



Proposed Regulations  
**Waters of the United States**

Assessment of Impacts  
July 25, 2014

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## **Proposed Regulations on Waters of the United States** Florida Stormwater Association

On April 21, 2014, the US Environmental Protection Agency (EPA) and the Army Corps of Engineers (Corps) jointly proposed regulations revising the definitions of waters subject to the jurisdiction of the federal government or “waters of the United States” (“WOTUS”) as the term is used in the application of the Clean Water Act (CWA) and Corps jurisdictional regulations. While the rule proposes language to a number of sections of the Code of the Federal Register (CFR), this analysis only refers to Part 122, EPA Administered Permit Programs – the National Pollutant Discharge Elimination System or “NPDES” program.

EPA has indicated that the purpose of the proposed regulations is to clarify what waters are (and are not) covered by the CWA and that the new regulations will not have substantial direct effects on the regulated community since they will not significantly change what is currently considered jurisdictional waters or WOTUS. However, an initial analysis of the proposed regulations indicates otherwise.

### Expansion of WOTUS

The proposed regulations begin with the traditional definition of WOTUS, such as those waters that are susceptible for use in interstate or foreign commerce, interstate waters, certain wetlands, territorial seas and impoundments of these waters, and tributaries thereto. But the proposed regulations then expand the definition of WOTUS in the following manner:



## Proposed Regulations on Waters of the United States Florida Stormwater Association

- “Adjacent” Waters – The current regulations provide that wetlands adjacent to WOTUS are included, although “adjacent” is not defined. The proposed regulations provide that *all* waters (including wetlands) that are adjacent to WOTUS are included. A definition of “adjacent” is also provided in the proposed rules that include *neighboring* waters. “Neighboring” includes waters within the *floodplain* of a WOTUS. “Floodplain” is an area bordering inland or coastal waters that was formed by sediment deposition from such water under present climatic conditions and is inundated during periods of *moderate to high* water flows. EPA has stated that it will use “best professional judgment” when determining where a floodplain exists.
  
- “Tributaries” – The current regulations provide that tributaries of a WOTUS are jurisdictional waters, although “tributary” is not defined. The proposed rules keep the same reference but have an expansive definition of what a tributary is, including man-altered or man-made ponds, canals, and ditches, with limited exceptions.
  
- Waters with “Significant Nexus” – Finally, on a case-specific basis, the proposed regulations provide that other waters and wetlands, alone or in combination with other waters, that have a significant effect on WOTUS in the region, are also considered jurisdictional waters.



## Proposed Regulations on Waters of the United States Florida Stormwater Association

### Specific Exclusions

The proposed regulations also define waters that are not considered jurisdictional waters. Ditches are specifically not considered WOTUS under the following circumstances:

- Ditches that are excavated wholly in uplands, only drain uplands, and have less than perennial flow; and, ditches that do not contribute flow, either directly or through another water, to WOTUS.
  
- Waste treatment systems, including treatment ponds or lagoons, constructed for water quality improvement purposes designed to meet CWA requirements.

### Assessment

Unless there is a specific exclusion, the proposed revisions will require that the provisions of the NPDES program (including the conditions of Municipal Separate Storm Sewer System permits) apply to ditches, stormwater conveyances and attenuation ponds if they meet certain tests. First, is the water body “adjacent” or has a “significant nexus” to classic WOTUS or a tributary thereof? To be adjacent, the water body must be within a classic WOTUS’s floodplain or is a tributary that is directly *or indirectly* connected to the waterbody. To have a significant nexus, a water body must be within the classic WOTUS’s watershed, the flow from which significantly affects the waterbody.



## **Proposed Regulations on Waters of the United States** **Florida Stormwater Association**

Thus (unless specifically excluded) a water body that is adjacent to a jurisdictional water is WOTUS. Also, if a water body is not adjacent but has a significant nexus, then that water body is also WOTUS, unless specifically excluded.

Additionally, all tributaries (i.e. ditches and stormwater conveyances) that have a direct connection and contribution to jurisdictional water - even if not “adjacent” or are without a “significant nexus” - will be considered to be WOTUS.

### Consequences

Given the assessment of the proposed regulations and considering all tests in total, in many areas of Florida the following types of water bodies will now be considered to be jurisdictional waters of the United States:

- Man-made or man-altered ditches and conveyances, and stormwater ponds (designed to attenuate stormwater runoff) within the floodplain of a classic WOTUS; and
- Man-made or man-altered ditches and conveyances, and stormwater ponds (designed to attenuate stormwater runoff) that have a direct connection to WOTUS.

Note that the expansion of the number of jurisdictional waters will be especially pronounced in coastal areas.



## **Proposed Regulations on Waters of the United States** **Florida Stormwater Association**

Ditches are excluded if they are built in uplands, drain only uplands and have less than a perennial flow. But in coastal areas, there are many ditches that are built in and drain uplands but have significant groundwater inputs; since they have constant flows, they may be WOTUS even if constructed in uplands.

Since the regulations are jointly issued by EPA and the Corps, there are at least two significant consequences of which Florida local governments should be aware:

1. Municipal Separate Storm Sewer System permit requirements and water quality standards must be met in stormwater conveyances and retention structures that are determined to be WOTUS, including numeric nutrient criteria applicable to Class III (“recreational”) water bodies, antidegradation requirements and other permit conditions.
2. Dredge and fill permitting policies of the Corps will be applicable to stormwater attenuation ponds, drainage ditches and other conveyances that are determined to be WOTUS – even during routine maintenance activities.

### Fiscal Impacts

Based on the language as contained in the proposed rule, attached please find a series of estimated fiscal impacts using a very small fraction of the waters likely to be added to the list of what is “jurisdictional” or WOTUS in just a few Florida counties.

*revised 7/25/14*



## Proposed Regulations on Waters of the United States Example Fiscal Impacts

### Hillsborough County

#### Lateral C stormwater conveyance

“Lateral C” discharges directly into Delaney Creek and eventually Hillsborough Bay. Delaney Creek is currently a jurisdictional waterbody or Water of the United States (WOTUS). Lateral C is a 1.3 mile channelized conveyance maintained by the Hillsborough County Public Works Department to provide stormwater drainage/flood control for the Clair Mel City neighborhood. It would become WOTUS under the proposed regulations.





## Proposed Regulations on Waters of the United States

### Example Fiscal Impacts

#### Fiscal Impact

Estimated Total Maximum Daily Load (TMDL) reductions were calculated according to established percent reduction protocols and EMC based load estimates as follows:

$$\frac{[\text{measured exceedance} - \text{target}]}{\text{measured exceedance}} \times \text{EMC based load estimates}$$

The measured exceedances used in the percent reduction calculation are annual average Total Nitrogen (TN) and Total Phosphorus (TP) concentrations for Lateral C from 2012-13. The target concentration was estimated based on the Numeric Nutrient Criteria as a biological target has not yet been established under the narrative criteria for ditches.

Under these assumptions, reductions of 89.61 lbs/yr TN and 153.0 lbs/yr TP could be required for in stream conditions in Lateral C. Using FDEP's retrofit estimates of \$3,500/lb TN and \$11,680/lb TP, the cost to bring Lateral C to in stream water quality standards is a combined total of approximately \$2,100,675 for the 1.3 mile long ditch.

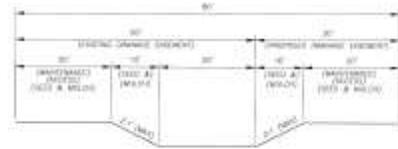
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## Proposed Regulations on Waters of the United States Example Fiscal Impacts

### Osceola County Stewart Street Drainage Area

The Stewart Street drainage area is primarily older rural and low density residential communities on septic systems which were built prior to stormwater attenuation and treatment requirements. The Stewart Street conveyance system is a series of man-made (typical trapezoidal) and maintained ditches. The system is bisected and adjacent to several wetlands and terminates into a regional stormwater pond which directly discharges to Lake Tohopekaliga. These ditches are subject to inundation year round due to the high water table in the area and backflow from Lake Tohopekaliga during the “dry” season (November-April) when the lake elevation stages up in accordance with the U.S. Army Corps Regulation Schedule.



**SOUTH STEWART DITCH  
TYPICAL SECTION**





## Proposed Regulations on Waters of the United States

### Example Fiscal Impacts

Under the proposed rule changes, the man-made conveyance ditches would be considered WOTUS and water quality regulations could be applied “in stream” instead of being considered as a loading contributor to the overall WBID. This application is problematic for several reasons, as noted below:

1. The nutrient concentration of conveyance system increases during the “dry” season due to stagnant inundation caused by backflow from the lake, blackwater in the wetlands and the high ground water table.
2. As a WOTUS, the County MS4 could be required to address the loads in stream which are primarily a result of non-stormwater sources. Since the water is stagnant and shallow, a pump or circulation system would be needed.
3. The retrofit pond was designed to treat the ditch water prior to discharge into Lake Tohopekaliga; however, the ditch system could be required to meet water quality standards in stream, which is prior to the treatment facility.
4. Maintenance of the ditches would be subject to Federal permitting requirements.

### Fiscal Impacts

Since a specific biological target has not been identified based on the narrative nutrient criteria applicable to ditches, the target concentration was estimated based on the Numeric Nutrient Criteria. The in-stream reduction requirements based on the existing projections to achieve the



## **Proposed Regulations on Waters of the United States**

### **Example Fiscal Impacts**

current post treatment concentration within the system treatment system are 2,667 lbs/yr of Total Nitrogen (TN) and 381 lbs/yr of Total Phosphorus (TP). Since there are no vacant uplands

that remain in this basin, the FDEP retrofit cost estimates of \$3,500/ lb. of TN and \$11,680/lb. of TP were used. The cost for compliance of this system is estimated at \$9,334,500 for TN and \$4,450,080 for TP.

The majority of Osceola County's 70+ miles of MS4 open conveyance "ditch" systems are subject to similar issues.

If the WOTUS designation leads to in-stream water quality requirements related directly to the ditch system, the County's \$2 million investment in the Stewart Street Regional Pond Retrofit would be devalued because the facility is located downstream in the system and will not reduce the loads along the entire length of the conveyance because it was designed to reduce loads to the downstream waterbody.

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## Proposed Regulations on Waters of the United States Example Fiscal Impacts

### Palm Beach County

The following examples are from Palm Beach County, Florida. The proposed changes to WOTUS will have far-reaching implications for the County in terms of fiscal impacts, primarily due to the network of ditches, canals and interconnected floodplains. Two representative examples are provided, although it is likely that hundreds of similar examples exist throughout the County.

#### Village of Wellington – Palm Beach County

The Village of Wellington (outlined below in yellow) is an incorporated town in Palm Beach County that operates an MS4 system of approximately 34 square miles. The stormwater management system includes five outfalls into current jurisdictional waterbodies or “WOTUS,” 91 miles of man-made canals, 270 acres of lakes, 365 acres of wetlands/preserves, eight pump stations, five control structures, 165 miles of pipes, 2,173 catch basins and 37 miles of swales. Due to the creation of the award-winning Wellington Environmental Preserve (shown in the west of the map below), the existing canal network, and the installation of significant infrastructure to prevent flooding, much of Wellington is linked together as one floodplain.





## Proposed Regulations on Waters of the United States

### Example Fiscal Impacts

#### Fiscal Impact

Under the current Total Maximum Daily Load of 13% for Total Phosphorus (TP) (EPA Proposed TMDL for the ACME North Sector), equates to approximately 400 pounds of TP. Under the TMDL, the receiving water is required to meet the load reduction, but the canal system is not required to meet the water quality standards in stream. Using FDEP's retrofit estimate of \$11,680/lb TP, the cost to bring the canal network in Wellington's Basin B to current water quality standards in stream is approximately \$4.6 million for TP. Costs for Wellington's Basin A would be comparable, bringing total retrofit costs for the Village canal network to \$9 million.

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## Proposed Regulations on Waters of the United States Example Fiscal Impacts

### PGA National – Palm Beach County

PGA National's stormwater and canal system is managed by Northern Palm Beach County Improvement District. The canals located within PGA National are for flood control purposes and are not currently considered jurisdictional waterbodies/WOTUS. The proposed regulatory changes (conservatively applied) would bring a minimum of two additional canal segments into jurisdictional status (adding an 8,400 linear feet, shown below in yellow), although another interpretation, based the definition of "floodplains" could essentially link most of PGA National into a network of jurisdictional waterbodies.





## Proposed Regulations on Waters of the United States Example Fiscal Impacts

### Fiscal Impact

Several adjacent waterbodies are listed for upcoming TMDL development for PGA National's Preserve, as defined under the new definition of WOTUS. Under a conservative estimate for a Total Maximum Daily Load, a 15% reduction for Total Nitrogen (TN) and a 40% reduction for Total Phosphorus (TP) could be required. These are slightly lower estimates than the EPA-adopted TMDL for Lake Ida/WBID 3262A in the same major watershed; it is likely that the TMDLs for this area will be much higher. This equates to reductions of approximately 975 pounds of TN and 132 pounds of TP. Using FDEP's retrofit estimates of \$3,500/lb TN and \$11,680/lb TP, the cost to retrofit these canals to meet in stream water quality standards would be \$3.4 million for TN and \$1.5 million for TP.

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## Proposed Regulations on Waters of the United States Example Fiscal Impacts

### Pasco County

#### Dade City Canal

Dade City Canal is a manmade conveyance located in the Upper Withlacoochee River Watershed. The canal was originally dredged for flood control and drains to the Upper Withlacoochee River Swamp (UWRS) prior to discharging into the Withlacoochee River. The Withlacoochee River is a jurisdictional waterbody or Water of the United States (WOTUS). Prior to 2007, flow in Dade City Canal was dominated by point source discharges from the Dade City WWTP and the Lykes Pasco Beverage facility. Both of these point sources have been removed and the canal is now typically characterized by zero to very low flows even when the Withlacoochee River stage is high. Dade City Canal is not now considered to be WOTUS but would be considered such under the proposed regulations.



*Dade City Canal near its confluence with the UWRS (March 16, 2010)*



## Proposed Regulations on Waters of the United States Example Fiscal Impacts



*Dade City Canal near its confluence with the UWRS (March 16, 2010)*

### Fiscal Impact

The total maximum daily load (TMDL) for the watershed was adopted in early 2007 and required a 70 percent reduction from point source, non-point source and MS4 loads for total nitrogen (TN) and total phosphorus (TP). If the Waste Load Allocation for the discontinued point source discharges is removed from the total existing loading, the remaining reductions required from the MS4 and other non-point sources in order to meet the TMDL are 40 percent for TN and 22 percent for TP. For the canal system, this equates to 3,758 pounds of TN and 274 pounds of TP. Using FDEP's retrofit estimates of \$3,500/lb TN and \$11,680/lb TP, the cost to bring Dade City Canal into compliance with in stream water quality requirements is \$13,153,000 for TN and \$3,200,320 for TP.



## Proposed Regulations on Waters of the United States Example Fiscal Impacts

Numerous segments of Pasco County's MS4 system would also likely be considered WOTUS under the proposed regulations. For example, the stormwater facilities for the Gulf View Mall include ditch and stormwater retention ponds that have a direct discharge into Salt Spring Run. Salt Spring Run is located behind the Gulf View Mall just north of Port Richey on the west coast of Pasco County (see below). Under the proposed regulations, these discharges would likely be required to meet in stream water quality criteria prior to discharge into Salt Spring Run, and routine maintenance activities would be subject to federal permitting policy. Retrofit of this stormwater facility to meet in stream water quality criteria in this highly urbanized environment would likely be cost-prohibitive for the County and provide little overall environmental benefit.



*Stormwater management facilities at Gulf View Mall adjacent to Salt Spring Run*



## Proposed Regulations on Waters of the United States Example Fiscal Impacts

### Pinellas County

#### Pinellas Park Ditch #5 (Bonn Creek)

Pinellas Park Ditch #5 (aka “Bonn Creek”) discharges directly into a wetland that discharges into “Joe's Creek.” Joe’s Creek is currently a jurisdictional waterbody or Water of the United States (WOTUS). The ditch is a conveyance managed as part of the Pinellas Park Water Management District, which was created in 1976 by the Florida Legislature to manage the primary stormwater drainage/flood control system for a portion of central Pinellas County.

Ditch #5 provides no environmental or human benefits, other than flood control. It is not now considered to be WOTUS but would be considered to be such per the proposed regulations of EPA and the ACOE.





## Proposed Regulations on Waters of the United States Example Fiscal Impacts



### Fiscal Impact

Based on the current Total Maximum Daily Load for the area, a 27% reduction is required for Total Nitrogen (TN) and a 64% reduction for Total Phosphorus (TP). When applied to the Pinellas Park Ditch #5, this equates to reductions of 3,795 pounds of TN and 1,547 pounds of TP. Using FDEP's retrofit estimates of \$3,500/lb TN and \$11,680/lb TP, the cost to bring Ditch #5 to in stream water quality standards is \$13,282,500 for TN and \$18,068,960 for TP.

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## Proposed Regulations on Waters of the United States Example Fiscal Impacts

### St. Johns County

#### Parker Canal

Parker Canal is a large constructed ditch that drains water east to west against natural land grade along Canal Road. Parker Canal discharges to Colson Branch, a tributary to the Lower St. Johns River (LSJR). The LSJR is currently a jurisdictional waterbody or Water of the United States (WOTUS). Parker Canal is the primary drainage feature within the Elkton Drainage District (EDD) in St. Johns County, Florida. The EDD is an active, dependent drainage district established under Chapter 298, Florida Statutes in 1917. The County is the responsible entity for stormwater in the EDD.





## **Proposed Regulations on Waters of the United States**

### **Example Fiscal Impacts**

#### **Fiscal Impact**

Based on the current Total Maximum Daily Load for the Lower St. Johns River Main Stem, a 30% reduction is required for both Total Nitrogen (TN) and Total Phosphorus (TP). When applied to the Parker Canal, this equates to a minimum in stream reduction of 13,240 pounds of TN and 14,500 pounds of TP. Using FDEP's retrofit estimates of \$3,500/lb TN and \$11,680/lb TP, the cost to bring Parker Canal to current water quality standards is \$13,902,000 for TN and \$50,808,000 for TP.

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## Proposed Regulations on Waters of the United States Example Fiscal Impacts

### Volusia County

#### B-21 Drainage Basin

There are number of roadside ditches and canals that flow into the B-21 Canal, which is a jurisdictional water located in Volusia County. For example, there are approximately 80,250 ft. of large roadside ditches on Tomoka Farms Road and approximately 31,650 ft. of canals draining into the B-21 Canal. The B-21 drainage basin is approximately 21,400 acres, comprised of approximately 3,000 acres of urban land use, 1,400 acres of agricultural, 10,000 acres of uplands and 9,000 acres of wetlands.



**Tomoka Farms Roadside Ditch**



**B -21 canal**



## Proposed Regulations on Waters of the United States Example Fiscal Impacts

### Fiscal Impacts

B-21 discharges to Spruce Creek which has a Total Maximum Daily Load (TMDL) for fecal coliform, Total Phosphorus (TP) and Biological Oxygen Demand (BOD). A TP reduction of 27% is required within the designated area, equating to 2,600 pounds of TP. Using FDEP's retrofit estimates of \$11,680/lb TP, the cost to bring the B-21 Canal to in stream water quality standards for TP (in the portion of the B-21 system that is maintained by Volusia County) is \$30,368,000.

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