers plans/documents were already filed/submitted to City of Deerfield Beach for approval.
25. Dan mentioned Century Village prefers the Department to focus the stormwater management facility plans for the third parcel (east of the clubhouse) since they have no plans for the park or walking paths and amenities on such parcel.

26. Dan inquired on the project's anticipated date for construction of stormwater management facilities. Robert explained that it is anticipated for spring of 2022, and he added that the Department could work on advanced right of-way acquisition to build the ponds ahead of roadway construction if it is advantageous for all parties.

Next Steps / Action Items

1. RS&H to setup Drainage Coordination Meeting with Toll Brothers.
2. RS&H to obtain any available plans and documents from Toll Brothers and City of Deerfield Beach.

Draft
10/07/19

Meeting Sign-In Sheet

SW 10th Street PD&E Study

FDOT-Century Village Drainage Coordination

Meeting

October 12, 2018 @ 3:00 pm

Meeting Location: Century Village Community

3501 West Drive, Deerfield Beach, FL



Name	Company	Phone	e-mail
Silvana Alvarez	FDOT		silvana.alvarez@dot.state.fl.us
Claudia Calvo	FDOT	(954) 777-4476	claudia.calvo@dot.state.fl.us
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RS&H:			
Cassie Piche			



MEETING AGENDA



Project:	SW 10th Street Connector PD&E Study	FPID No:	439891-1-22-02
		Contract No.:	C9V60
Meeting Place:	Conference Call	Meeting Date:	10/24/2018
		Meeting Time:	1:00 PM
Participants:	Robert Bostian, Cassie Piche, Chris Jackson, Vanessa Caycedo, Tina Borello, Zane Beard, Lisa Stone		
Purpose:	FDOT-Toll Brothers Drainage Coordination Meeting		

1. Introductions

2. Project Overview

Chris Jackson, RS&H Senior Drainage Engineer, provided a brief overview and description of the project, alternatives and schedule.

3. Drainage Overview

1. Chris discussed the pre-development and post-development drainage conditions for the project. He indicated that the project extends from just east of the Sawgrass Interchange to Military Trail, and that the project is located and falls under the jurisdiction of the South Florida Water Management District (SFWMD) Hillsboro Canal Drainage Basin and Broward County Water Control District (BCWCD) C-2 and C-3 Basins. He added that Century Village Community and future Toll Brothers properties are located within the C-2 Basin.
2. Chris mentioned that the project is in the PD&E Study phase, and as part of the drainage phase for that process, is developing a conceptual drainage design and defining any offsite pond requirements in order to select the best site for the project. He stated that good progress has been made in the Pre-Development and Post-Development analysis of the area within the project limits and that the team has already developed a draft Conceptual Drainage Report/Pond Siting Report. The report includes Drainage Maps, Calculations and Models, and the analysis has resulted in the required parcel sizes for the stormwater management facilities that will be needed to meet permitting requirements as well FDOT drainage design criteria.
3. Chris stated that the drainage analysis indicates approximately 11 acres are required for stormwater management of the SW 10th Street project limits from Powerline Road to the FEC railroad, including pump stations for conveyance of roadway runoff to the receiving pond/canal. Chris stated that right-of-way acquisition for offsite ponds will be required to accommodate the 11 acres.
4. Chris briefly discussed the conventional approach for stormwater management facilities (a pond site located near the corridor which receives untreated stormwater runoff via piping from the roadway corridor and then contain control structures which discharge the treated overflow into the receiving waters (C-2 Canal in this case)). He then mentioned that BCWCD C-2 Basin is designated as a "water quality basin" which provides storage, treatment, and groundwater control for the entire basin draining to it and is controlled by one structure (S-4) at the north end of the C-2 Canal which discharges to the SFWMD Hillsboro Canal. Therefore, pond site alternatives within existing stormwater management facilities in the C-2 basin have also been evaluated to expand/modify as needed to provide the required water quality, water quantity, and floodplain compensation volume for the project.

5. Chris discussed that pond siting analysis has been completed, identifying three conventional offsite pond alternatives, along with four additional non-conventional offsite pond alternatives identified within the vacant Century Village golf course parcels owned by Fairway Investors LLC (soon to be Toll Brothers) for accommodation of stormwater management needs.
6. Chris stated that from the recent meeting with Century Village, it was discussed that, of the non-conventional alternatives, Century Village prefers Alternative 6 (the parcel just east of the clubhouse). They currently have development plans for Alternatives 4 and 5 that have already been vetted through the community.
7. Zane Beard, Land Development Manager for Toll Brothers, stated that the parcel just east of the clubhouse (Alternative 6) is the location of their stormwater management facility. He stated that they will need approximately 4 acres of the total 17.11 acres for construction of their stormwater management facility.
8. Zane asked what the project schedule was for the FDOT SW 10th Street Connector project, particularly for right-of-way acquisition, concerned that the project schedule would interfere with their development plans. Robert stated that construction is currently planned for spring of 2022, and he added that the Department could work on advanced right of-way acquisition to build the ponds ahead of roadway construction if it is advantageous for all parties.
9. Zane stated that Toll Brothers will be breaking ground in February 2019 and that they do not have a closing date for parcel acquisition, as it is contingent upon permit approvals.
10. Chris asked if Toll Brothers was using conventional stormwater management facility design or if they were expanding the existing lake/canal system within the parcel for volume compensation of the C-2 basin. Zane stated that they are expanding the existing facilities for their pond construction.
11. Cassie Piche, RS&H Project Manager, mentioned concerns over the presence of arsenic within the vacant golf course parcels and asked if any testing has been done for these parcels by Toll Brothers. Zane stated that they have done contamination testing, and although the reports were not yet available, results indicated lower contamination than originally anticipated.
12. Cassie asked if Toll Brothers could provide any of their development plans, reports, etc. Zane stated that their Site Assessment Report is to be submitted Friday, October 26th, and that he will send it over to RS&H once it has been submitted.

4. Next Steps / Action Items

1. Continued coordination with Toll Brothers as regional modeling progresses.



MEETING MINUTES



Project:	SW 10 th Street Connector PD&E Study	FPID No:	439891-1-22-02
		Contract No.:	C9V60
Meeting Place:	SFWMD Headquarters 3300 Gun Club Road West Palm Beach, FL	Meeting Date:	2/15/18
		Meeting Time:	9:45 a.m.
Participants:	See sign-in sheet for attendees		
Purpose:	FDOT – SFWMD Drainage Coordination Meeting		

Introductions

Project Overview

1. Cassie Piche, RS&H Project Manager, provided a brief overview of the project, preliminary alignment alternatives, and schedule. She indicated that the project will be procured through a design-build contract, which is currently funded in 2025. She noted, however, that funding is anticipated to be available sooner.

Drainage Overview

2. Chris Jackson, RS&H Senior Drainage Engineer, indicated that the project is located within the South Florida Water Management District (SFWMD) Hillsboro Canal Drainage Basin and Broward County Water Control District (BCWCD) C-2 Basin. He added that the project falls under the regulatory jurisdiction of the SFWMD and BCWCD #2.
3. Chris provided an overview of the existing drainage. He indicated that portions of the project fall within the FEMA 100-year floodplain, the City of Deerfield Beach Wellfield zone of influence, and within a drainage basin designated by BCWCD as a “water quality basin” which is regulated by the BCWCD control structure (S-4) and outfall to the SFWMD Hillsboro Canal. Therefore, in lieu of new stormwater management facilities within the basin, any of the existing stormwater management facilities within the entire basin could be expanded/modified as needed to provide the required water quality, water quantity, and floodplain compensation volume for the project. He explained this provides additional flexibility from the conventional approach of collecting and conveying project runoff to an adjacent, isolated offsite stormwater management facility for treatment and attenuation prior to discharge to receiving waters.
4. Carlos de Rojas, SFWMD, agreed with the “water quality basin” designation but noted that the BCWCD basin and infrastructure was not covered under any existing SFWMD Environmental Resource Permit (ERP). As such, he noted that an ERP application would also need to be submitted by BCWCD for the basin.
5. Chris stated that the proposed improvements do not physically impact existing wellfield infrastructure but that dry retention pretreatment may be required for wellfield protection. Carlos clarified that dry pretreatment retention would only be required if the proposed stormwater management facilities were physically located within the respective zone of influence.

6. Chris provided an overview of the potential stormwater management options. He indicated that the flexibility provided by the designation of the basin as a “water quality basin” allows for modification/expansion of the existing stormwater management facilities within the vacant golf course at Century Village and within the Deer Creek Golf Course, north of Hillsboro Boulevard. He noted the possibility of shared use drainage, similar to I-595 with the Lago Mar and Pine Island Ridge golf courses. In the event that these golf courses cannot be modified/expanded to accommodate the project, then FDOT would be required to acquire offsite parcels, most likely industrial parcels along the south side of the project. Chris noted that French drain was not a viable option for this project.
7. Chris indicated that the proposed Express Lanes depressed section would impact the existing cross drains serving the BCWCD C-2 and C-3 canals. He noted that pump stations or inverted siphons would be required to maintain these conveyances. He also noted that a pump station would be required to collect and convey the roadway runoff from the Express Lanes depressed section.
8. Carlos De Rojas inquired about the depth of the Express Lanes depressed section and the associated dewatering activities. Cassie stated the cuts would be 56’ deep with the roadbed sitting 18’-20’ below grade. Carlos noted that groundwater modeling / calculations would be needed to demonstrate that the proposed Express Lanes depressed section and associated dewatering activities do not adversely impact the wellfield.

Permit Requirements

9. Chris indicated that there are no existing ERPs for the project area. He added that there is only a Water Use Permit for the City of Deerfield Beach wellfield.
10. Chris indicated that there were no wetlands or listed species impacts, however, dredging activities will be required in other surface waters, including the BCWCD C-2 and C-3 canals.
11. Chris identified the anticipated environmental permits as follows: SFWMD Environmental Resource Permit, SFWMD Consumptive Use (Dewatering Modification), and USACE Section 404 Dredge & Fill Permit. In addition, a Surface Water Management License and a Natural Resource License may be required from the Broward County Environmental Protection & Growth Management Department (BCEPGMD) for proposed activities outside of the State Highway System limits.
12. Chris indicated that FDOT would be meeting with BCEPGMD on 2/21/18 to discuss the project and to determine any additional requirements and permit criteria.

Meeting Sign-In Sheet

SW 10th Street PD&E Study

FDOT-SFWMD Drainage-Permit Coordination

Meeting

February 15, 2018 @ 9.45 am

Meeting Location: SFWMD, 3300 Gun Club Road,
West Palm Beach, FL



	Name	Company	Phone	e-mail
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Meeting Sign-In Sheet

SW 10th Street PD&E Study

FDOT-SFWMD Drainage-Permit Coordination

Meeting

February 15, 2018 @ 9.45 am

Meeting Location: SFWMD, 3300 Gun Club Road,
West Palm Beach, FL



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MEETING MINUTES



Project:	SW 10 th Street Connector PD&E Study	FPID No:	439891-1-22-02
		Contract No.:	C9V60
Meeting Place:	Broward County 1 N. University Drive Plantation, FL	Meeting Date:	2/21/18
		Meeting Time:	2:00 p.m.
Participants:	See sign-in sheet for attendees		
Purpose:	FDOT-BCEPGMD Drainage Coordination Meeting		

Introductions

Project Overview

1. After introductions, Chris Jackson, RS&H Senior Drainage Engineer, provided a brief project overview and indicated the purpose of the meeting was to discuss potential impacts to Broward County Water Control District (BCWCD) #2 surface water management infrastructure. He discussed the preliminary alignments that were currently under evaluation as part of the Florida Department of Transportation (FDOT) SW 10th Street Project Development & Environment (PD&E) study.
2. Chris presented a stacked exhibit illustrating a northern alignment and a center alignment, both consisting of typical sections with four managed lanes within a depressed open cut section primarily serving traffic to/from the Sawgrass, Turnpike, and I-95, along with four at-grade, local general purpose lanes serving local SW 10th Street traffic.
3. Chris stated that the project is under a fast-track schedule since FDOT is planning to move directly from the PD&E study phase into the Design-Build phase, allowing for the proposed managed lanes to connect with the I-95 express lanes, which are currently under construction. He stated that the project is currently funded in 2025, however, funding is expected to become available sooner.

Drainage Overview

4. Chris indicated that the project is located within the South Florida Water Management District (SFWMD) Hillsboro Canal drainage basin and the BCWCD C-2 basin. He noted the project falls under the regulatory jurisdiction of SFWMD, as well as BCEPGMD since existing BCWCD #2 infrastructure and right-of-way is proposed to be impacted.
5. Chris indicated that portions of the project fall within the FEMA 100-year floodplain and the City of Deerfield Beach Wellfield zone of influence.
6. Chris provided an overview of the existing drainage. He indicated that the C-2 basin is controlled by one structure (S-4) at the north end of the C-2 Canal which discharges to the SFWMD Hillsboro Canal. He also indicated that, per prior correspondence with Carl Archie, BCWCD #2, the C-2 basin is designated as a "water quality basin" which provides storage, treatment, and groundwater control necessary to protect the wellfields from saltwater intrusion.

7. Chris acknowledged that stormwater treatment and attenuation would be required for the project. He also indicated that the project would likely impact the existing cross drains serving the BCWCD C-2 and C-3 canals.
8. Chris provided an overview of the potential stormwater management options. He stated that drainage and permit criteria could be achieved with the conventional approach of collecting and conveying project runoff to an adjacent, isolated offsite stormwater management facility for treatment and attenuation prior to discharge to receiving waters. Alternatively, he noted that the “water quality basin” designation provides additional flexibility by allowing for the potential of expanding/modifying any of the existing stormwater management facilities within the entire C-2 basin as needed to provide the required water quality, water quantity, and floodplain compensation volume for the project.
9. Chris indicated that the flexibility provided by the designation of the basin as a “water quality basin” would allow for modification/expansion of the existing stormwater management facilities such as the vacant golf course at Century Village and within the Deer Creek Golf Course, north of Hillsboro Boulevard. He noted that if these golf courses cannot be modified/expanded to accommodate the project, then FDOT would have very limited stormwater management options and would most likely need to acquire large offsite industrial parcels along the south side of the project.
10. Jose Portillo, BCEPGMD, agreed with the “water quality basin” designation but noted that FDOT would need to demonstrate no adverse impacts to conveyance at or near the point of inflow. Chris agreed with this concern and stated that FDOT would certainly evaluate any potential for adverse impacts.
11. Chris indicated that this “water quality basin” approach was also discussed at a meeting with SFWMD on February 15, 2018. He noted that SFWMD supported the approach but mentioned that there is no existing Environmental Resource Permit (ERP) for the C-2 basin and therefore a new ERP application would have to be submitted by Broward County if FDOT pursues this approach. The ERP application would require a model of the entire basin to demonstrate how it functions today. Carl and Jose stated there was no concern with this, but were unsure if this would require a new permit versus a modification to an existing permit, previously issued to Broward County for a project to the west of the SW 10th Street project.
12. Susan Juncosa, BCEPGMD, expressed concern with direct discharge of stormwater runoff to the C-2 Canal which is near the wellfields. She noted potential impacts to the wellfield and suggested that homeowners would be concerned that their ponds wouldn’t be degraded. Chris stated that similar concerns were encountered with the I-595 project in which there was direct discharge to the Lago Mar and Pine Island Ridge golf courses, and explained that the Department committed to providing sumps and baffles on every inlet throughout the project along with pollution control box just upstream of the discharge point into the golf course pond systems. He noted a similar approach could be taken for this project.
13. Chris indicated that at the recent SFWMD meeting, Carlos de Rojas clarified that dry pre-treatment retention is only required when the proposed stormwater management facilities are physically located within the wellfield zone of influence. Chris noted that while portions of the project falls within the wellfield zone of influence, none of the proposed stormwater management facilities do. He added that the proposed modifications/expansions to the stormwater management system could be limited to areas outside the wellfield zone of influence as well. Susan indicated that existing stormwater management facilities within the wellfield zone of influence could also become a concern since everything is interconnected.

14. Jose indicated that nutrient loading, particularly for nitrogen, could be a concern and inquired about the possibility of providing dry pre-treatment before discharging into the existing stormwater management system. Chris stated that it wouldn't be possible to provide dry pre-treatment within the existing corridor due to insufficient right-of-way width. However, he noted dry retention pre-treatment could be provided if roadway runoff was collected and conveyed by pipe to the offsite parcel located within the vacant golf course at Century Village, adjacent to Military Trail. Chris also stated that French drain might be able to be used along SW 10th Street to provide a limited amount of pre-treatment prior to discharge through a weir to the C-2 Canal. However, he had reservations since the need for pump stations to drain the depressed managed lanes section could make the use of French drain with weirs an unviable option. Susan and Jose also reaffirmed that French drains wouldn't be allowed within the wellfield zone of influence.
15. Susan inquired about the status of the Century Village golf course ownership, as she recalled a permit recently being submitted for a residential development. Chris stated that it is his understanding that there is a Memorandum of Agreement between the property owner, Fairway Investors LLC, and Toll Brothers for the three eastern vacant golf course parcels. However, he was unsure if the actual closing had yet gone through. Anson Sonnett, FDOT Project Manager, stated that Toll Brothers presented the City of Deerfield with plans to develop one parcel and turn the other two over to Century Village as passive parks but no approval has yet been given.
16. Chris stated that before putting too much effort into coordinating with Fairway Investors, Toll Brothers, or Deer Creek, FDOT needed to confirm the viability of the "water quality basin" approach. Otherwise, he noted, the focus would need to shift to traditional offsite pond siting and acquisition. Jose and Carl indicated that the "water quality basin" approach should be acceptable as long as the nutrient loading and pre-treatment concerns were properly addressed.
17. Chris indicated that the managed lanes depressed section would impact existing cross drains serving the BCWCD C-2 and C-3 canals. He noted that inverted siphons below the managed lanes depressed section, pipes on structure spanning over the managed lanes, and/or pump stations would be required to maintain these conveyances. He also noted that a pump station would be required for FDOT to collect and convey the roadway runoff from the managed lanes depressed section.
18. Carl stated they do not use stormwater pump stations since they have the advantage of gravity head within this area. He emphasized that maintenance and accessibility of the infrastructure would be a concern. He stated that while he would not prefer pump stations, he would not immediately rule them out. Carl asked that the options be sent to him so that he could evaluate them further. Jason Lee, Kimley-Horn, will prepare and distribute exhibits illustrating the three concepts.

Permit Requirements

19. Chris indicated that there are no existing Broward County or SFWMD stormwater management permits for the project or C-2 basin. He added that there is only a SFWMD Consumptive Use permit for the City of Deerfield Beach Wellfield.
20. Chris envisioned SFWMD would require submittal of an ERP application from Broward County to address the existing conditions of the BCWCD C-2 drainage basin, followed by a subsequent ERP application from FDOT for the SW 10th Street project that would build upon the permit to be issued to Broward County. He noted that the Broward County application would need to include drainage maps and ICPR model based on existing plans, atlas', as-builts, etc. and that the FDOT application would essentially modify the Broward

County drainage maps and ICPR model to reflect the additional impervious area and modified/expanded stormwater management facilities associated with the SW 10th Street project.

21. Carl mentioned that the County had similarly permitted one of its regional basins with SFWMD. He stated that this was done primarily to turn the entire area into a wellfield recharge basin and to facilitate large scale development.
22. Chris stated that while the proposed improvements do not physically impact or encroach existing wellfield infrastructure, SFWMD also requested that groundwater modeling be performed to ensure that the wellfields are not impacted by the managed lanes depressed section. He also mentioned that SFWMD requested additional analysis to ensure that dewatering activities do not adversely impact wellfields.
23. Chris noted that there were no wetlands within the project limits but that dredging activities would be required within other surface waters, including the BCWCD C-2 and C-3 canals.
24. Chris identified the anticipated environmental permits, as follows: SFWMD Environmental Resource Permit, SFWMD Consumptive Use (Dewatering), and USACE Section 404 Dredge & Fill Permit. In addition, he noted that a Surface Water Management License and a Natural Resource License would be required from BCEPGMD. Jose indicated that a Dewatering Approval may also be needed from BCEPGMD if dewatering is required within 500 feet of a contamination site.
25. Chris inquired about the new Broward County codes pertaining to sea level rise and antecedent (groundwater) conditions. Jose stated that the project is too far west to be affected by these new codes.

Meeting Sign-In Sheet

SW 10th Street PD&E Study FDOT-BCEPGMD Drainage-Permit Coordination Meeting

February 21, 2018 @ 2:00 pm

Meeting Location: Broward County, 1 N. University Drive,
Plantation, FL



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