



FLORIDA STORMWATER ASSOCIATION

Leadership in Stormwater Management and Utilities

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Via Electronic Mail

November 14, 2014

Water Docket
U.S. Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue NW
Washington, DC 20460

Attention: Docket ID No. EPA-HQ-OW-2011-0880
Proposed Regulations concerning Waters of the United States

To Whom It May Concern:

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. This letter presents the comments of the Florida Stormwater Association, Incorporated (FSA) concerning the Proposed Regulations as relates to the regulation’s impacts on Part 122 of the Code of the Federal Regulations (CFR), EPA Administered Permit Programs – the National Pollutant Discharge Elimination System or “NPDES” program.

Summary of Recommendations

As drafted, the Proposed Regulations would exceed Congress’s authority under the Commerce Clause of the U.S. Constitution and would misinterpret and then misapply the U.S. Supreme Court’s decision in *Rapanos v. United States*, 547 U.S. 715, 738 (2006).

FSA thus recommends that the Proposed Regulations NOT be finalized or adopted at this time. We further recommend the following:

1. The Regulations be re-proposed to limit the expansion of federal jurisdiction as discussed in greater detail below;

Derrik Owens, PE, DWRE
President
City of Pensacola

Virginia Barker
Vice-President
Brevard County

Tiffany Busby
Secretary-Treasurer
Wildwood Consulting

Kurt Spitzer
Executive Director

2. The Regulations be re-proposed to confirm that ditches, canals and other waterways that convey wastewater or treated water to or from features where treatment occurs are covered by the wastewater treatment exclusion, including all sections of NPDES-permitted Municipal Separate Storm Sewer Systems (MS4s) that are upstream from the point of discharge;
3. The Economic Analysis of the Proposed Regulations be dismissed as it is based on fatally flawed assumptions, a new economic analysis be conducted and that a Small Entity Advisory Committee be created pursuant to the requirements of the Regulatory Reform Act based on the provision of the re-proposed rules; and
4. A new comment period opened on the provisions of the re-proposed rules, that EPA and the Corps concurrently engage recognized stakeholder groups in the discussion of the re-proposed rules, and that a series of public hearings be scheduled in each EPA Region on the re-proposed rules.

The Florida Stormwater Association

The Florida Stormwater Association (FSA) is a voluntary, non-profit Florida corporation organized under subsection 501(c)(4) of the Internal Revenue Service Code. There are over 290 organizational members of FSA, primarily consisting of municipal and county governments that must obtain and comply with MS4 permits. FSA's membership also includes various water control districts, Water Management Districts, academic institutions, and consulting and engineering firms.

FSA has been actively involved in the development of water quality policy and the implementation of water quality improvement programs in Florida for the past 21 years. All of the members of FSA have an interest in surface water quality improvement and the effective implementation of the MS4 permit program.

Analysis of Proposed Regulations

The Proposed Regulations would categorically and very significantly expand the definition of jurisdictional waters in the following manners:

1. “Adjacent” Waters – The proposed regulations provide that *all* waters (including wetlands) that are adjacent to a waterbody that is currently jurisdictional are themselves jurisdictional and therefore subject to Clean Water Act (CWA) and EPA/Corps policies. Adjacent is defined to include “neighboring” waters. Neighboring waters include waters within the “floodplain” of jurisdictional waterbodies. 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*.

The proposed definition of “floodplain” is the broadest possible definition of the word. The definition is so broad that it would limit EPA’s and the Corp’s ability to use best professional judgment when determining where a floodplain (and therefore jurisdictional water) is or is not. It would create a state of confusion where many would litigate the terms “adjacent” and “floodplain” for years to come – the antithesis of the stated reasons for one of the primary reasons for proposing the regulations: To provide clarity in terms of the application of the CWA.

2. “Tributaries” – The proposed regulations provide for an expansive definition of what a tributary is, categorically including man-altered and man-made ponds, canals and ditches, with limited exceptions. The exemption from the definition of tributary includes 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 a jurisdictional waterbody.

However, in coastal and other low-lying areas where high groundwater tables exist, it is common for ditches that are built in and drain uplands to have significant groundwater inputs. Since they have constant flows, the exemption would not apply to these types of waters.

3. “Significant Nexus” – The proposed rule broadens the “significant” nexus test from *wetlands* that are connected to a jurisdictional water physically, chemically *and* biologically, to physically or chemically *or* biologically. Thus, any water that was not determined to be jurisdictional by the expansive definitions of “adjacent” or “tributary” would likely be determined to be jurisdictional by the expansive definition of significant nexus.

Therefore, unless there is a specific exclusion pursuant to the very limited exceptions as contained in the proposed regulations, one could interpret the regulations as making all ditches, stormwater conveyances and attenuation ponds jurisdictional waters. Additionally, any and all waterbodies that are “adjacent” to jurisdictional water, and any and all waterbodies that have a physical or chemical or biological connection to jurisdictional water, could also be determined to be jurisdictional.

Impacts of the Proposed Regulations

If finalized as currently worded, the proposed regulations would have very significant and profound impacts on local governments and other entities subject to or administering the NPDES and MS4 permit programs, and to the workload of EPA and Corps Regional offices. Waterbodies that are “jurisdictional” are subject to the following:

1. Water Quality Criteria – Water quality criteria for the appropriate classification of the waterbody must be attained. In Florida, the overwhelming numbers of waterbodies are classified as “Class 3 - Recreational” waters. Class 3 recreational waters are subject to the “swimmable, fishable” narrative or numeric nutrient water quality criteria.

The Class 3 designation is the default classification for waterbodies in Florida. Waterbodies that are not presently considered to be jurisdictional (but would become such per the proposed regulations) would become subject to the Class 3 classification unless an administratively complicated, arduous and expensive process is successfully undertaken to move (for example) a ditch out of a Class 3 classification into another classification category.

2. TMDLs and Basin Management Action Plans – Florida’s landmark programs for *implementing* Total Maximum Daily Loads and water quality improvement measures – the listing process for impaired waters and Basin Management Action Plans (BMAPs) – would be applied to newly jurisdictional waters, significantly increasing

the workload of not only the MS4 permittees but also that of Florida's Water Management Districts and the Florida Department of Environmental Protection.

3. MS4 Permit Program – Attainment of water quality criteria and water quality improvement programs (i.e. implementation of TMDLs and BMAPs) are implemented by the regulated community. In the case of city and county governments, that is through the MS4 permit program, as administered by the Florida Department of Environmental Protection.
4. Fiscal Impacts - Contrary to the conclusions reached in EPA's Economic Analysis of the Proposed Regulations, FSA has determined that there will be very profound negative fiscal impacts on MS4 permit holders in Florida. Please see the attached documents, which are incorporated by reference herein.

Our analysis concludes that the cost of implementing the provisions of the proposed regulations would easily exceed \$1 million per mile of roadside ditch and that the cumulative impact on selected county geographic areas would exceed several hundred million dollars each, and in some cases more than \$1 billion.

The State of Florida and its MS4 permit holders have worked cooperatively for the past 25 years to develop and refine water quality improvement programs that implement the goals and provisions of the Clean Water Act and other state-based initiatives. Florida's TMDL and BMAP programs implement these provisions on a systematic basis, establishing priorities for directing scarce fiscal resources to those waters most in need of improvement and where there is a realistic possibility of seeing improvements that will benefit environmental systems and human uses. It is a methodical, focused approach, with the costs of implementing water quality improvements as required by the TMDL and BMAP programs primarily borne by the MS4 permit holders.

If finalized, the proposed regulations would throw Florida's programs into a state of chaos, increasing the number of waters determined to be jurisdictional to such a degree that it will force local governments to divert scarce resources from water quality improvement projects benefiting streams, lakes and rivers, to ditches and other stormwater conveyances that serve no useful purpose other than to move floodwaters from one point to another.

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The universe of waterbodies to which the MS4 permit program might apply would be so large and local fiscal resources so dispersed, and the discretion of EPA and the Corps so limited by the provisions of the proposed regulations, that it is quite possible that the regulations would have the paradoxical effect of reducing (not improving) water quality. This would be an absurd result if ever there were one.

Furthermore, to attempt to successfully implement the proposed regulations, local governments subject to the MS4 permit program would be forced to implement revisions to zoning and other land use regulations, in addition to the permit conditions. We believe that this necessity far exceeds any consideration ever made by the framers of the Clean Water Act and far exceeds the authority granted by Congress to EPA and the Corps.

Commerce Clause Concerns and *Rapanos* Concerns

Indeed, as drafted, the Proposed Regulations would exceed Congress's authority under the Commerce Clause and would contravene the U.S. Supreme Court's decision in *Rapanos*. Congress intended for Clean Water Act jurisdiction to be tied to its ability to regulate channels of interstate commerce like navigable rivers, lakes and canals. *SWANCC v. U.S. Army Corps of Eng'rs*, 531 U.S. 159 (2001). According to the Court, the word "navigable" should have some meaning. In *Rapanos*, the Court thus rejected the "any hydrological connection" theory, reasoning that the theory "would stretch the outer limits of Congress's commerce power." *Rapanos*, 547 U.S. at 738. But by now extending jurisdiction to isolated wetlands and ponds, ephemeral drainage features, ditches, and other waters that have no navigable features and lack connections to truly navigable waters, the Proposed Regulations would exceed Congress's authority under the Commerce Clause.

The Proposed Regulations also incorrectly conclude that Justice Kennedy's decision in *Rapanos* is controlling. The Proposed Regulations then stretch the "significant nexus" test in Justice Kennedy's opinion to waters other than wetlands – to "tributaries," "adjacent waters," and "other waters." But by its own terms, Justice Kennedy's opinion applies only to wetlands. And, even for wetlands, because Justice Kennedy's opinion alone cannot be the narrowest, it alone cannot control. *See Marks v. United States*, 430 U.S. 188, 193 (1977).

Recommended Revisions to the Proposed Regulations

As such, FSA recommends that the proposed regulations not be adopted or finalized at this time. We recommend that EPA's Economic Analysis be rejected as it is based on fatally flawed assumptions. The rule should be re-proposed, a new Economic Analysis initiated and a Small Entity Advisory Committee created to study its effects.

FSA further recommends that any re-proposed amendments to 40 CFR 230.3(u) be revised as follows:

1. Adjacent – We recommend that the definition of “adjacent” be revised to delete the word “neighboring” so that the definition includes only waters that border or are contiguous to a jurisdictional water.
2. Floodplain - As an alternative to our recommendation as contained in subparagraph 1 (above), we recommend that the definition of “floodplain” as used within the term “neighboring” be revised to specifically include only waters that are within the floodplain of a 20-year flood event. Leaving this phrase vague might encourage the inclusion of waters within, for example, the floodplain of a 100-year (or even higher) event - the inclusion of *land* that is usually dry.
3. Tributary – We recommend that the definition of “tributary” be revised to delete all language after the end of the first sentence of the proposed definition (i.e. delete all “additional” references) that add wetlands, lakes, ponds, impoundments, canals and ditches, whether they are natural, man-altered, or man-made.

Concerning ditches and whether they already should or should not be considered to be tributaries and therefor jurisdictional waters, EPA has stated during numerous conference calls, webinars and other meetings (both public and those that are less formal) that ditches and other conveyances with standing water in them already are or should be determined to be waters of the United States. This obviously begs the question: Why is it necessary to categorically include the term “ditches” within the definition of tributaries if they are already subject to existing regulations?

4. Significant nexus – We recommend that the term “significant nexus” be revised to include only waterbodies that significantly affect the physical, chemical, and biological integrity of a water as identified in the re-proposed regulations. And we recommend that that the term “significant nexus” apply only when considering whether wetlands are jurisdictional.
5. Exclusions – We recommend that subsection 40 CFR 230.3(t)(1) (concerning exclusions from the definitions of “waters of the United States”) be revised as follows:

Waste treatment and flood control systems, including treatment ponds or lagoons, stormwater retention and detention ponds, and man-made and made-altered structures, devices and conveyances that are designed to meet the requirements of the Clean Water Act, the conditions of an MS4 permit or to provide flood control services.

Such an exclusion would be consistent with existing distinctions in the Clean Water Act and EPA regulations. Specifically, such a distinction would confirm that sections of an MS4 upstream from a discharge point are not jurisdictional; that the MS4 system itself is not waters of the United States; that the features of an MS4 are clearly and unequivocally subject to the waste treatment exclusion and are distinct from waters of the United States. *See, e.g.* 33 U.S.C. § 1342(3)(B) (requiring NPDES permits to limit pollutant “discharges *from* municipal storm sewers”)(emphasis added); 40 C.F.R. §122.26(b)(9)(defining an MS4’s “outfall” as “*the point where a municipal separate storm sewer discharges to waters of the United States...*”) (emphasis added); *Id.* at § 122.26(d) (providing requirements for MS4 permittees to manage their systems to limit pollutants to jurisdictional waters); *Id.* at § 122.1(b) (“The NPDES program requires permits for the discharge of ‘pollutants’ from any ‘point source’ into waters of the United States.”).

Conclusion

Contrary to providing clarity and furthering the laudable objective of more effective implementation of the Clean Water Act, the Proposed Regulations would leave the

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public, the regulated community, the Florida Department of Environmental Protection, and EPA and the Corps in a flummoxed state.

Despite whatever the best intentions of the drafters of the proposed regulations may have been, it would take the courts many years to sort out the validity of the proposed regulations. Worse yet, the proposed regulations would force city and county governments to divert scarce resources away from streams, rivers and lakes sorely in need of water quality improvement projects, to ditches and urban stormwater conveyances that serve no environmental or human purpose, other than flood protection or (ironically) waste treatment.

We therefore urge EPA and the Corps to not adopt or finalize the proposed regulations but to re-propose substantially revised regulations, re-open a new comment period, conduct a new economic analysis and empanel a Small Entity Advisory Committee on the re-proposed regulations.

As always, we stand ready to answer any questions that you may have concerning our comments and to work with both agencies to improve water quality.

Sincerely,
FLORIDA STORMWATER ASSOCIATION, Inc.

A handwritten signature in black ink that reads "Kurt Spitzer". The signature is written in a cursive style with a large, sweeping flourish at the end.

Kurt Spitzer

attachments



Proposed Regulations
Waters of the United States

Assessment of Impacts
July 25, 2014

Florida Stormwater Association
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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.

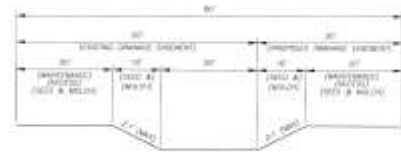
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Proposed Regulations on Waters of the United States Example Fiscal Impacts

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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revised 7-25-14

Waters of the United States
Regulations Proposed by the
US EPA and US ACOE

Estimated Fiscal Impacts on Selected Municipal Separate Storm Sewer System Permittees

Prepared for:



August 29, 2014

Prepared by



Applied Technology & Management, Inc.
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ATM provides environmental engineering and sciences, water resources, site/civil, coastal engineering and surveying services, and marina and waterfront development services to public and private clients. Our current staff of 48 includes Professional Engineers, Ecologists, Environmental Scientists and a Professional Surveyor/Mapper.

ATM has been assisting clients with water resource issues for 30 years. ATM's technical diversity allows us to provide effective studies and solutions for any water-related environmental or developmental issue. From projects involving sensitive headwaters to coastal systems, we provide customized data collection, assessments, computer modeling, alternatives analysis, management planning, design and regulatory guidance. ATM specializes in performing hydrodynamic and water quality modeling of receiving waters, watershed assessments, and water quality management services. ATM provides clients with comprehensive technical support related to watershed assessments, MFLs, waterbody impairment listings, TMDLs and BMAPs. ATM integrates GIS with all projects, including field studies, data collection, asset management, geospatial analysis, watershed, hydrodynamic and water quality model pre- and post-processing. We have performed detailed data analysis and computer modeling to determine the water quality impacts of nonpoint and point source discharges throughout Florida, the United States and internationally.

ATM provides both screening-level and detailed dynamic evaluations of watershed hydrology and pollutant loadings. Models utilized include SWMM5, HEC-HMS, ICPR, SWAT, PLOAD, BASINS/HSPF, LSPC, WAM and WMM.

ATM also performs hydrodynamic pollutant transport and/or water quality assessments in rivers, lakes, reservoirs, estuaries and oceans using 1-D, 2-D and 3-D models. Models utilized include EFDC, ECOMSED, ADCIRC, RMA2, HEC-RAS, WASP, CE-QUAL-R1V1, CEQUAL-W2, CEQUAL-ICM, QUAL2E, CORMIX, the full MIKE suite of models, and VisualPLUMES.

Fiscal Impacts on Selected Municipal Separate Stormwater Systems (MS4s) from EPA/USACE Proposed Regulations on Waters of the United States

Overview

On April 21, 2014, the U.S. Environmental Protection Agency (EPA) and U.S. Army Corps of Engineers (USACE) jointly proposed regulations to revise the definitions of “waters of the United States” or “WOTUS,” as the term is to be used in the application of the Clean Water Act (CWA) and USACE jurisdictional regulations. EPA has indicated that the purpose of the proposed rule is to clarify what waters are (and are not) covered by the CWA. In addition, EPA has said that the new regulations will not have substantial direct effects on the states since it will not significantly change what is currently considered WOTUS. However, there are some areas that, depending on the interpretation, could constitute a very significant expansion of the WOTUS definition and include waters previously not deemed jurisdictional under previous USACE and EPA practice or guidance.

First, is the water body “adjacent” or does it have 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 be a tributary that is directly or indirectly connected to a classic WOTUS. To have a significant nexus, a water body must be within the classic WOTUS’s watershed, the flow from which significantly affects the classic WOTUS.

From this test, a water body that is adjacent is WOTUS, unless specifically excluded. If a water body is not adjacent but has a significant nexus, then the water body is WOTUS, unless specifically excluded.

Additionally, all tributaries (e.g. ditches) that have a direct connection and contribution to WOTUS – even if not “adjacent” or do not have a “significant nexus” – will be considered to be WOTUS.

Given the assessment of the proposed regulations as provided above (and considering all tests in total), in many areas of Florida, the following types of water bodies will now be considered WOTUS:

- Manmade or man-altered ditches and stormwater ponds (designed to attenuate stormwater runoff) within the floodplain of a classic WOTUS; and

- Manmade or man-altered ditches 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.

Ditches are excluded if they are built in uplands, drain uplands and have less than perennial flow. But in Florida's coastal areas and most inland 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 EPA and USACE jointly issued the regulations, there are at least two significant consequences to local governments:

- Municipal Separate Storm Sewer System (MS4) permit requirements and water quality standards must be met in stormwater conveyances and retention structures that are determined to be WOTUS, including numeric or narrative nutrient criteria applicable to Class III ("recreational") water bodies, antidegradation requirements, and other permit conditions.
- USACE dredge and fill policies would be applicable in WOTUS. Therefore, stormwater attenuation ponds (with no water quality treatment) and drainage ditches that are in the floodplain would be required to meet jurisdictional requirements – even during routine maintenance activities, unless an exemption is granted by the USACE.

Of specific concern is the potential for the inclusion of "flooded" areas as providing connectivity and bringing portions of the various counties' MS4s into WOTUS. The potential cost of compliance if those areas are now deemed WOTUS and are subject to the criteria under the CWA is enormous.

Determination of Fiscal Impacts

To assess the potential levels of fiscal impact associated with the proposed rule, a geographic information system (GIS) based analysis was performed to estimate the area currently delineated as WOTUS and to estimate the increase in WOTUS jurisdiction due to the inclusion of flooded areas and resultant connectivity to upstream waters, including stormwater conveyances and ditches. Data sources utilized included:

- MS4 infrastructure/areas – from County GIS departments
- Federal Emergency Management Agency (FEMA) Flood Hazard Areas (100-year floodplain)– FEMA Special Flood Hazard Layer
- Soils - Natural Resources Conservation Service (NRCS)
- Land use maps – from regional water management districts through the Florida Geographic Data Library
- Sub-watershed/water body segment (WBID) coverages for counties
- National Hydrography Dataset (NHD) – U.S. Geological Survey (USGS)
- Parcel boundaries and associated subdivisions- from county GIS departments

GIS data processing was performed for two scenarios: Under current WOTUS practice and guidelines and under the proposed WOTUS rule. For the current WOTUS guideline scenario, the parcel layer was intersected with the soils and land use layer. Using the NHD layer, which represents the drainage network with features such as rivers, streams, canals, lakes, ponds and coastline, man-made features such as canals and ditches were removed. A 500-foot buffer was then placed around the resultant NHD layer. This served as the baseline estimate for WOTUS jurisdiction. This layer was then intersected with the parcel and sub-division layer. The assumption was that if the sub-division layer was intersected by the processed NHD layer, then it is likely that the whole sub-division, and therefore all parcels contained therein, drained to the nearest NHD stream. The parcels selected through this process became the contributing drainage area layer to the baseline WOTUS jurisdiction estimate. This layer, combined with the soils and land use layers, provided the data necessary to perform the current WOTUS nutrient loading estimates.

The proposed WOTUS scenario followed a similar scenario with a couple of exceptions. First, the whole NHD layer including canals and ditches was intersected with the FEMA layer delineation of the 100-year floodplain as the

initial estimate of connectivity and, thus, WOTUS jurisdiction. “Floodplain” is defined as 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. Given that uncertainty on where the area of the floodplain would be defined, the 100-year floodplain as delineated by FEMA was used for our analysis. The parcel-sub-division layer described above was intersected with the FEMA-NHD layer to estimate the contributing drainage areas to the new WOTUS jurisdiction estimate under the proposed rule. This layer, combined with the soils and land use layers provided the data necessary to perform the proposed WOTUS nutrient loading estimates.

Nutrient load calculations were performed for the contributing drainage areas for both WOTUS scenarios using the methods and data from the following references:

- Harper H. H. and D. M. Baker, 2007. Evaluation of Current Stormwater Design Criteria within the State of Florida. Final Report submitted to Florida Department of Environmental Protection. Environmental Research & Design, Inc. Orlando, FL.
- Reiss, K.C., Evans, J., and M. Brown, 2009. Summary of Available Literature on Nutrient Concentrations and Hydrology for Florida Isolated Wetlands. Final Report submitted to Florida. Department of Environmental Protection, Tallahassee, FL.

The nutrient load calculation described in Harper and Baker (2007) is sometimes referred to as the “constant concentration method” and is used routinely to develop stormwater pollutant loading estimates for state permitting agencies in Florida and through the United States and in basin water quality studies. The method essentially consists of (first) calculating the stormwater runoff volume that is estimated to occur in a year. The annual runoff volume is then multiplied by the average amount of nitrogen and phosphorus in the stormwater runoff, also known as the event mean concentration (EMC), to estimate the amount of nitrogen and phosphorus, or nutrient load that is being carried to WOTUS-jurisdictional waters in one year. The nutrient load difference between the two scenarios was calculated to estimate the additional nutrient loads that would be subject to treatment to meet Florida water quality criteria prior to discharge to the additional WOTUS jurisdictional areas.

The percentage of this increased nutrient load that would need to be removed prior to discharge to WOTUS to meet Florida’s numeric nutrient criteria in these areas was calculated by comparing the average nutrient concentration in the annual runoff to the nutrient concentration limits as specified in Florida’s Numeric Nutrient Criteria.

The estimated fiscal impact on counties as the result of the additional stormwater treatment requirements was estimated using project costs and nutrient removal data from FDEP’s TMDL Grant Program from 2010, which was the latest year available. The data covers projects located throughout Florida. Unit treatment costs were calculated for nitrogen and phosphorus for median, 25th percentile and 75th percentiles of the data to provide a cost range. These unit costs were then adjusted for inflation to estimate the 2013 costs using Florida Department of Transportation Advisory Inflation Factors for construction. The range of unit costs for treatment can vary greatly depending in land purchase costs and the particular stormwater treatment practice being constructed.

The resultant unit costs for treatment were:

	Total Nitrogen (\$/lb/yr)	Total Phosphorus (\$/lb/yr)
75 th Percentile	\$7,844	\$28,004
Median	\$3,781	\$12,615
25 th Percentile	\$1,005	\$4,957

Fiscal Impacts on MS4s from EPA/USACE-Proposed Regulations on Waters of the United States

Description

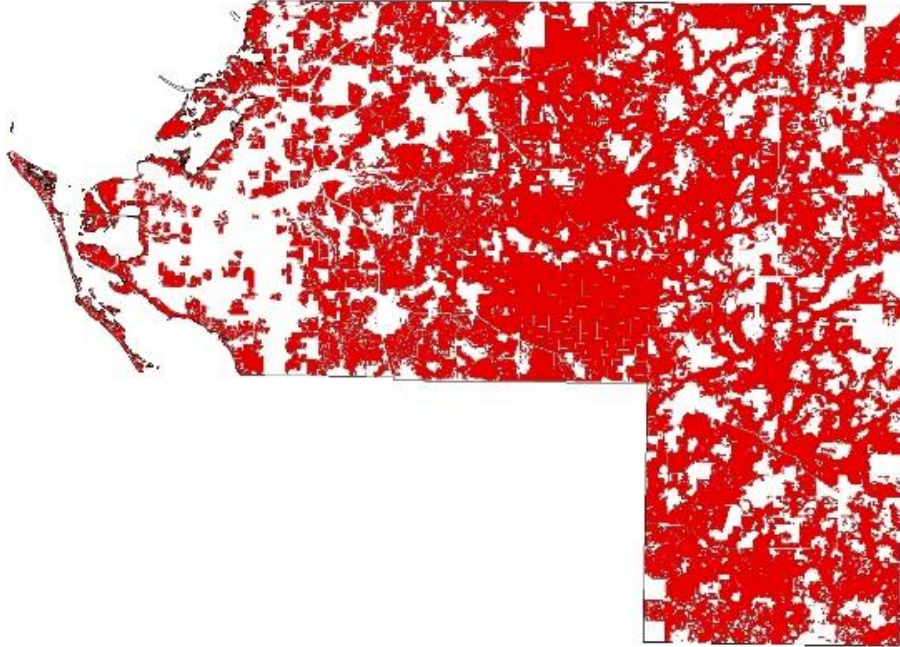
Manatee County, located in southwest Florida, is a Phase 1 MS4 that owns and operates many stormwater collection and treatment systems and is an ongoing participant in efforts to protect Tampa Bay and the Manatee River. If the proposed rule were implemented, Manatee County, its partner cities, and other stakeholders would need to expend significant resources to provide treatment so that these stormwater conveyances would meet Florida’s numeric nutrient criteria (NNC) for streams.

Determination of Fiscal Impacts

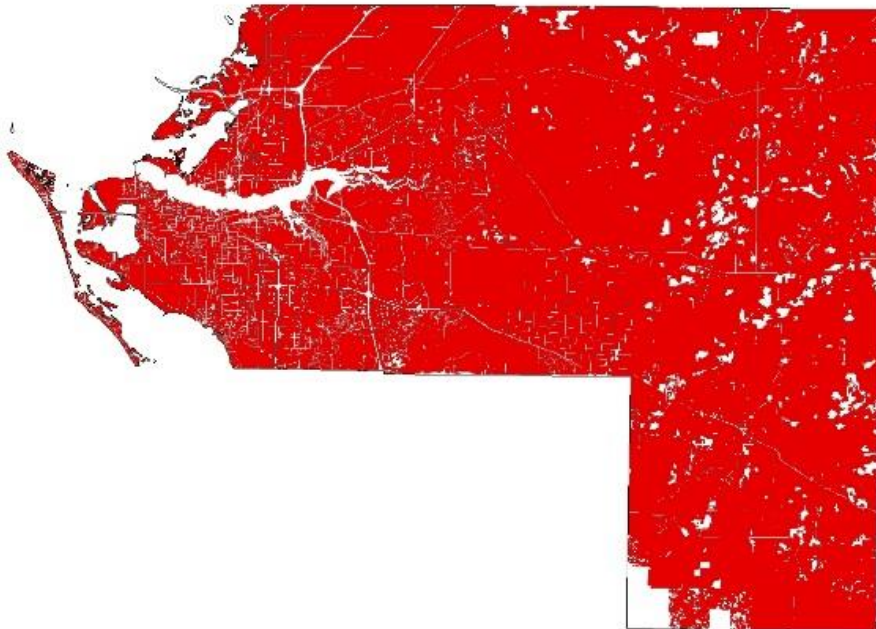
The results of the GIS analysis are presented on the following figures. The area shown in red represents the area estimated to contribute to WOTUS jurisdiction under the current WOTUS guidelines and practice and under the proposed WOTUS regulations. For Manatee County, a 31 percent reduction in total nitrogen (TN) would be needed to meet Florida’s NNC for streams. A reduction for total phosphorus (TP) is not required due to the higher TP limit in the west-central Florida region. Based upon the load to the system, the cost for designing and constructing treatment facilities is shown in the following table. The unit costs for treatment were applied to the required load reduction to get the estimated total cost to meet water quality criteria in the new WOTUS jurisdiction.

	Runoff (Acre-feet)	Total Nitrogen	Total Phosphorus
Nutrient Load Under Current WOTUS Practice (lb/yr)	377,857	2,476,409	460,062
Nutrient Load Under Proposed WOTUS Regulations (lb/yr)	534,399	3,496,239	648,790
Difference in Current and Proposed WOTUS Loads (lb/yr)	156,542	1,019,830	188,728
Average Runoff Concentration (mg/L)		2.40	0.44
Numeric Nutrient Criteria (NNC) (mg/L)		1.65	0.49
% Reduction Needed To Meet NNC in New WOTUS		31.27%	N/A
Load Reduction Needed To Meet NNC in New WOTUS (lb/yr)		318,940	N/A
Estimated Costs to meet WQ Criteria in New WOTUS (Median)		\$1,205,872,000	N/A

The estimated cost range to meet water quality criteria in the new WOTUS jurisdiction is \$320 million to \$2.3 billion for nitrogen.



Manatee County areas affected by current WOTUS practice and guidelines.



Manatee County areas potentially affected by proposed WOTUS regulations.

Fiscal Impacts on MS4s from EPA/USACE-Proposed Regulations on Waters of the United States

Description

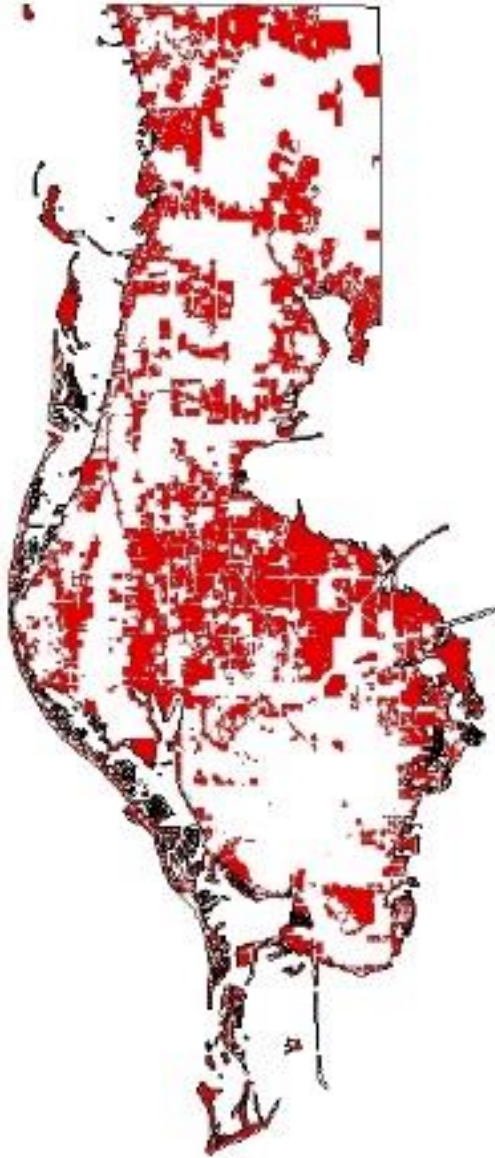
Pinellas County currently has one of the best watershed protection programs in the State of Florida and is an active participant in the Tampa Bay Nitrogen Management Consortium (TBNMC). The TBNMC is a coalition of cities and counties whose sole mission is the restoration and protection of Tampa Bay. These programs are geared toward protecting the counties' critical surface water resources, including lakes, Tampa Bay, and the numerous small embayments along the Gulf of Mexico. If the proposed WOTUS rule were implemented, Pinellas County would have to divert significant funds from the protection of these critical waterbodies to meet Florida's numeric nutrient criteria (NNC) within all of its stormwater conveyances and drainage ditches.

Determination of Fiscal Impacts

The results of the GIS analysis are presented on the following figures. The area shown in red represents the area estimated to contribute to WOTUS jurisdiction under the current WOTUS guidelines and practice and under the proposed WOTUS regulations. For Pinellas County, a 32 percent reduction in total nitrogen (TN) and a 73 percent reduction in total phosphorus (TP) would be needed to meet Florida's NNC for streams. Based upon the load to the system, the cost for designing and constructing treatment facilities is shown in the following table. The unit costs for treatment were applied to the required load reduction to get the estimated total cost to meet water quality criteria in the new WOTUS jurisdiction.

	Runoff (acre-feet)	Total Nitrogen	Total Phosphorus
Nutrient Load Under Current WOTUS Practice (lb/yr)	98,680	584,164	109,267
Nutrient Load Under Proposed WOTUS Regulations (lb/yr)	166,032	996,395	191,421
Difference in Current and Proposed WOTUS Loads (lb/yr)	67,352	412,231	82,154
Average Runoff Concentration (mg/L)		2.26	0.45
Numeric Nutrient Criteria (NNC) (mg/L)		1.54	0.12
% Reduction Needed To Meet NNC in New WOTUS		31.72%	73.30%
Load Reduction Needed To Meet NNC in New WOTUS (lb/yr)		130,776	60,223
Estimated Costs to meet WQ Criteria in New WOTUS (Median)		\$494,445,000	\$759,703,000

The estimated cost range to meet water quality criteria in the new WOTUS jurisdiction is \$131 million to \$1.03 billion for nitrogen and \$299 million to \$1.69 billion for phosphorus.



Pinellas County areas affected by current WOTUS practice and guidelines.



Pinellas County areas potentially affected by proposed WOTUS regulations.

Fiscal Impacts on MS4s from EPA/USACE-Proposed Regulations on Waters of the United States

Description

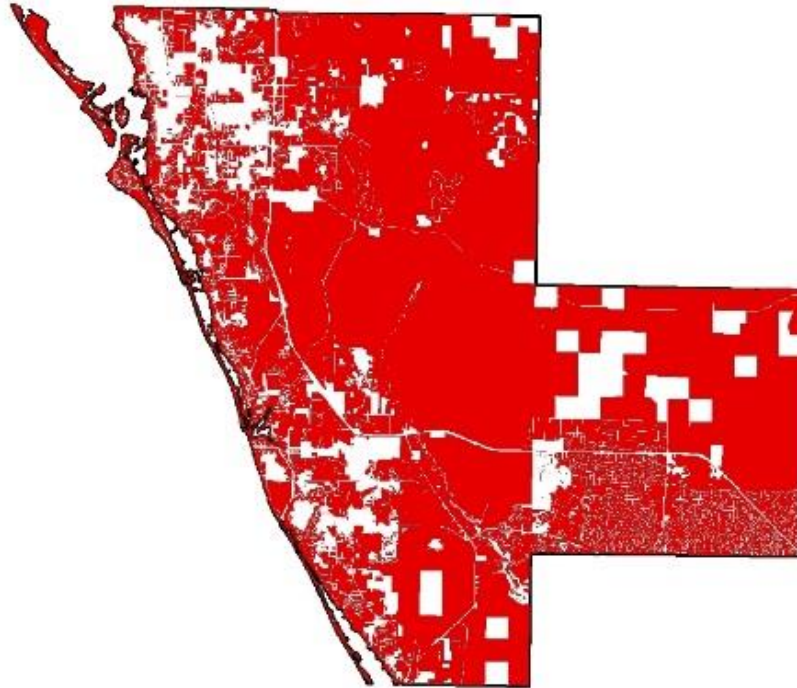
Sarasota County, located in southwest Florida, is a Phase 1 MS4 that owns and operates many stormwater collection and treatment systems and is an ongoing participant in efforts to protect Sarasota Bay, the Myakka River and Charlotte Harbor. If the proposed rule were implemented, Sarasota County, its partner cities, and other stakeholders would need to expend significant resources to provide treatment so that these stormwater conveyances would meet Florida's numeric nutrient criteria (NNC) for streams.

Determination of Fiscal Impacts

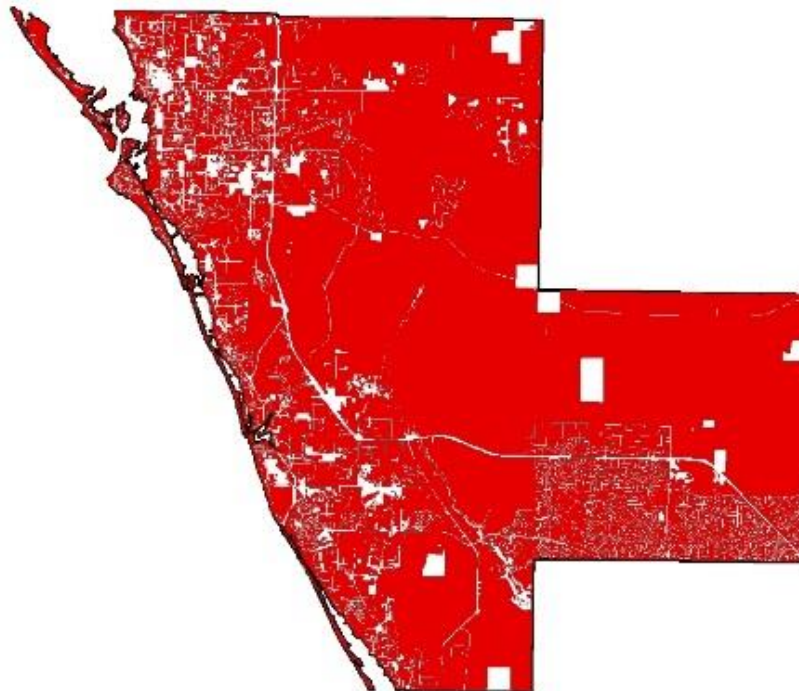
The results of the GIS analysis are presented on the following figures. The area shown in red represents the area estimated to contribute to WOTUS jurisdiction under the current WOTUS guidelines and practice and under the proposed WOTUS regulations. For Sarasota County, a 25 percent reduction in total nitrogen (TN) would be needed to meet Florida's NNC for streams. A reduction for total phosphorus (TP) is not required due to the higher TP limit in the west-central Florida region. Based upon the load to the system, the cost for designing and constructing treatment facilities is shown in the following table. The unit costs for treatment were applied to the required load reduction to get the estimated total cost to meet water quality criteria in the new WOTUS jurisdiction.

	Runoff (acre-feet)	TN (lb/yr)	TP (lb/yr)
Nutrient Load Under Current WOTUS Practice (lb/yr)	352,795	2,183,457	404,726
Nutrient Load Under Proposed WOTUS Regulations (lb/yr)	392,694	2,422,741	447,803
Difference in Current and Proposed WOTUS Loads (lb/yr)	39,899	239,285	43,077
Average Runoff Concentration (mg/L)		2.21	0.40
Numeric Nutrient Criteria (NNC) (mg/L)		1.65	0.49
% Reduction Needed To Meet NNC in New WOTUS		25.34%	N/A
Load Reduction Needed To Meet NNC in New WOTUS (lb/yr)		60,642	N/A
Estimated Costs to meet WQ Criteria in New WOTUS (Median)		\$229,281,000	N/A

The estimated cost range to meet water quality criteria in the new WOTUS jurisdiction is \$61 million to \$476 million for nitrogen.



Sarasota County areas affected by current WOTUS practice and guidelines.



Sarasota County areas potentially affected by proposed WOTUS regulations.

Fiscal Impacts on MS4s from EPA/USACE-Proposed Regulations on Waters of the United States

Description

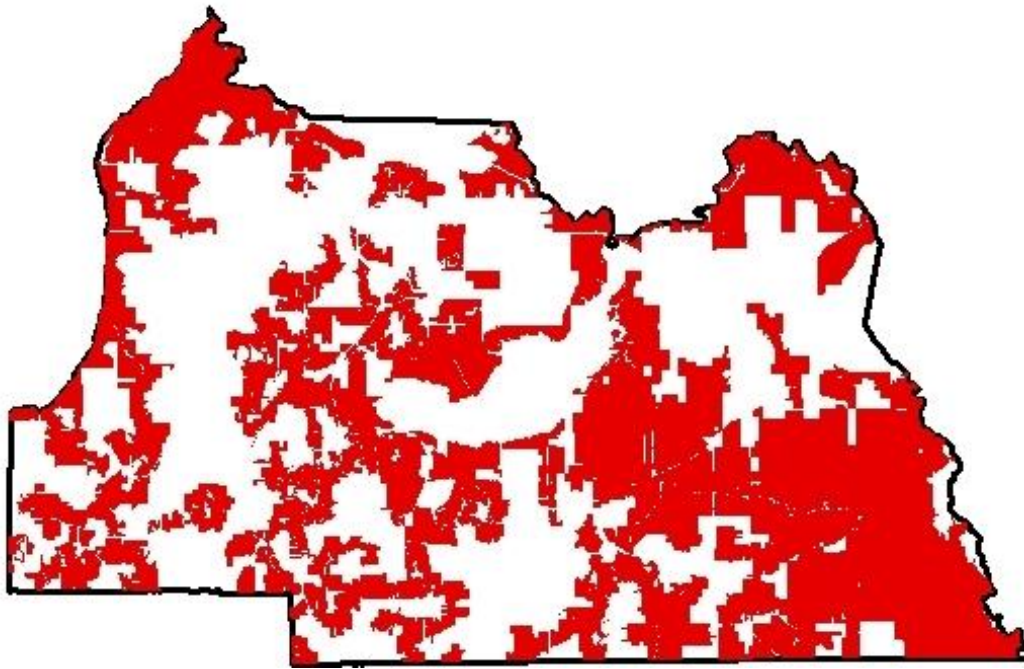
Seminole County, located in central Florida, is a Phase 1 MS4 that owns and operates many stormwater collection and treatment systems and is an ongoing participant in efforts to protect Lake Jesup and the St. Johns River. If the proposed rule were implemented, Seminole County, its partner cities, and other stakeholders would need to expend significant resources to provide treatment so that these stormwater conveyances would meet Florida’s numeric nutrient criteria (NNC) for streams.

Determination of Fiscal Impacts

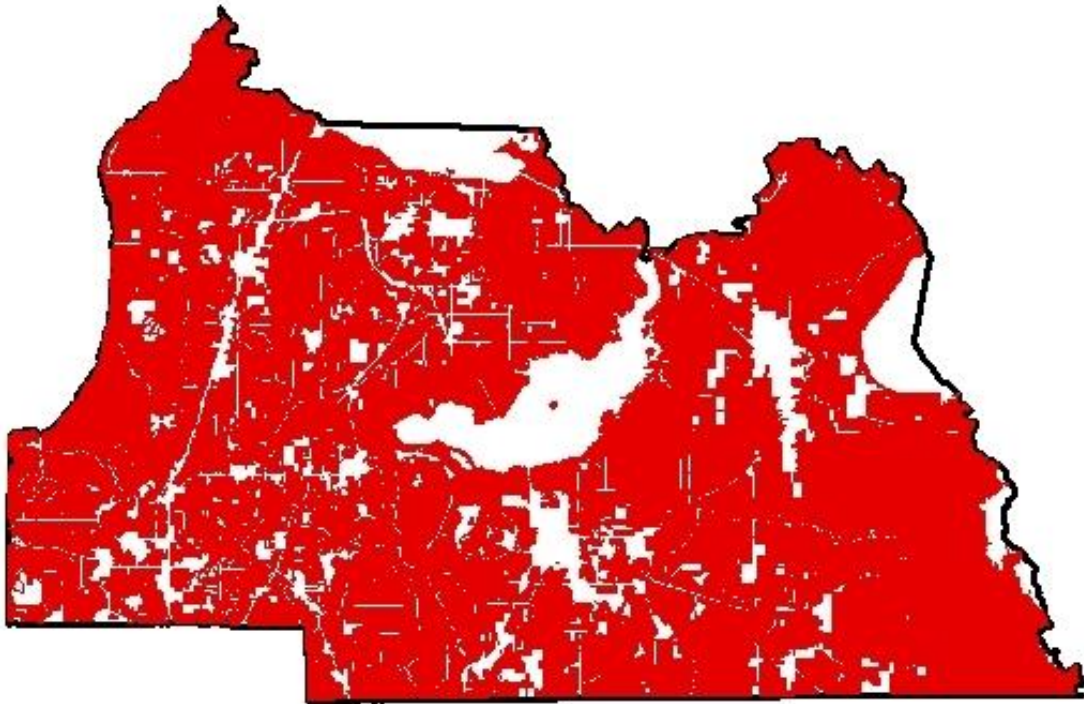
The results of the GIS analysis are presented on the following figures. The area shown in red represents the area estimated to contribute to WOTUS jurisdiction under the current WOTUS guidelines and practice and under the proposed WOTUS regulations. For Seminole County, a 34 percent reduction in total nitrogen (TN) and a 73 percent reduction in total phosphorus (TP) would be needed to meet Florida’s NNC for streams. Based upon the load to the system, the cost for designing and constructing treatment facilities is shown in the following table. The unit costs for treatment were applied to the required load reduction to get the estimated total cost to meet water quality criteria in the new WOTUS jurisdiction.

	Runoff (acre-feet)	Total Nitrogen	Total Phosphorus
Nutrient Load Under Current WOTUS Practice (lb/yr)	155,545	1,093,746	231,281
Nutrient Load Under Proposed WOTUS Regulations (lb/yr)	235,626	1,599,295	327,035
Difference in Current and Proposed WOTUS Loads (lb/yr)	80,080	505,549	95,754
Average Runoff Concentration (mg/L)		2.33	0.44
Numeric Nutrient Criteria (NNC) (mg/L)		1.54	0.12
% Reduction Needed To Meet NNC in New WOTUS		33.81%	72.77%
Load Reduction Needed To Meet NNC in New WOTUS (lb/yr)		170,905	69,678
Estimated Costs to meet WQ Criteria in New WOTUS (Median)		\$649,169,000	\$878,983,000

The estimated cost range to meet water quality criteria in the new WOTUS jurisdiction is \$172 million to \$1.34 billion for nitrogen and \$345 million to \$1.95 billion for phosphorus.



Seminole County areas affected by current WOTUS practice and guidelines.



Seminole County areas potentially affected by proposed WOTUS regulations.