



## Florida Department of Environmental Protection

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September 14, 2016

Mr. John Ryan  
Environmental Manager  
Sarasota County  
1001 Sarasota Center Boulevard  
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RE: Response to Comments for the Sarasota Bay, Peace and Myakka DRAFT Impaired Waters List

Dear Mr. Ryan,

Thank you for your comments regarding the draft assessments for the Sarasota Bay, Peace and Myakka basin. It is important that we receive input from interested stakeholders to ensure accurate assessments of Florida's waters. This letter is in response to those comments received via e-mail on February 9, 2016.

In the evaluation of these waterbodies (WBIDs – **WaterBody ID**entification assessment units), our assessment takes into consideration whether the results are representative of the current conditions of the waterbody. Please keep in mind that the assessments you commented on were reassessed using data through June 30, 2015 (in the Impaired Waters database (IWR Run 52)) extracted from Florida STORET (**STOR**age and **RETR**ieval database) as of February 11, 2016. We delayed responding to your comments until this database was made available. Your comments are provided below and our response immediately following.

**Sarasota County – Comment 1:** The foremost concern about the DRAFT lists is the absence of the abundance of high-quality ambient water quality data produced by Sarasota County that is available in the STORET database. The Department has indicated that the data in STORET will be used for the next (revised) assessment and lists

to be published in the coming months. The Department is strongly encouraged to make use of this data in order to make the best science-based decisions.

**FDEP Response 1:** For performing water quality and biological assessments, the department considers all readily available data, with the Florida STORET database serving as the primary source of data. The Draft Group 3 Sarasota Bay, Peace and Myakka basin assessments were based on data extracted from STORET in October 2014 while the assessment period for the basin ended in June 2015. If data was uploaded into STORET after the extraction date it would not have been used in the draft assessments.

The Revised Group 3 Sarasota Bay, Peace and Myakka basin assessments were based on data extracted from STORET on February 11, 2016, so any applicable data uploaded before this date was used in the revised assessments. This latest extraction saw Sarasota County Verified Period data increase from 67,043 records (October 2014 extraction) to 149,475 records.

**Sarasota County – Comment 2:** Lake Myakka (Upper Segment) (WBID 1981C) was not analyzed properly for Total Phosphorus under 62-302.531, as it is located within the West Central Nutrient Watershed Region and has a long-term geometric mean for True Color greater than 40 PCU (126 PCU); therefore, the stream criterion of 0.49 mg/L should have been used. County review did not find this waterbody was impaired for this parameter.

**FDEP Response 2:** WBID 1981C (Lake Myakka (Upper Canal)) has a long-term color of 125 Platinum Cobalt Units (PCU), therefore chlorophyll-a is assessed applying the 20 µg/L criterion. In all years of the Verified Period besides 2008, there is insufficient data to calculate an annual geometric mean (AGM) for chlorophyll-a. As per 62-302.531 F.A.C., Total Phosphorus (TP) was assessed applying the minimum criterion of 0.05 mg/L for lakes with true color greater 40 PCU for each year in the assessment period except for 2008. Although the WBID is located in the West Central Nutrient Watershed Region and has a long-term geometric mean for lake color greater than 40 PCU, it is still subject to the minimum criterion due to the lack of sufficient chlorophyll-a data. TP is exceeding the minimum criteria of 0.05 mg/L in years 2010 and 2011, which is more than once in a three-year period. The TP impairment remains on the Verified List for the revised assessment.

**Sarasota County – Comment 3:** Many of the results for metals appeared to be in the incorrect unit of measure. For example, results for Iron in Curry Creek were 391, 0.61, 0.53, 0.918, and 0.513 µg/L. Although it is possible that the 391 is in µg/L, it is more likely to actually be mg/L. This pattern, with values in the hundreds and thousands combined with low ones and small decimals and no intermediate values, was repeated often. Units of measure need to be verified and corrected where necessary.

**FDEP Response 3:** The department investigated the iron data in WBID 2009 (Curry Creek) and confirmed that there were some incorrect units of measure for iron values and

Method Detection Limits (MDLs) for data collected by the department from August 2003 to June 2004 (STORET Organization code 21FLTPA). The department has begun working with the Southwest Regional Operating Center (ROC) and the appropriate STORET coordinator to correct the data. Until the corrections are reflected in the IWR database, the data with incorrect units will be manually adjusted and used to assess the iron data. As per this correction and the replacement of WBID 2009 (Curry Creek) with WBID 2009B (Curry Creek (Freshwater Portion)) and WBID 2009C (Curry Creek (Tidal Portion)) (described in FDEP Response 4), WBID 2009C will be placed in category 3b – insufficient data with 5 out of 5 samples below the 1.0 mg/L criteria (6/11/2003 - 0.391 mg/L, 7/23/2003 - 0.610 mg/L, 10/13/2003 - 0.530 mg/L, 12/1/2003 - 0.918 mg/L, 12/16/2003 - 0.513 mg/L).

Additionally, the metal results for WBIDs 1975A (Clowers Creek Estuary) for Copper, 1995 (Myrtle Slough) for Iron, and 2053 (Trailer Park Canal) for Copper were also investigated for incorrect units of measure. There were no errors found in those metals data.

**Sarasota County – Comment 4:** A number of waterbodies including Warm Mineral Spring (2026A), Curry Creek (2009), Mud Lake Slough (1958), and Clower Creek (1975A) were assessed as Class 3F however, County analyses indicate the sample results do not always meet the State’s definition of “Predominantly Fresh” waters: <4,580 µmhos/cm (62-303.200(20), F.A.C.). In addition, Myakka River below Blackburn Bridge (1991G) was assessed as Class 3M but the long term arithmetic mean of Specific Conductance was 2,472 µmhos/cm (10% of the total number of samples). The definition and interpretation of “Predominantly Fresh” and “Predominantly Marine” needs to be addressed and clarified.

**FDEP Response 4:** Due to the high-mineral content of Warm Mineral Spring as described in the FDEP Ground Water Protection Section’s *Documentation to Support Natural Conditions: Dissolved Oxygen in Group 3 Springs* report and the high specific conductance results (> 4,580 µmhos/cm), WBID 2026A (Warm Mineral Spring) has been changed from a class 3F spring to a class 3M spring. Additionally, the geometry of WBID 2026A has been revised to better reflect the spring’s geometry, resulting in the reassignment of stations 112WRD 2703330821, 112WRD 270333082154000, and 21FLA 270330508215422 to WBID 2026 (Little Salt Creek [Warm Mineral Spring]). Please see Figure 1 below for the WBID boundary revisions and station reassignments.

Furthermore, due to tidal influence (and corresponding high specific conductance results), WBID 2009 (Curry Creek) will be retired and replaced by WBID 2009B (Curry Creek (Freshwater Portion)) and WBID 2009C (Curry Creek (Tidal Portion)). WBID 2009B will be classified as a 3M estuary and extend eastward to Capri Isles Blvd to capture all of the tidally-influenced portions of the waterbody. WBID 2009C will extend from Capri Isles Blvd eastward to the current WBID 2009 boundary and will be classified as a 3F stream. Please see Figure 2 below for the revised WBID boundaries. These

WBID revisions will be reflected in the upcoming 53<sup>rd</sup> run of the Impaired Waters database.

WBID 1958 (Mud Lake Slough) was not found to have any specific conductance or chloride concentration values exceeding the “predominantly marine water” standards (4,580  $\mu\text{mhos/cm}$  and 1,500 mg/liter, respectively) during Cycle 3 and is therefore not considered to be tidally-influenced (i.e. marine). WBID 1975A (Clowers Creek Estuary) was assessed as a 3M estuary for Cycle 3 and will remain that classification.

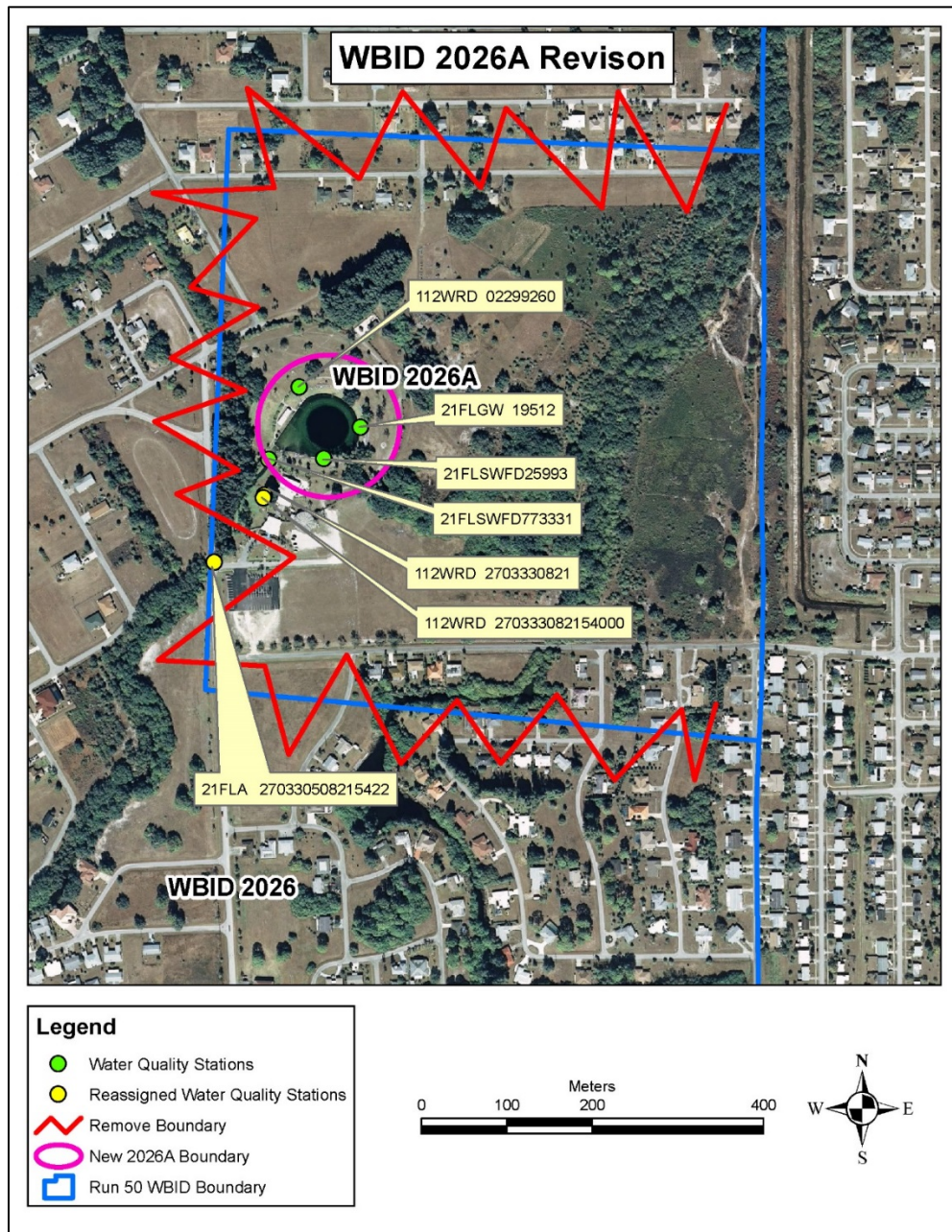


Figure 1. WBID 2026A and associated station revisions



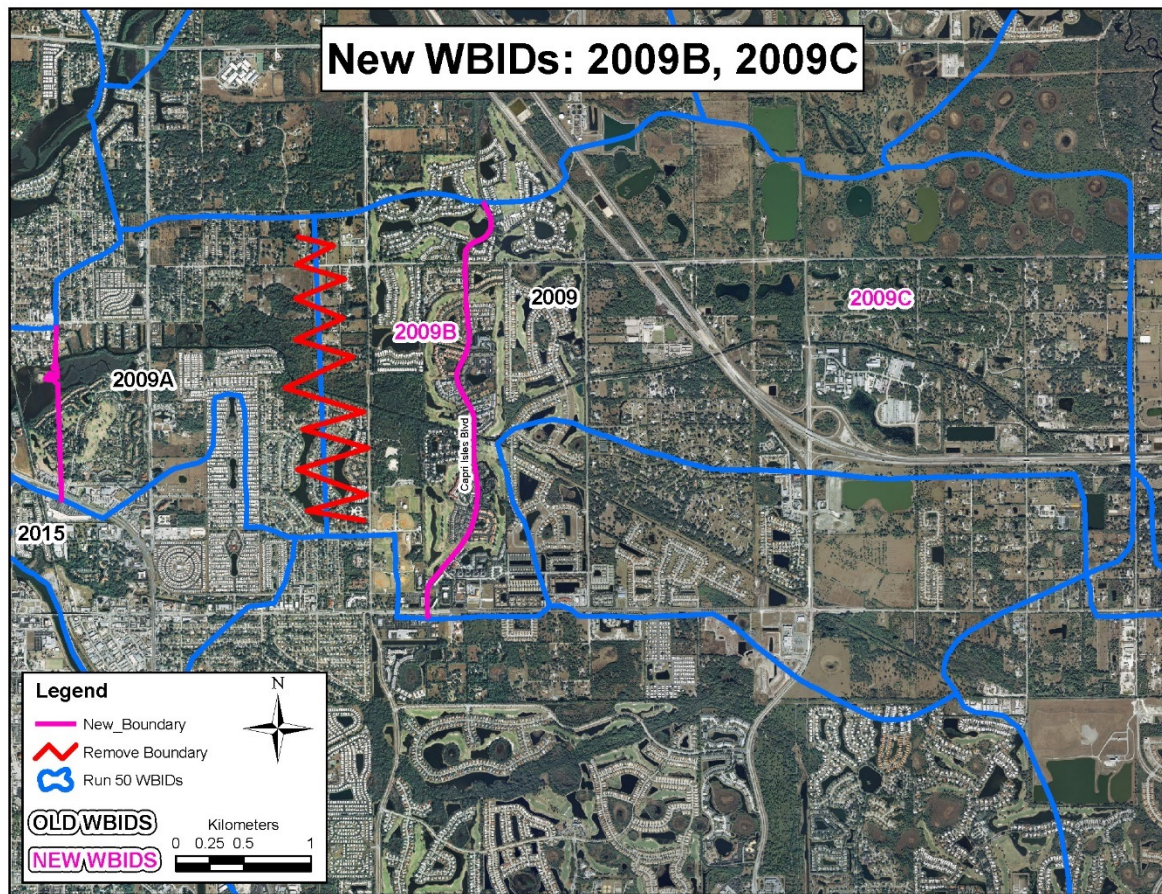


Figure 2. WBID 2009B and 2009C boundaries

**Sarasota County – Comment 5:** Many of the units of measure for sample depths should be examined. Although it is possible that samples were taken at 0.2 and 0.5 feet (2.4 – 6 inches), it is more likely they were taken at 0.2 – 0.5 meters, which would be more in line with most established and accepted practices. It is recommended that sample depths be verified and corrected as necessary.

**FDEP Response 5:** The recorded sample depths of 0.2 and 0.5 feet are accurate. These depths reflect the previous sampling protocol followed by the department's South ROC samplers.

**Sarasota County – Comment 6:** Myakka River (1981B) was assessed as impaired for Nutrients (Algal Mats) and Myakka River (North Fork) (1877C), Cow Pen Slough (1924), Indian Creek (1943), Phillippi Creek Tributary (1966), and Curry Creek (2009) were listed for Nutrients (Macrophytes) based upon floral surveys. Although the assessments are in accordance with 62-303.200, 62-303.320 through 62-303.330, and 62-303.350 through 62-303.354, F.A.C., it is recommended to delay TMDL development until nutrients can be determined as the causative pollutant, rather than relying solely on floral metrics.

**FDEP Response 6:** WBIDs 1981B (Myakka River), 1877C (Myakka River (North Fork)), 1924 (Cow Pen Slough), 1943 (Indian Creek), 1966 (Philippe Creek Tributary), and 2009 (Curry Creek) were placed on the draft Verified List due to the failing of one of the floral measures used to determine the achievement of the numeric interpretation of the narrative nutrient criteria for the stream standard as described in the *Implementation of Florida's Numeric Nutrient Standards* ([http://www.dep.state.fl.us/secretary/news/2013/03/NNC\\_Implementation\\_3-11-13.pdf](http://www.dep.state.fl.us/secretary/news/2013/03/NNC_Implementation_3-11-13.pdf)); however, waterbodies not currently listed on the TMDL Development Plan through 2022 (<http://www.dep.state.fl.us/water/tmdl/docs/TMDL-Development-Plan.pdf>) are not subject to TMDL development in the near future. As a result, TMDLs for Nutrients (Algal Mats) and Nutrients (Macrophytes) will not be developed at this time. For more information regarding the development of water quality restoration goals (TMDLs), please contact Erin Rasnake (Program Administrator of the Water Quality Evaluation and TMDL program) via email at [Erin.Rasnake@dep.state.fl.us](mailto:Erin.Rasnake@dep.state.fl.us).

All WBIDs are on the revised Verified List due to the failing of one of the floral measures except WBID 2009 (Curry Creek) because, as explained in Response 4, the WBID is being retired and the replacing freshwater WBID 2009C (Curry Creek [Freshwater Portion]) is being added to the Verified List for Nutrients (Macrophytes).

**Sarasota County – Comment 7:** Venice Beach (8053D) was added for Bacteria (Beach Advisories) due to 27 days of beach advisories during 2011 (most of which occurred in the month of March). There were few beach advisories for the remainder of the Verified Period. The standard is > 21 days of beach advisories per year. TMDL development for this assessment is a high priority. It is recommended that TMDL development be delayed, as the WBID will be delisted if it does not exceed the threshold for five consecutive years and it has not exceeded standards since 2011.

**FDEP Response 7:** WBID 8053D (Venice Beach) was given a “high” priority for TMDL development as per 62.303.500(2) F.A.C. because the bacteria (beach advisories) impairment poses a threat to human health; however, since the waterbody is not currently listed on the TMDL Development Plan through 2022 (<http://www.dep.state.fl.us/water/tmdl/docs/TMDL-Development-Plan.pdf>), a TMDL for this parameter will not be developed in the immediate future. For more information on the development of water quality restoration goals (TMDLs) and priorities, please contact Erin Rasnake (Program Administrator of the Water Quality Evaluation and TMDL program) via email at [Erin.Rasnake@dep.state.fl.us](mailto:Erin.Rasnake@dep.state.fl.us).

**Sarasota County – Comment 8:** Myakka River below Blackburn Bridge (1991G) and Dona Bay (WBID 2002/ENRD1) were assessed as impaired for Nutrients (Chlorophyll-a). Myakka River below Blackburn Bridge exceeded an Annual Geometric Mean (AGM) of 11 µg/L in 2008 (13), 2009 (12), 2013 (15), and 2014 (31). Results from County analyses agree with FDEP, with the exception of the AGM for 2012 where the County

analysis found the AGM to be 9, as compared to the FDEP value of 7; both analyses support the assessment.

**FDEP Response 8:** The department calculated the 2012 AGM for chlorophyll-a in WBID 1991G (Blackburn Bridge) to be 7 µg/L (rounding down from 7.238) using the 11 samples collected during the Verified Period. The samples taken at station 21FLGW 3499 on 9/4/2012 and 10/1/2012 resulted in values between the MDL of 0.55 µg/L and the PQL of 1.7 µg/L, and as a result were qualified with an “T” qualifier. As per 62-303.320(12) F.A.C., these two values were replaced with the MDL for assessment calculations. WBID 1991G was removed from the Verified List for the revised assessment because it is not impaired for Nutrients (Chlorophyll-a) after using all of the data available in STORET on February 11, 2016.

WBID 2002 (Dona Bay) was assessed as impaired for Nutrients (Chlorophyll-a) due to annual arithmetic mean (AAM) values exceeding the  $\leq 4.9$  µg/L chlorophyll-a criterion for the Charlotte Harbor/Estero Bay Estuary Nutrient Region more than once in a three-year period (2008- 6.4 µg/L, 2009-6.4 µg/L, 2010-8.5 µg/L, 2011-7.2 µg/L, 2012-4.9 µg/L, and as of Run 52 years 2013-5.2 µg/L and 2014-7.2 µg/L) as per 62-302.532(d)1 F.A.C.

**Sarasota County – Comment 9:** Myakka River (1981B) was placed on the Study List due to Biology, having exceeded the criterion for Stream Condition Index (SCI) with averages scores of at least two temporally independent SCI scores found to be  $\geq 40$ ; the causative pollutant was not identified. The SCI scores were: 2010 (Q2) = 18, 2011 (Q2) = 18, and 2011 (Q4) = 29. This segment is not on the Strategic Monitoring Plan.

**FDEP Response 9:** The 2016 Strategic Monitoring Plan was developed with Group 4, 5 and 1 basins as the top priority due to the approaching ends of their current Verified Periods (6/2016, 6/2017 and 6/2018, respectively). Because the Cycle 3 Verified Period for Group 3 basins ended 6/2015, and because the Cycle 4 Verified Period for these basins will not conclude until 6/2020, many Group 3 WBIDs (including WBID 1981B (Myakka River)) will not make it onto the Strategic Monitoring Plan until at least 2017.

Furthermore, WBID 1981B has been moved from category 4d – study list to category 3c – planning list due to inappropriate SCI site-selection methods for SCI samples collected during the Verified Period, resulting in their exclusion from this assessment. Nevertheless, the department plans to include WBID 1981B on a future iteration of the Strategic Monitoring Plan with the goal of collecting useable SCI data and determining a causative pollutant for failing biological assessments.

**Sarasota County – Comment 10:** Three waterbodies were delisted for Nutrients (Chlorophyll-a), including Myakka River (1981B), South Creek (1982A), and Apollo Waterway (2043). Each was delisted due to insufficient data. All three do not exceed State standards for the analyte in question, but are not being listed as Category 2, not impaired for the particular analyte “because biological or site-specific data are needed to

determine whether or not the waterbody fully attains its designated use.” These three waterbodies are not on the 2016 Strategic Monitoring Plan.

**FDEP Response 10:** Please see FDEP Response 9 above as to why WBID 1981B (Myakka River) is not on the 2016 Strategic Monitoring Plan. If future SCI data collected through the Strategic Monitoring Plan shows that biology is no longer impaired, then Nutrients (Chlorophyll-a) will be moved from category 3b – insufficient data to category 2 – not impaired in the next assessment cycle if the parameter is otherwise not impaired.

Since WBIDs 1982A (South Creek) and 2043 (Apollo Waterway) are both estuaries, biological data cannot be obtained through SCIs to determine whether or not the waterbody attains its designated use. Alternatively, seagrass coverage of the WBIDs was analyzed as a surrogate for biological data; however, there was insufficient coverage to determine whether or not the waterbodies attain their designated uses. As a result, WBID 1982A remain in category 3b – insufficient data for Nutrients (Chlorophyll-a) and thus will not be placed on the Strategic Monitoring Plan. Due to WBID 2043 exceeding the Nutrients (Chlorophyll-a) criteria in 2013 with an AGM of 15 µg/L, it is being moved from category 3b – insufficient data to category 3c- planning list, and will be placed on a future iteration of the Strategic Monitoring Plan.

**Sarasota County – Comment 11:** Sam Knight Creek (2048A) was assessed for Arsenic, Copper, Lead, and Zinc. Copper was the only analyte to exceed criteria. Arsenic, Lead, and Zinc were rarely detected in analyses during the Planning Period, and were listed as Category 2, not impaired for those analytes. The waterbody exceeded the Class 3M standard (>3.7 µg/L) four times during the Planning Period, it was placed into Category 3c and added to the Planning List. Each exceedance was equal to the MDL, 5.0 µg/L. The waterbody did not exceed standards for Copper during the Verified Period; however, it remains on the Planning List, but is not scheduled to be sampled on the Strategic Monitoring Plan.

**FDEP Response 11:** Upon further analysis of the copper data used during the Planning Period, it was determined that the sample values reported by the department’s South ROC at stations 21FLFTM 25020622FTM, 21FLFTM 25020623FTM, 21FLFTM 25020624FTM, and 21FLFTM 25020625FTM that were equal to the MDL of 5.0 µg/L should have included the “U” qualifier code indicating that the reported value was the laboratory MDL. Subsequently, these values should not have been assessed as exceedances of the 3.7 µg/L criterion. Therefore, WBID 2048 (Sam Knight Creek) does not meet Planning List requirements during the Planning Period. Due to this revision and the lack of exceedances during the Verified Period, the assessment of WBID 2048 changed from 3c – planning list to 2 – Not Impaired for the revised assessment. The omission of the “U” qualifier code for these samples will be corrected in the Florida STORET database.



Mr. John Ryan  
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September 14, 2016

The department appreciates Sarasota County taking the time to submit comments on the the Group 3 basin assessments. Your input helps the department in producing better assessments. If you have additional questions about our response or the assessments, please contact the Environmental Manager for the basin, Jessica Mostyn at (850)-245-8441 or [Jessica.Mostyn@dep.state.fl.us](mailto:Jessica.Mostyn@dep.state.fl.us), or if you need to contact me, my contact information is (850)-245-8469 or [Kevin.ODonnell@dep.state.fl.us](mailto:Kevin.ODonnell@dep.state.fl.us).

Sincerely,

A handwritten signature in black ink that reads "Kevin O'Donnell". The script is cursive and fluid, with the first letters of each word being capitalized and slightly larger than the others.

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Tallahassee, FL 32399-2400

cc: Molly Williams