




# **SOUTH FLORIDA WATER MANAGEMENT DISTRICT**

## **Memorandum**

**To:** Jill Creech, Division Director, Regulation Division

**From:** J. Timothy Beirnes, Inspector General 

**Date:** October 1, 2024

**Subject:** Investigation of Complaints Re: ERP Permit for Sierra Ranch - Project # 24-07

---

### **BACKGROUND**

We received a complaint concerning a District Environmental Resource Permit (ERP) issued to Lennar Homes (Developer) that authorized the construction and operation of a Stormwater Management System (SWM) and Water Preserve Area serving 89.1 acres of residential development known as Sierra Ranch located in the Town of Davie, Broward County, Florida. The project was designed with 79 homesites. The SFWMD's ERP permit included constructing a 6-acre on-site lake and enhancing 24 acres of on-site wetlands into a natural Water Preserve Area Basin. The project also entailed a permit issued by the Central Broward Water Control District (CBWCD) that entailed constructing a 35-foot open water channel along the shoreline boarding the buildable lots.

The design went through different iterations between 2003 and 2006 under different owners and wetland consultants along with the permits transferred to different owners. The project's initial design specified the open-water buffer at 10 feet deep and 75 feet wide. A new developer applied for a new permit in 2017 with a modified design of the site and wetland preserve. Due to a large onsite existing wetland, mitigation efforts were determined necessary to take place for the development of the property. The new design incorporated a larger wetland preserve, consolidated on the eastern side of the property. The new design reduced the width of the open-water channel/buffer from 75 to 35 feet. The mitigation was done with a planned combination of providing offsite credits and providing for an onsite wetland; thus, requiring an ERP permit from the SFWMD. The new design incorporated a larger wetland preserve, consolidated on the eastern side of the property.

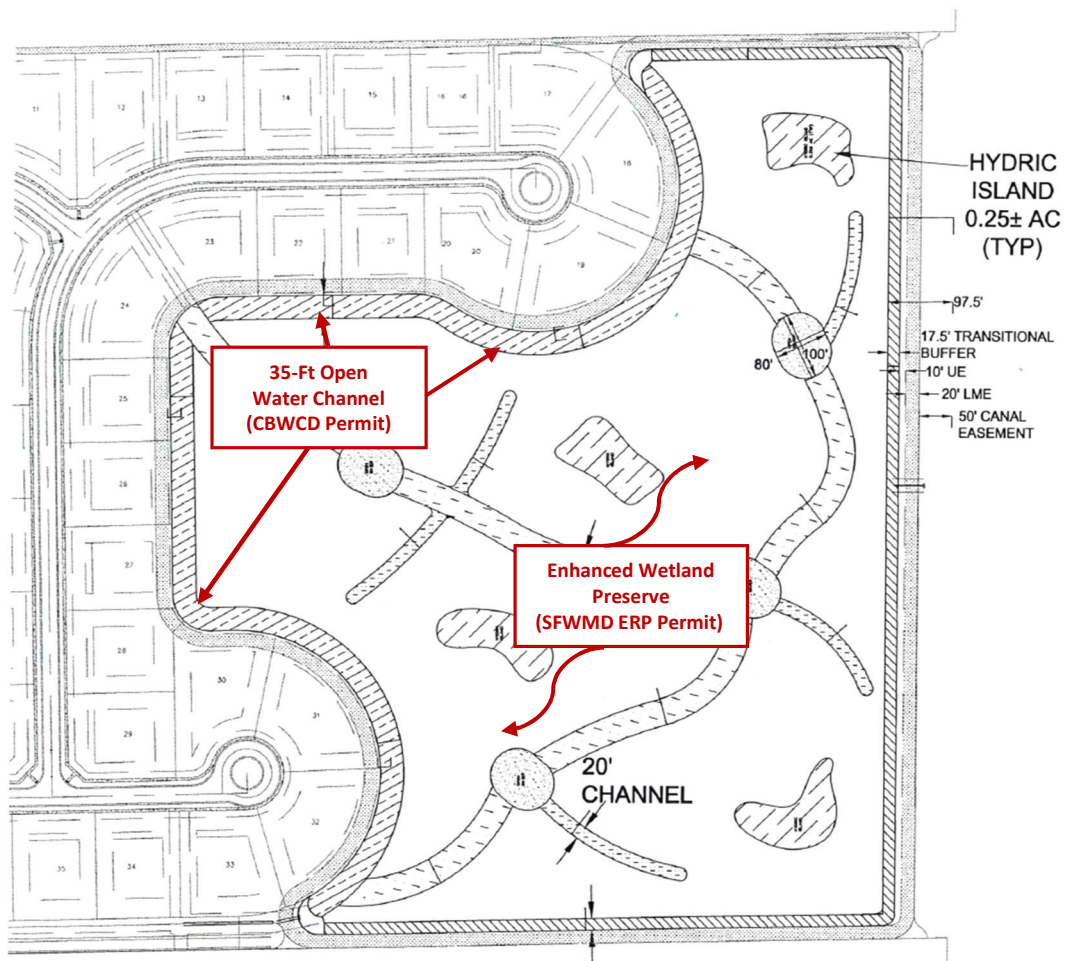
---

On May 26, 2021, Lennar Homes LLC granted to the CBWCD a Drainage, Flowage and Storage Easement, along with a companion Lake Maintenance Easement to provide for a 35-foot open-water channel that borders the shoreline of the building lots for the Sierra Ranch development to provide drainage, retention, and flowage.

Following is an aerial photograph of the completed project:

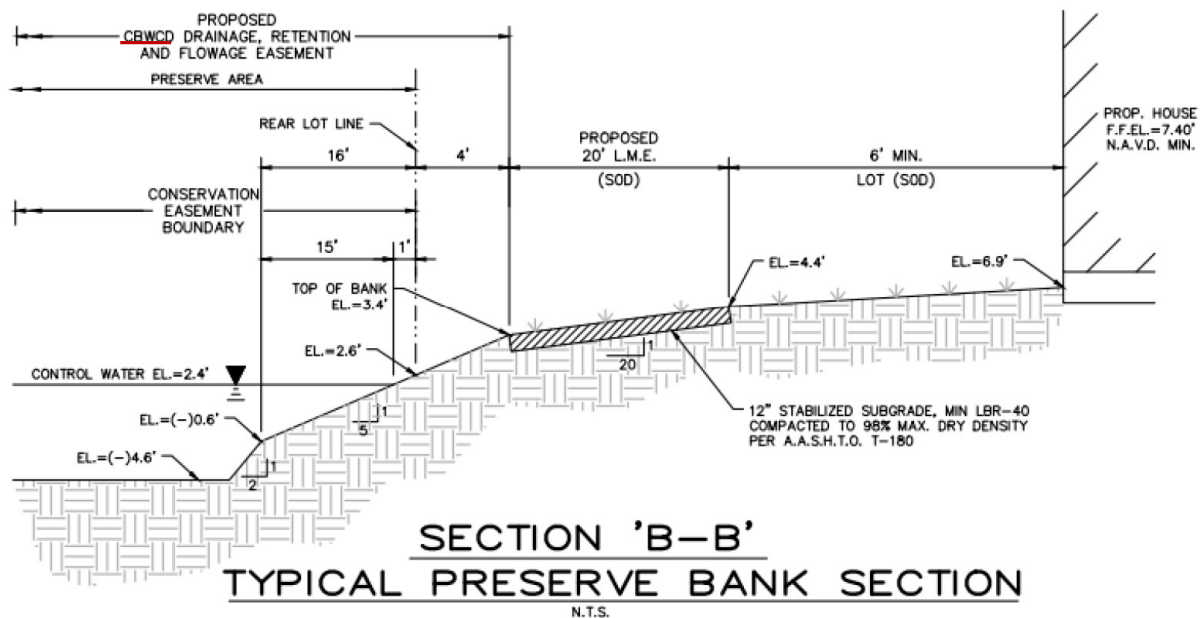


The following illustration delineates the areas covered by the CBWCD permit for the Open Water Channel and the SFWMD's ERP Permit:





The following illustration shows the Typical Preserve Bank Section along the shoreline for the CBWCD Drainage, Retention and Flowage easement.



The Complainant engaged Pillar Consultants, Inc., a Consulting Engineers Planners & Surveyors, firm (the Consultant) to perform cross-sections and earthwork analysis of the open water channel to assess whether the as-built survey properly reflects actual site conditions. The Consultant performed site survey work between September 22, and September 25, 2023, which was between 44 and 47 days after the sign-off date on as-built survey submitted to the CBWCD.

---

## **ALLEGATIONS & CONCERNS**

The Complainant's concerns are summarized into the following three specific allegations:

- 1) The design drawings contain conflicting cross-sections regarding the open-water channel, with one showing a 7-foot depth and another a 10-foot depth.
- 2) The surveyor, Joseph Martin, (the "Surveyor") signed the as-built survey submitted to the SFWMD on 12/10/2021. The survey states that the drawings reflect their findings as per a field survey performed on 12/01/2021. The Surveyor signed the as-built survey submitted to the CBWCD on 8/9/2023, approximately 20 months later. The Complainant further asserts that the as-built survey drawings submitted to the CBWCD are identical and based on the same 20-month-old 12/01/2021 field survey data, with the sign-off date being the only difference between the two.
- 3) The final as-built surveys submitted to the SFWMD (District) and CBWCD do not reflect the actual final site conditions as constructed by the Developer. Specifically, the Complainant alleged that the width and depth dimensions of the open water channel construction, along the shoreline boarding the homesites, are both less than the dimensions shown on the as-built surveys. Further, the actual depth in many areas is still less than 7 feet (even using the shallower depth in the ambiguous design documents). According to the Complainant, the narrower and shallower open-water channel has resulted in wetland plants (native and non-native nuisance species) propagating near the shoreline and throughout the area where the open water channel/buffer is proposed to be between their homes and the wetland marsh areas.

## **OBJECTIVE, SCOPE AND METHODOLOGY**

Our objective was to determine whether the Complainant's allegations have merit. To accomplish our objective, we performed the following procedures:

- Discussed allegations with the Complainant.
- Reviewed documents submitted by the Complainant.
- Discussed the allegations with District Regulatory staff members.
- Reviewed documents provided by District staff.

---

Our investigation includes an evaluation of the evidence to determine whether the alleged improprieties were:

- **Unfounded:** The allegation is false or not factual.
- **Exonerated:** The allegation occurred but was lawful and proper.
- **Not Sustained:** Insufficient evidence to prove or disprove the allegation(s).
- **Sustained:** The allegation is supported by sufficient evidence to justify a reasonable conclusion that it occurred and was improper or unlawful.

Our investigation was conducted in accordance with the Principles and Standards of Offices of Inspector General promulgated by the Association of Inspectors General. These standards require that we plan and perform the investigation to obtain sufficient appropriate evidence to provide a reasonable basis for our findings and conclusions based on our investigation objectives and report the results in a timely manner.

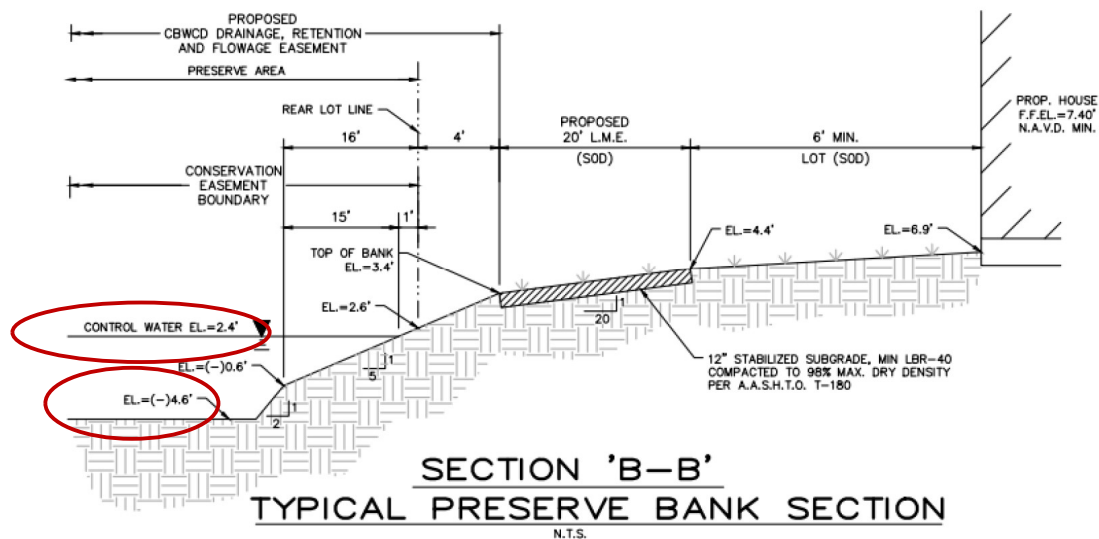
## **Statement of Independence**

The Office of Inspector General serves as an independent oversight unit within the District to examine and evaluate its activities. The Office of Inspector General is independent of District management and cannot be prevented "from initiating, carrying out, or completing any audit or investigation." The Inspector General reports directly to the District's Governing Board (the "Board"), through the Board's Audit & Finance Committee, whose members are appointed by the Chairman of the Board. The Audit & Finance Committee operates under an Audit & Finance Committee Charter established by the Board. The Office of Inspector General is accorded unrestricted access to District facilities, records, and documents and is not limited as to the scope of work. The legal basis for the Inspector General's authority to conduct these audits or investigations is contained in Chapter 20.055, Florida Statutes, Agency Inspector General. Chapter 373.079, Florida Statutes, authorizes the Governing Board to appoint an Inspector General whose scope of work is unrestricted.

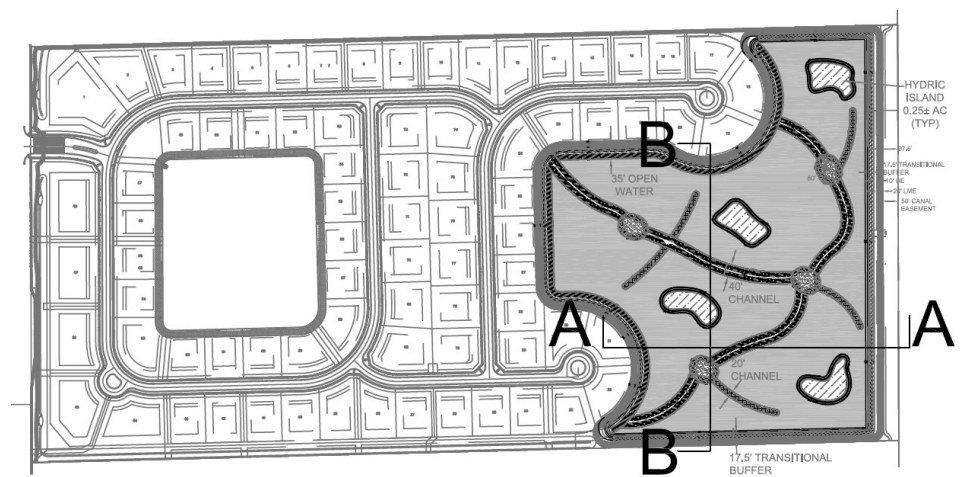
## INVESTIGATION RESULTS

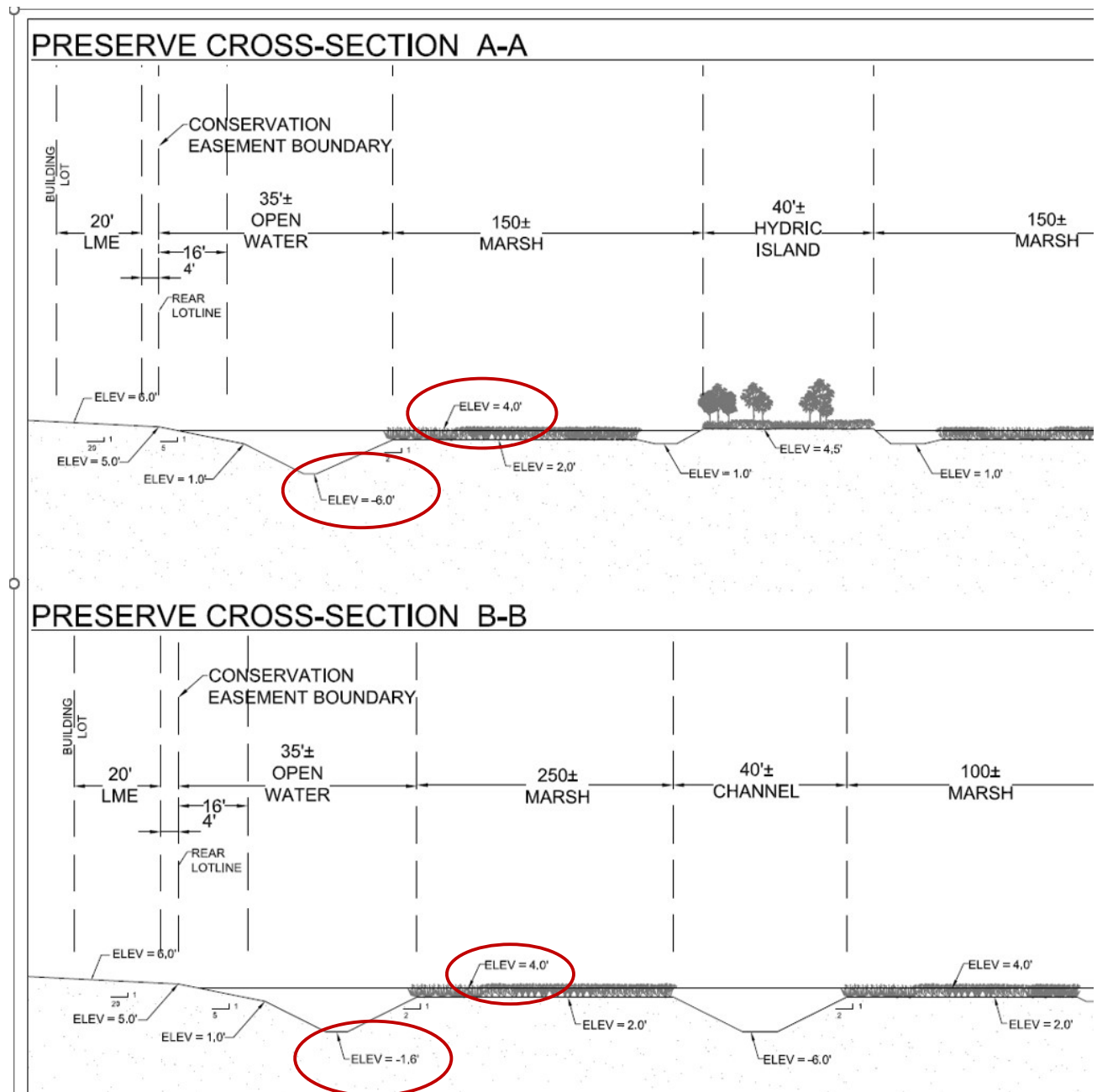
### Allegation Re: Design Depth Discrepancy

To address the allegation as to whether the design contains conflicting cross-sections regarding the open water channel (with one showing a 7-foot depth and another a 10-foot depth) we compared the indicated elevation shown on the Section B-B Typical Preserve Bank Section (shown below) to the elevations indicated on other typical drawings in the same set of plans. The drawings state that all elevations are shown in **NGVD 1929 DATUM**.



The above cross section shows the bottom of the open-water channel elevation at -4.6 feet and the Control Water Elevation at +2.4 feet. Based to this cross section, the bottom of the open water channel was designed to be 7 feet below the Control Water Elevation. The design documents also contained the following drawing. (The A & B cross-sections are shown on the following page.)





The Preserve Cross-Section A-A above shows the open water channel elevation at -6.0 feet and a line that appears to be the Control Water Elevation at +4.0 feet; thus, indicating a designed water depth of 10 feet. Additionally, the Preserve Cross-Section B-B above shows the open-water channel elevation at -1.6 feet and a line that appears to be the Control Water Elevation at +4.0 feet; thus, indicating a designed water depth of 5.6 feet.



---

**Conclusion Re: *Design Depth Discrepancy:***

The line presumed to be the Control Water Elevations on both of the “Preserve Cross-Section” on page 8 are not labeled and may represent something else; therefore, we cannot definitively determine whether the differences between the drawings represents discrepancies. The as-built plans show the open-water channel was constructed with a base elevation of -4.6 feet NGVD, which is consistent with the cross section shown on page 7. Considering that the Control Water Elevations are not labeled on the apparent conflicting drawings there is insufficient evidence to prove or disprove this allegation; thus, the allegation is Not Sustained.

---

## **Allegation Re: Survey Field Work Not Updated Between As-Builts Submissions**

### **Allegation Details**

The Complainant asserts that the surveyor, Joseph Martin, signed the as-built survey submitted to the SFWMD on 12/10/2021. The survey states that the drawings reflect their findings as per a field survey performed on 12/01/2021. The Complainant further asserts that the surveyor signed an as-built survey submitted to the CBWCD on 8/9/2023, approximately 20 months later. He further asserts that the as-built survey drawings submitted to the CBWCD are identical, and based on the same 20-month-old 12/01/2021 field survey data, with the sign-off date being the only difference between the two.

### **Examination of Evidence**

Our observations of the dates on the as-built surveys submitted to the SFWMD and the CBWCD confirm the Complainant's allegation and appears to be identical in every way, except for the sign-off date. The Complainant also requested their Consultant to review the two sets of plans to determine if they were identical. An email from the Consultant to the Complainant, dated October 24, 2023, states: "I checked the as-builts and they are indeed the same. The field work for the as-builts was completed on 12/01/2021. All survey's list either the last date of field work or the day that field work was completed. It is note 3 on the cover of the as-builts (see below). The dates of which the survey is signed does not signify that they rechecked the work."

#### **NOTES**

1. ELEVATIONS SHOWN ARE EXPRESSED IN U.S. FEET AND REFER TO NORTH AMERICAN VERTICAL DATUM (N.A.V.D.) OF 1988
2. BROWARD COUNTY BENCH MARK #2352; ELEVATION: 7.132 FEET.  
DESCRIPTION: BRASS DISC. IN CONCRETE, NORTHEAST SECTION CORNER OF SECTION 13-50-40, 175 ± OR- SOUTH OF CENTERLINE OF SOUTHWEST 13 PLACE, 7.5± WEST OF WEST EDGE OF PAVEMENT OF HIATUS ROAD. B.M. FOUND 8-9-2000  
NOTE: MARK FOUND AT W.E.O.P., ABOUT 1' BELOW GROUND LEVEL.
3. THIS DRAWING REFLECTS OUR FINDINGS AS PER A FIELD SURVEY PERFORMED ON: 12/01/2021
4. COUNTY-WIDE LAND SURVEYORS, INC. CARRIES PROFESSIONAL LIABILITY INSURANCE FOR SURVEYING AND MAPPING SERVICES.
5. AS-BUILT PLAN NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

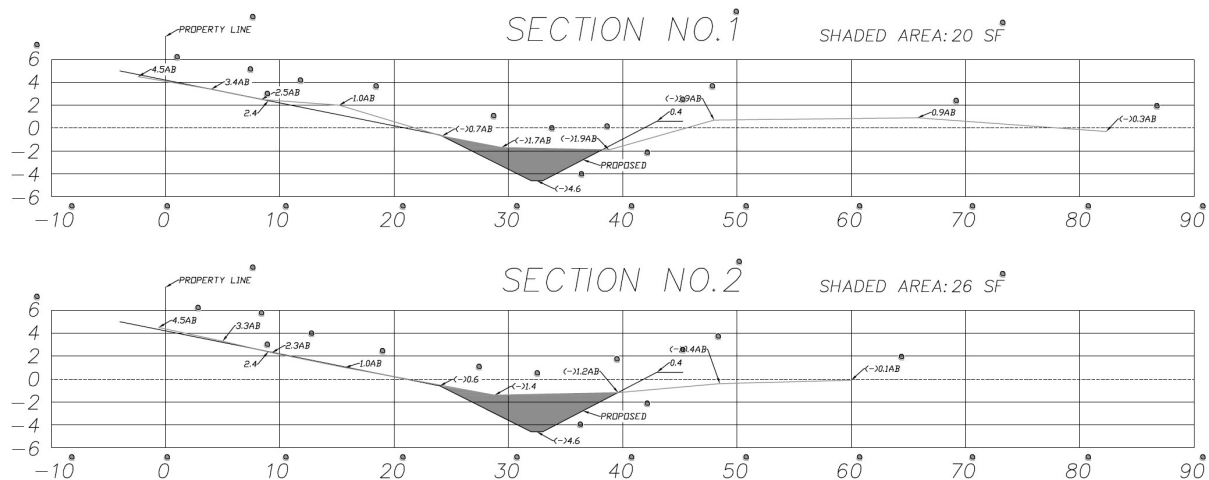
### **Conclusion Re: Survey Field Work Not Updated Between As-Builts Submissions:**

Evidence supports the allegation that the survey field work was not updated between the as-built's submitted to the SFWMD and the CBWCD; thus, the allegation is Sustained.

The Complainant's Consultant performed cross-sections and earthwork analysis of the open-water channel to assess whether the as-built survey properly reflected actual site conditions. The consultant performed site survey work between September 22nd, and September 25th, 2023, which was between 44 and 47 days after the as-builts sign-off date survey submitted to the CBWCD.

[illegible]

Following is a sample of the 16 cross-sections:



The Consultant's report included the following findings regarding whether the as-built surveys reflect the actual site conditions:

- The width of the open-water channel in certain locations was less than 20 feet, compared to the design width of 35 feet.
- The survey results revealed that little to no channel currently exists compared to the original approved plans and the as-builts provided by the developer.
- The bottom of the proposed channel was found to be filled in.
- Wetland plants were observed propagating within the open-water channel when little to no wetland plants should exist due to the prescribed depths of this area (7' or 10').
- The estimated amount of excavation to bring the open-water channel back to conformity of the plans, utilizing the 7' depth, was ~41,000 Cubic Feet of material; and about three times that amount utilizing the 10' depth.

Using the cross section details in the Consultant's report, we calculated that the average open-water channel depth of the elevations at the lowest points of the 16 cross section surveyed. The result showed the actual average depth is 2.1 NAVG, for a total depth of 4.5 feet, or 2.5 feet less than the 7-foot depth shown in the as-built surveys.

---

**Conclusion Re: *As-Builts Not Reflecting Actual Site Conditions:***

The Consultant's drawings shows that the open-water channel depth is shallower than the depth shown in the as-built survey that was submitted to the CBWCD with a sign-off date of 8/9/2023. The Consultant's report states that their field survey took place on September 22<sup>nd</sup> and 25<sup>th</sup>, 2023, only 44 to 47 days later. However, the as-built survey states that "this drawing reflects our findings per a field survey performed on 12/01/2021", approximately 20 months prior to the sign-off date. It should be noted that, although both surveys do show very different results, both were performed by license professionals and any conclusions reached by us are limited to comparing the results of the two surveys. We do not represent to have the proficiencies to assess the credibility of one survey over the other; however, we do offer the following observations:

- Considering the short period of time between the as-built survey sign-off date on the survey submitted to the CBWCD and the field survey performed by the Complainant's Consultant, there is a low probability that the conditions changed significantly during such a short period of time (44 to 47 days).
- Considering the 20-month period between the sign-off date and the actual field survey for the survey submitted to the CBWCD, it is conceivable that the as-built survey does represent the actual site conditions on the indicated field survey date of 12/01/2021, but that the conditions changed over the following 20-month period due to erosion in the open-water channel.



---

## OVERALL CONCLUSION

The three allegations addressed in this investigation are all issues concerning only the open-water channel. It should be noted that construction of the open-water channel was regulated by the permit issued by the CBWCD. The SFWMD's **ERP permit covers the Stormwater Management System** and enhancements to the Water Preserve Area; thus, regardless of the conclusion presented regarding each of the specific allegations concerning the open-water channel, we did not find any improprieties by District staff regarding the SFWMD's ERP permit.

cc: Drew Bartlett  
Jennifer Smith  
Maricruz Fincher  
Jesse Markle  
Natalie Cole