

US EPA ARCHIVE DOCUMENT



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4  
SAM NUNN  
ATLANTA FEDERAL CENTER  
61 FORSYTH STREET  
ATLANTA GEORGIA 30303-8960

JAN 17 2014

Herschel T. Vinyard  
Secretary  
Florida Department of Environmental Protection  
3900 Commonwealth Boulevard  
Tallahassee, Florida 32399-3000

Dear Secretary Vinyard:

The U. S. Environmental Protection Agency has completed its review of the site specific alternative criterion (SSAC) for total nitrogen (TN) for Crane Strand Drain (CSD). Florida Department of Environmental Protection submitted revised Chapter 62-302, including the SSAC, to the EPA on June 13, 2012 as a new or revised water quality standard with the necessary certification by the FDEP General Counsel, pursuant to 40 CFR 131. The SSAC was included in the list of site specific numeric interpretations of paragraph 62-302.530(47)(b), Florida Administrative Code (F.A.C.), referenced in paragraph 62-302.531(2)(a), F.A.C. and published at the FDEP's website at <http://www.dep.state.fl.us/water/wqssp/swq-docs.htm>. FDEP submitted the numeric interpretations of the state narrative nutrient criterion for WBID 3014 expressed in the CSD Total Maximum Daily Load report as the SSAC. FDEP intends for this SSAC to serve as the numeric nutrient criterion for TN for CSD in place of the otherwise applicable TN criterion set out in paragraphs 62-302.531(2)(c) F.A.C.

In accordance with section 303(c) of the Clean Water Act, I am hereby approving the SSAC for CSD as the revised water quality standard for TN. Any other criteria applicable to this waterbody remain in effect, including other applicable criteria at 62-302.531(2)(c), F.A.C. The requirements of paragraph 62-302.530(47)(a), F.A.C. also remain applicable. The details of the SSAC are discussed in the enclosed documentation. We would like to commend you and your staff for your continued efforts in environmental protection for the State of Florida.

If you have any questions regarding the EPA's approval, please contact me at (404) 562-9345 or have a member of your staff contact Ms. Annie M. Godfrey, Water Quality Standards Section Chief at (404) 562-9967.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Giattina".

James D. Giattina  
Director  
Water Protection Division

Enclosure

cc: Matthew Z. Leopold, FDEP  
Daryll Joyner, FDEP

**Decision Document for Hierarchy 1 Site Specific Alternative Criterion  
for Crane Strand Drain (CSD)**

Summary Information

<b>WBID</b>	<b>Description</b>	<b>Class</b>	<b>Waterbody Type</b> <i>Impaired Waters Rule (IWR) Run 40</i>	<b>Listing Parameter</b>
3014	Crane Strand Drain	Class III	Stream / Canal	Dissolved oxygen (DO) and Biochemical Oxygen Demand (BOD)

A nutrient and DO Total Maximum Daily Load (TMDL) for Crane Strand Drain (CSD) WBID 3014 was developed by Florida Department of Environmental Protection and approved by the Environmental Protection Agency on January 3, 2007, pursuant to section 303(d) of the Clean Water Act (CWA). This TMDL was developed to identify the level of nutrients that would prevent an imbalance of flora and fauna as required by the state's narrative nutrient criterion at paragraph 62-302.530(47)(b), Florida Administrative Code (F.A.C). FDEP determined that a total nitrogen (TN) load of 29,828 lbs/year, (13.5 tons/year) not to be exceeded as an annual load, would meet their narrative criterion and adopted that load as a TMDL value at subsection 62-304.505(2), F.A.C. FDEP has submitted the TN load from the TMDL for EPA review as a hierarchy 1 site specific alternative nutrient criterion (SSAC) for the CSD WBID 3014, pursuant to section 303(c) of the CWA and EPA's implementing regulations at 40 C.F.R. Part 131. This decision document approves the SSAC for TN of 29,828 lbs/year, not to be exceeded as an annual load, as a hierarchy 1 criterion for CSD WBID 3014. Any other criteria applicable to this waterbody remain in effect. Specifically as to nutrients, total phosphorus (TP) criteria consistent with paragraph 62-302.531(2)(c), F.A.C. continue to apply, as well as the requirements of paragraph 62-302.530(47)(a), F.A.C.

In a letter dated June 13, 2012, from Thomas M. Beason, General Counsel for FDEP, to Gwendolyn Keyes Fleming, Regional Administrator of the EPA's Region 4 Office, FDEP submitted the numeric interpretation of the state narrative nutrient criterion as expressed in the CSD WBID 3014 TMDL as the SSAC for the CSD WBID 3014. This SSAC serves as a primary site specific interpretation of Florida's narrative water quality criterion for nutrients set out in paragraph 62-302.530(47)(b), F.A.C., in accordance with paragraph 62-302.531(2)(a), F.A.C. Pursuant to section 303(c) of the CWA, this revised water quality standard is subject to review and approval by the EPA since FDEP intends for this SSAC to serve as the numeric nutrient criterion for TN for CSD in the place of the otherwise applicable TN criterion set out in paragraph 62-302.531(2)(c), F.A.C. In the June 13, 2012 letter, FDEP General Counsel certified that the revised water quality standards were duly adopted pursuant to Florida law.

The EPA's decision to approve this criterion is subject to the results of consultation under section 7 of the Endangered Species Act with the U.S. Fish and Wildlife Service. By approving the standards "subject to the results of consultation," the EPA retains its discretion to take appropriate action if the consultation identifies deficiencies in the standards requiring remedial action by the EPA. The EPA will notify FDEP of the results of the section 7 consultation upon completion of the action.

#### Description of waters for which a SSAC has been proposed

Crane Stand Drain (WBID 3014) is located in the Econlockhatchee River Planning Unit of the Middle St. Johns River Basin, approximately 2 miles north of Orlando in Orange and Seminole Counties (see map on page 3). 81% of the watershed is "Urban and Built-up" and although it's similar to an 'urban ditch', it is not separated from the Little Econlockhatchee River by a control structure, so it is considered a jurisdictional waterbody.

#### Discussion of how the load was derived

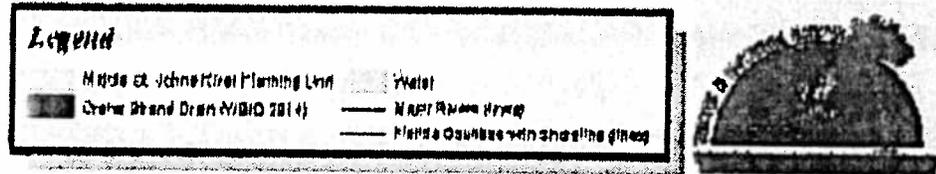
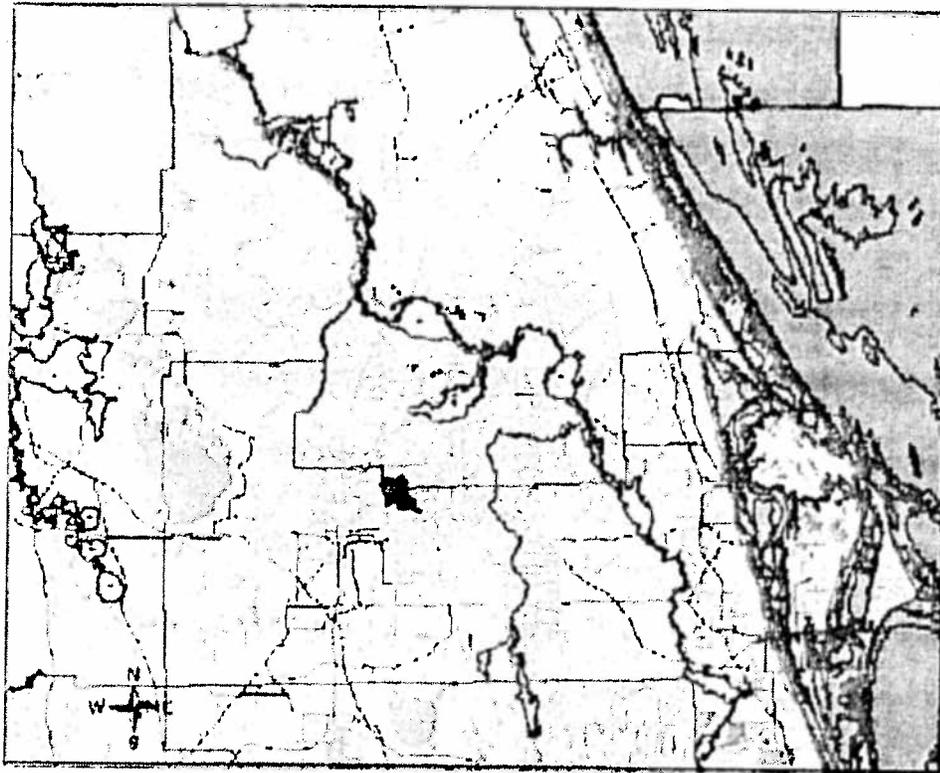
WBID 3014 was verified as impaired in 2004 for DO and BOD, with nutrients as a causative pollutant, based on assessment methodologies identified in Florida's Impaired Waters Rule (IWR) at Chapter 62-303, F.A.C. A statistically significant relationship was found relating DO to TN (but not to BOD or TP) in the CSD sample data. An equation was derived and solved with the applicable criteria of 5.0 mg/L DO as the endpoint and resulted in a target of 0.78 mg/L TN. This was then modeled into a load by means of Soil and Water Assessment Tool and Storm Water Management Model computer programs. The final target is an average of the critical conditions and natural background, being expressed as percent reductions for non-point sources. Screening targets (based on the 70<sup>th</sup> percentile of STORET data from 1970-87) were used for BOD endpoint and assimilative capacity calculations. The final TMDL targets are 68,917 lbs/year BOD (a 57% reduction) and 29,828 lbs/year TN (a 29% reduction).

#### Consideration of TMDL load as a new or revised water quality standard

The Dissolved Oxygen Total Maximum Daily Load for CSD WBID 3014 adopted at 62-304.505(2) was for TN of 29,828 lbs/year, not to be exceeded as an annual load. This loading was based upon the applicable DO criteria as an endpoint to be protective of designated uses.

#### Conclusion

Based on the data presented in the development of the SSAC, the EPA concludes that the SSAC for TN established for the Crane Strand Drain WBID 3014 protects healthy, well-balanced biological communities in the waters to which the SSAC applies and is consistent with the CWA and its implementing regulations. More specifically, the SSAC is consistent with both 40 CFR 131.11(b)(1)(ii), and the EPA's 304(a) guidance on nutrient criteria. The TN SSAC for Crane Strand Drain WBID 3014 which provides for TN loading of 29,828 lbs/year, not to be exceeded as an annual load, will protect water quality and aquatic life. Paragraph 62-302.531(4) will apply to this WBID in conjunction with the Hierarchy 1 SSAC to ensure attainment and maintenance of water quality standards of downstream waters, in accordance with 40 CFR 131.10. In accordance with section 303(c) of the CWA, the SSAC for Crane Strand Drain for TN loading of 29,828 lbs/year (13.5 tons/yr), not to be exceeded as an annual load, is hereby approved as consistent with the CWA and 40 CFR Part 131.



Overview of waters included in this TMDL (p. 2, Figure 1.1)

**Appendix 1 – Summary of the TMDL Background**

<b>Name(s) of Addressed Water(s)</b>	Crane Strand Drain (CSD)
<b>Waterbody Type(s)</b>	Stream (IWR Run 40)
<b>WBIDs</b>	3014
<b>Latitude/Longitude</b>	Not provided
<b>Description</b>	Approximately 2 miles north of Orlando. It flows into the E-4 Canal and ultimately is a tributary to the Econlockhatchee River. Three quarters of the watershed is in Orange County, with the remaining in Seminole County. 81% of the watershed is "Urban and Built-up." Although it's similar to an 'urban ditch' it is not separated from the Little Econlockhatchee River by a control structure, so it is considered a water of the state of Florida. See map in TMDL, p. 2, Figure 1.1.
<b>Classification(s)</b>	Class III (freshwater) (TMDL p. 7)
<b>Basin</b>	Middle St. Johns River (Econlockhatchee River Planning Unit)
<b>Date Placed on Verified List</b>	May 2004 (TMDL, p. 1)
<b>Date TMDL was approved by EPA</b>	January 3, 2007 (EPA WATERS database query 6/4/12)
<b>Reference Streams/Lakes</b>	N/A
<b>Source of Majority of Flow</b>	Urban Runoff (TMDL p. 12)
<b>Indicators</b>	DO, BOD (TMDL p. 1).
<b>Identification of Causative Pollutants (as determined by measurements of response endpoints or indicators)</b>	TN (TMDL p. 10)
<b>Sources and Concentrations of Nutrient Enrichment</b>	77% of TN loadings from High or Medium Density Residential and/or Commercial. (TMDL p. 15)
<b>Nutrient Watershed Region in Proposed 62.302</b>	Peninsular, 1.54 mg/L TN.
<b>Proposed Nitrogen SSAC and Frequency</b>	29,828 lbs/year, not to be exceeded as an annual load
<b>Proposed Phosphorus SSAC and Frequency</b>	N/A
<b>Biological Index Score(s) (e.g., SCI, TSI, IBI)</b>	N/A