

**ENHANCING THE ROLE OF WETLANDS IN FLOOD MITIGATION:  
POLICY RECOMMENDATIONS FOR NORTH CAROLINA**

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## I. INTRODUCTION

Floods have had devastating impacts in North Carolina in recent years. Hurricanes Matthew and Florence caused multiple deaths, billions of dollars in property damage, and widespread power outages, and public health risks due to contaminated wells and sewage spills.<sup>1</sup>

As other researchers involved in the NC Collaboratory Flood Resiliency Study demonstrate, wetlands and other natural systems provide important flood mitigation benefits, and deliver additional economic, water quality, and ecological benefits, as well.<sup>2</sup> The 2020 North Carolina Climate Risk Assessment and Resiliency Plan similarly emphasizes the relationship between environmental stressors and natural disasters, and identifies protection and restoration of floodplains, wetlands, pocosins, and coastal estuaries as essential actions to enhance community resiliency.<sup>3</sup>

This white paper begins with a summary of federal and state wetlands protections and the impact of the EPA’s 2020 Navigable Waters Protection Rule. It then outlines four recommendations to maintain and enhance the role of wetlands in North Carolina’s flood resilience strategy, starting with a recommendation to ensure regulatory certainty by maintaining current protections and mitigation requirements. The three subsequent recommendations include funding flood control projects authorized in the 2020 Water/Wastewater Public Enterprise Reform Act (HB 1087), expanding opportunities for landowners and local governments to protect natural systems that contribute to flood mitigation, and providing local governments with capacity building and coordination support. While the white paper focuses on wetlands, some recommendations could apply more generally to natural systems that provide flood mitigation benefits.

## II. THE STATE OF WETLANDS REGULATION IN NC

North Carolina and the federal government each exercise jurisdiction over the state’s wetlands and streams. The Clean Water Act authorizes the Environmental Protection Agency (“EPA”) to implement pollution control programs and prohibits any discharge of pollutants into “navigable waters.”<sup>4</sup> The Clean Water Act defines “navigable waters” as “the waters of the United States, including the territorial seas,”<sup>5</sup> but the law does not further define the scope of federal jurisdiction. Clean Water Act Section 404 requires the EPA and U.S. Army Corps of Engineers (“Army Corps”) to regulate the discharge of dredged or fill materials into waters subject to

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<sup>1</sup> Hurricanes Matthew (2016) and Florence (2018) caused an estimated \$4.8 billion and \$17 billion in property damage in N.C., respectively. Press Release, *Updated Estimates Show Florence Caused \$17 Billion in Damage*, Office of Gov. Roy Cooper, Oct. 31, 2018, <https://governor.nc.gov/news/updated-estimates-show-florence-caused-17-billion-damage>; Press Release, *One Year Later: North Carolina Continues Recovering from Hurricane Matthew*, Office of Gov. Roy Cooper, Oct. 3, 2017, <https://governor.nc.gov/news/one-year-later-north-carolina-continues-recovering-hurricane-matthew>.

<sup>2</sup> Barbara Doll, *et al.*, *Improving North Carolina’s Resilience to Coastal Riverine Flooding* (2021).

<sup>3</sup> See pp 1-18–1-19, <https://files.nc.gov/ncdeq/climate-change/resilience-plan/2020-Climate-Risk-Assessment-and-Resilience-Plan.pdf>

<sup>4</sup> 33 U.S.C. §§ 1311(a), 1362(12), 1251 et seq. See also *Summary of the Clean Water Act*, EPA (June 12, 2020, 2:52 PM), <https://www.epa.gov/laws-regulations/summary-clean-water-act> (“The basis of the Clean Water Act was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. ‘Clean Water Act’ became the Act’s common name with amendments in 1972.”).

<sup>5</sup> 33 U.S.C. §1362(7).

federal jurisdiction.<sup>6</sup> The N.C. Department of Environmental Quality’s (“DEQ”) Division of Water Resources is responsible for issuing Clean Water Act § 401 water quality certifications, which certify that a project “will not degrade Waters of the State or violate State water quality standards.”<sup>7</sup>

North Carolina law also independently protects “Waters of the State,” which has a more expansive definition of jurisdictional waters than the Clean Water Act. Other state laws include specific protections for coastal and estuarine waters and marshlands.

This section summarizes the shifting scope of federal Clean Water Act jurisdiction. It then explains the scope of state wetlands jurisdiction and the impact of the 2020 Navigable Waters Protection Rule on wetlands permitting in North Carolina. The section concludes with an explanation of DEQ’s proposed temporary rules to fill the state permitting gap resulting from the narrow definition of federal jurisdictional waters included in the Navigable Waters Protection Rule.

### **A. Federal Wetlands Jurisdiction**

The Clean Water Act does not define “waters of the United States” (“WOTUS”). Instead, Congress defers to the EPA and Army Corps to determine the scope of their jurisdiction.<sup>8</sup> As a result, these agencies, and the U.S. Supreme Court, have grappled with the scope of federal jurisdiction under the Clean Water Act, particularly regarding coverage of wetlands. This continues to create regulatory uncertainty regarding the scope of federal jurisdiction.

The following discussion summarizes major developments in Clean Water Act jurisdiction.

#### ***Riverside Bayview Homes and Adjacent Wetlands***

In 1985’s *United States v. Riverside Bayview Homes, Inc.*, the U.S. Supreme Court held that the Army Corps’ Section 404 regulatory authority included adjacent wetlands, and landowners could not discharge fill materials into wetlands without permits.<sup>9</sup> The Court stated that “[p]rotection of aquatic ecosystems, Congress recognized, demanded broad federal authority to control pollution.”<sup>10</sup> It then concluded that Congress intended to define WOTUS broadly, making “the term ‘navigable’ . . . of limited import.”<sup>11</sup>

#### **The 1986 Rule, SWANCC, and the Migratory Bird Rule**

In 1986, the Army Corps aligned its WOTUS definition to the EPA’s, and included all traditional navigable waters, interstate waters, and the territorial seas, including wetlands adjacent to

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<sup>6</sup> *Section 404 of the Clean Water Act: Permit Program under Clean Water Act Section 404*, EPA (June 3, 2020, 12:36 PM), <https://www.epa.gov/cwa-404/permit-program-under-cwa-section-404>.

<sup>7</sup> DEQ, *Wetland & Stream FAQs*, <https://deq.nc.gov/about/divisions/water-resources/water-quality-permitting/401-buffer-permitting-branch/frequently>.

<sup>8</sup> See, e.g., 33 U.S.C. §1362. The two agencies relied on separate regulatory definitions of WOTUS until 1986. See, e.g., 33 C.F.R. 328.3 (ARMY CORPS); 40 CFR 120.2 (EPA). The definitions became nearly identical in 1986, however. See Final Rule for Regulatory Programs of the Corps of Engineers, 51 Fed. Reg. 41,206, 41,216 (Nov. 13, 1986).

<sup>9</sup> *United States v. Riverside Bayview Homes, Inc.*, 474 U.S. 121 (1985).

<sup>10</sup> *Id.* at 132–33 (citing S. REP. NO. 92–414, 77 (1972), U.S. CODE CONG. & ADMIN. NEWS 1972, 3668, 3742.)

<sup>11</sup> *Id.* at 133.

traditional navigable waters, interstate waters, the territorial seas, impoundments, tributaries, or “other waters” (other than waters that are themselves wetlands).<sup>12</sup> However, it also added what became known as the “Migratory Bird Rule” to the preamble.<sup>13</sup> This rule expanded its jurisdiction to intrastate waters, such as isolated wetlands, that provided habitats for migratory birds.<sup>14</sup>

The Supreme Court invalidated the Army Corps’ “Migratory Bird Rule” in the 2001 decision in *Solid Waste Agency of Northern Cook County (SWANCC) v. U.S. Army Corps of Engineers*.<sup>15</sup> The Court determined that “navigable waters” did not include isolated wetlands -- only navigable rivers, their tributaries, and adjacent wetlands.<sup>16</sup> The EPA and Army Corps provided joint guidance clarifying federal jurisdictional waters following the *SWANCC* decision, stating that the agencies would evaluate jurisdiction over intrastate, non-navigable waters on a case-by-case basis without using migratory bird factors.<sup>17</sup> The agencies retained jurisdiction over wetlands adjacent to traditional navigable waters and those adjacent to non-navigable waters that are tributaries to navigable waters.<sup>18</sup>

### **The *Rapanos* Plurality: Continuous Surface Connection or Significant Nexus Test?**

In 2006 the Supreme Court revisited federal wetlands jurisdiction in *Rapanos v. United States*.<sup>19</sup> The Court failed to reach agreement among a majority of the justices. Instead, Justice Scalia wrote an opinion for four justices arguing for a bright-line test to guide Clean Water Act jurisdiction.<sup>20</sup> Justice Scalia’s plurality opinion stated that WOTUS “include[d] only relatively permanent, standing or flowing bodies of water.”<sup>21</sup> According to this interpretation, Clean Water Act jurisdiction includes “*only* those wetlands with a continuous surface connection to [WOTUS] . . . are ‘adjacent to’ such waters and covered by the Act.”<sup>22</sup> Justice Kennedy drafted a separate opinion, concurring in the result but rejecting Justice Scalia’s reasoning. Instead, Justice Kennedy introduced a “significant nexus” rule.<sup>23</sup> He argued that jurisdiction should be determined on a case-by-case basis depending upon whether the body of water has a “significant nexus” to navigable-in-fact waters.<sup>24</sup> Wetlands would have a significant nexus if they, “either alone or in combination with similarly situated [wet]lands in the region, significantly affect the

<sup>12</sup> 33 C.F.R. 328.3(a)(1)-(7), (b) (1987). The 1986 regulation also excluded “waste treatment systems” from the WOTUS definition, consistent with the EPA’s regulatory definition. In 1993, the agencies amended the WOTUS definition to exclude “prior converted croplands.” 58 Fed. Reg. 45,008, 45,031 (Aug. 25, 1993).

<sup>13</sup> Final Rule for Regulatory Programs of the Corps of Engineers, 51 Fed. Reg. 41,206, 41,217 (Nov. 13, 1986).

<sup>14</sup> *Id.*

<sup>15</sup> *Solid Waste Agency of N. Cook County v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001).

<sup>16</sup> *Id.* at 160-161.

<sup>17</sup> Joint Memorandum, 68 Fed. Reg. 1,995, 1,996 (Jan. 15, 2003).

<sup>18</sup> *Id.* at 1,996-1,997.

<sup>19</sup> 547 U.S. 715 (2006).

<sup>20</sup> *Id.* at 732.

<sup>21</sup> *Id.*

<sup>22</sup> *Id.* at 742 (emphasis in the original).

<sup>23</sup> *Id.* at 782.

<sup>24</sup> *Id.* See also Zoë Schlanger, *Trump’s Rollback of a Clean Water Rule Hinges on a Definition of “Waters” Scalia Found in a Dictionary*, QUARTZ (Mar. 2, 2017), <https://qz.com/922503/trumps-rollback-of-a-clean-water-rule-hinges-on-a-definition-of-waters-scalia-found-in-a-dictionary/>.

chemical, physical, and biological integrity of other covered waters more readily understood as ‘navigable.’”<sup>25</sup>

Following *Rapanos*, courts differed on which test to apply. Some circuits used Kennedy’s “significant nexus” test.<sup>26</sup> Others criticized the test as vague and difficult to implement.<sup>27</sup> Some circuit courts used both tests.<sup>28</sup> None applied the bright-line test by itself, however.<sup>29</sup> In 2008, the EPA and Army Corps issued a joint memorandum clarifying Clean Water Act jurisdiction, and included the significant nexus text.<sup>30</sup>

### **The 2015 Clean Water Rule**

The 2015 Clean Water Rule sought to clarify the definition of WOTUS and the scope of federal Clean Water Act jurisdiction.<sup>31</sup> The Rule directly referenced Justice Kennedy’s concurrence in *Rapanos* and incorporated “significant nexus” into its interpretation of WOTUS.<sup>32</sup> Traditional navigable waters, interstate waters, territorial seas, and impoundments of jurisdictional waters remained within the scope of the Clean Water Act.<sup>33</sup> Tributaries and adjacent waters were also jurisdictional due to the significant nexus to traditional navigable waters.<sup>34</sup> Other waters could be jurisdictional if analysis determined that the waters had a significant nexus to traditional navigable waters.<sup>35</sup>

Numerous courts enjoined the Rule, however, resulting in a patchwork of regulations. Courts blocked implementation of the Rule in twenty-seven states (including North Carolina). The Clean Water Rule remained in effect in twenty-two states and the District of Columbia. The

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<sup>25</sup> *Rapanos*, 547 U.S. at 780.

<sup>26</sup> See, e.g., *United States v. Gerke Excavating, Inc.*, 464 F.3d 723, 725 (7th Cir. 2006) (“[A]s a practical matter the Kennedy concurrence is the least common denominator[.]”), cert. denied, 552 U.S. 810 (2007); *United States v. Robison*, 505 F.3d 1208, 1222 (11th Cir. 2007) (“[P]ursuant to Marks, we adopt Justice Kennedy’s ‘significant nexus’ test as the governing definition of ‘navigable waters’ under *Rapanos*.”), cert. denied sub nom; *McWane v. United States*, 555 U.S. 1045 (2008).

<sup>27</sup> See, e.g., *United States v. Chevron Pipe Line Co.*, 437 F. Supp. 2d 605 (N.D. Tex. 2006) (“This test leaves no guidance on how to implement its vague, subject centerpiece.”); Annie Snider, *The Two Words that Rewrote American Water Policy*, POLITICO (May 25, 2016), <http://www.politico.com/agenda/story/2016/05/obama-wotus-wetlands-rulesupreme-court-000131> (“[A]s definitive as those words [significant nexus] sound, the real problem was—and still is—that nobody has ever known quite what they were supposed to mean.”).

<sup>28</sup> See, e.g., *United States v. Donovan*, 661 F.3d 174, 183-84 (3d Cir. 2011), cert. denied, 132 S. Ct. 2409 (2012); *United States v. Bailey*, 571 F.3d 791, 799 (8th Cir. 2009); *United States v. Johnson*, 467 F.3d 56, 66 (1st Cir. 2006), cert. denied, 552 U.S. 948 (2007).

<sup>29</sup> STEPHEN P. MULLIGAN, CONG. RESEARCH SERV., R44585, EVOLUTION OF THE MEANING OF “WATERS OF THE UNITED STATES” IN THE CLEAN WATER ACT 22 (2019).

<sup>30</sup> Joint Memorandum: Clean Water Act Jurisdiction Following the U.S. Supreme Court’s Decision in *Rapanos v. United States & Carabell v. United States*, EPA & Dept. of the Army (Dec. 2, 2008).

<sup>31</sup> Clean Water Rule: Definition of “Waters of the United States”, 80 Fed. Reg. 37,054, 37,055 (June 29, 2015).

<sup>32</sup> *Id.* at 37,115.

<sup>33</sup> *Id.* at 37,058.

<sup>34</sup> *Id.* at 37,058, 37,062.

<sup>35</sup> *Id.* at 37,059.

status remained unclear in New Mexico due to a pending lawsuit.<sup>36</sup> In February 2018, the EPA delayed the effective date of the 2015 Clean Water Rule to February 6, 2020.<sup>37</sup>

### **The 2020 Navigable Waters Protection Rule**

The EPA and Army Corps rescinded the Clean Water Rule in 2019<sup>38</sup> and replaced it with the Navigable Waters Protection Rule in June 2020.<sup>39</sup> The new rule reduces the jurisdictional scope under the Clean Water Act and codifies a new WOTUS definition.<sup>40</sup> The Navigable Waters Protection Rule abandons the significant nexus test and limits jurisdictional waters to four categories: (1) territorial seas and traditional navigable waters; (2) perennial and intermittent tributaries; (3) lakes, ponds, and impoundments of jurisdictional waters; and (4) wetlands adjacent to jurisdictional waters.<sup>41</sup> Adjacent wetlands are defined as

wetlands that abut a territorial sea or traditional navigable water, a tributary, or a lake, pond, or impoundment of a jurisdictional water; are inundated by flooding from a territorial sea or traditional navigable water, a tributary, or a lake, pond, or impoundment of a jurisdictional water in a typical year; are physically separated from a territorial sea or traditional navigable water, a tributary, or a lake, pond, or impoundment of a jurisdictional water only by a natural berm, bank, dune, or similar natural feature; or are physically separated from a territorial sea or traditional navigable water, a tributary, or a lake, pond, or impoundment of a jurisdictional water only by an artificial dike, barrier, or similar artificial structure so long as that structure allows for a direct hydrological surface connection to the territorial sea or traditional navigable water, tributary, or lake, pond, or impoundment of a jurisdictional water in a typical year, such as through a culvert, flood or tide gate, pump, or similar artificial feature.<sup>42</sup>

The Navigable Waters Protection Rule also includes twelve categories of exclusions, such as groundwater, most ditches, prior converted cropland, waste treatment systems, and features that only contain water in direct response to rainfall (e.g., ephemeral features).<sup>43</sup>

### **B. State Wetlands Jurisdiction**

North Carolina law also governs wetlands, streams, and other water bodies in the state. These protections operate in parallel with federal law and remain in place even when federal law becomes less stringent. The State Constitution specifies that:

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<sup>36</sup> Valerie Volcovici, *Trump EPA Repeals Obama-Era Water Protections to Boost Industry*, REUTERS (Sep. 12, 2019), <https://www.reuters.com/article/us-usa-epa-water-idUSKCN1VX1XC>; Pamela King, *WOTUS Lawsuits Start Long, Muddy Legal Battle*, E&E NEWS (Oct. 24, 2019), <https://www.eenews.net/stories/1061365079>.

<sup>37</sup> Definition of “Waters of the United States”-Addition of an Applicability Date to 2015 Clean Water Rule, 83 Fed. Reg. 5,200, 5,201 (Feb. 6, 2018).

<sup>38</sup> Definition of “Waters of the United States”-Recodification of Pre-Existing Rules, 84 Fed. Reg. 56,626 (Oct. 22, 2019).

<sup>39</sup> Navigable Waters Protection Rule: Definition of “Waters of the United States”, 85 Fed. Reg. 22,250 (Apr. 21, 2020).

<sup>40</sup> 40 C.F.R. § 120.2.

<sup>41</sup> Navigable Waters Protection Rule, 85 Fed. Reg. at 22,266.

<sup>42</sup> *Id.* at 22,251.

<sup>43</sup> *Id.*; 40 C.F.R. § 120.2.

It shall be the policy of this State to conserve and protect its lands and waters for the benefit of all its citizenry, . . . to control and limit the pollution of our . . . water, . . . and in every other appropriate way to preserve as a part of the common heritage of this State its . . . wetlands, estuaries, beaches.<sup>44</sup>

State law defines Waters of the State as:

Any stream, river, brook, swamp, lake, sound, tidal estuary, bay, creek, reservoir, waterway, or other body or accumulation of water, whether surface or underground, public or private, or natural or artificial, that is contained in, flows through, or borders upon any portion of this State, including any portion of the Atlantic Ocean over which the State has jurisdiction.<sup>45</sup>

Although the Waters of the State definition does not specifically refer to wetlands, the state administrative code states that

“Wetlands” are “waters” as defined by G.S. 143-212(6) that are inundated or saturated by an accumulation of surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.<sup>46</sup>

North Carolina’s regulations explicitly recognize the “[s]torm and flood water storage and retention” role of wetlands.<sup>47</sup>

Following the Supreme Court’s 2001 *SWANNC* decision, the N.C. Department of Justice’s (“NC DOJ”) Environmental Division clarified state oversight of isolated wetlands.<sup>48</sup> According to the NC DOJ opinion:

Unlike the federal law, North Carolina’s statutory definition is not constrained by inclusion of the word ‘navigable.’ Nor does the State, unlike the federal government, have constitutional restrictions on the scope of its purely local regulations.<sup>49</sup>

The opinion concludes that the statutory definition of Waters of the State, the State Constitution, and public policy supported the State’s protection of wetlands, including isolated wetlands.<sup>50</sup>

In addition, the 1972 N.C. Coastal Area Management Act<sup>51</sup> protects coastal and estuarine waters and marshlands. DEQ’s Division of Coastal Management (“DCM”) oversees permitting of

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<sup>44</sup> N.C. CONST. art. XIV, § 5 (emphasis added).

<sup>45</sup> N.C. GEN. STAT. § 143-212(6).

<sup>46</sup> 15A NCAC 2B .0202.

<sup>47</sup> 5A NCAC 02B .0231.

<sup>48</sup> N.C. Dep’t of Justice, Opinion Letter on Authority of the Environmental Management Commission to Adopt Temporary and Permanent Rules Requiring Permits for Impacts to Isolated Wetlands and Surface Waters (Sept. 5, 2001).

<sup>49</sup> *Id.*

<sup>50</sup> *Id.*

<sup>51</sup> N.C. GEN. STAT. § 113A-100 et seq.

waters subject to the law.<sup>52</sup> DCM also oversees permitting for NC’s Dredge and Fill Act, which covers estuarine waters, tidelands, marshlands, and State-owned lakes.<sup>53</sup>

### **C. The Impact of the Navigable Waters Protection Rule on NC Wetlands Permitting**

Under existing state and federal law, disturbances, alterations, discharges, or other impacts to wetlands may require one or more permits, depending on the type of wetland, amount of wetland impacted, and whether the wetland is subject to state or federal jurisdiction. If a proposed project impacts state or federal jurisdictional waters, project developers must explore “all practical alternatives for avoiding and minimizing impacts” and mitigate impacts that exceed permit thresholds.<sup>54</sup> Mitigation options include project-specific mitigation whereby the project developer mitigates impacts on-site or off-site, purchasing mitigation credits from an approved mitigation bank, or in-lieu fee mitigation that involves purchasing mitigation credits through the Division of Mitigation Services.<sup>55</sup> Applicants must satisfy mitigation requirements before completing the project or opening it to the public, depending on the type of project.<sup>56</sup>

Until recently, federal and state law both covered adjacent wetlands and wetlands that satisfied the significant nexus test, and DEQ relied on Clean Water Act § 401 permitting authority to satisfy federal and state law permitting requirements. DEQ relied upon its independent permitting for isolated and non-404 jurisdictional wetlands.<sup>57</sup> (Figure 1)

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<sup>52</sup> DEQ, *Division of Coastal Management*, <https://deq.nc.gov/about/divisions/coastal-management>.

<sup>53</sup> N.C. GEN. STAT. § 113-229.

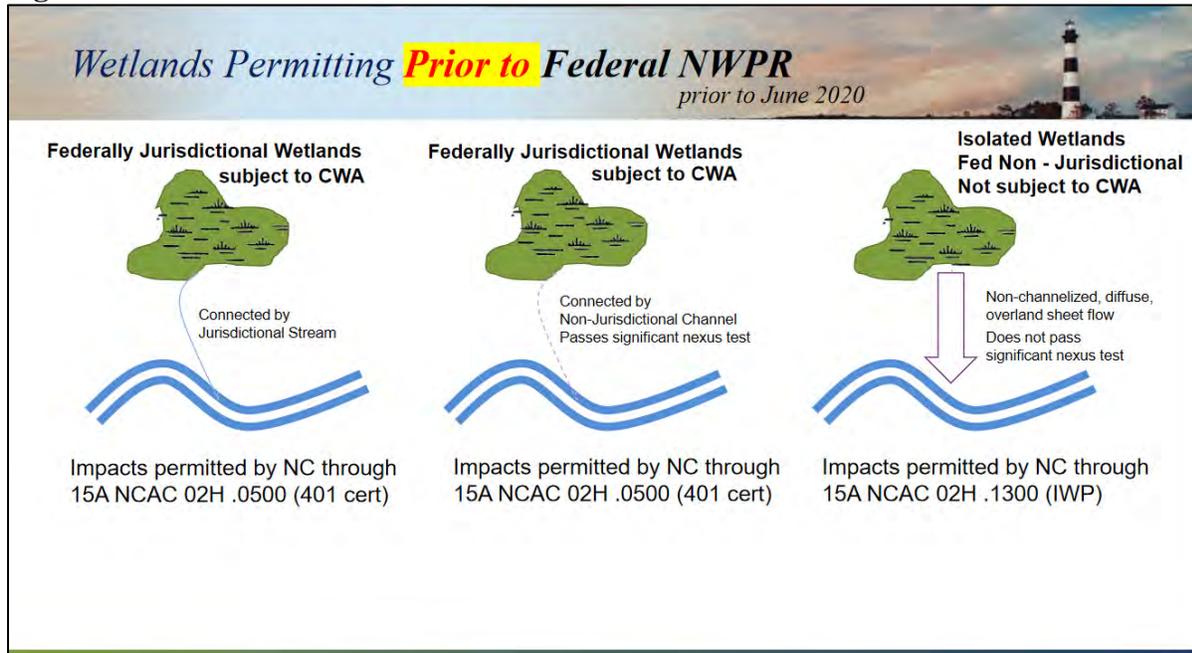
<sup>54</sup> 40 CFR Part 230; NC DEQ, *Stream & Wetland Mitigation Program*, <https://deq.nc.gov/about/divisions/water-resources/water-quality-permitting/401-buffer-permitting-branch/stream-wetland>.

<sup>55</sup> NC DEQ, *Stream & Wetland Mitigation Program*, *supra* note 57. This process does not prevent the loss of all wetlands in North Carolina. For example, DMS reports that 139.76 acres of wetlands were lost from permitting between July 2018 and June 2019, while 107.82 acres were gained through mitigation. DIVISION OF MITIGATION SERVICES, 2019-20 ANNUAL REPORT, <https://files.nc.gov/ncdeq/Mitigation%20Services/Administration/Reports/2019-2020ar/DEQ-Mitigation-Services-Annual-2020-11-01.pdf>. During the same period, 81,120.51 liner feet of streams were lost while only 22,645.00 were gained. *Id.* DMS provides annual reports, including annual losses and gains of wetlands and streams.

<sup>56</sup> NC DEQ, *Stream & Wetland Mitigation Program*, *supra* note 57. For example, if the project is a public road, the mitigation plan must be implemented before the road is open to the public. Evidence of implementation of a mitigation plan is provided to the DWR via proof of payment. *Id.*

<sup>57</sup> DEQ, *Wetland & Stream FAQs*, *supra* note 7.

Figure 1.

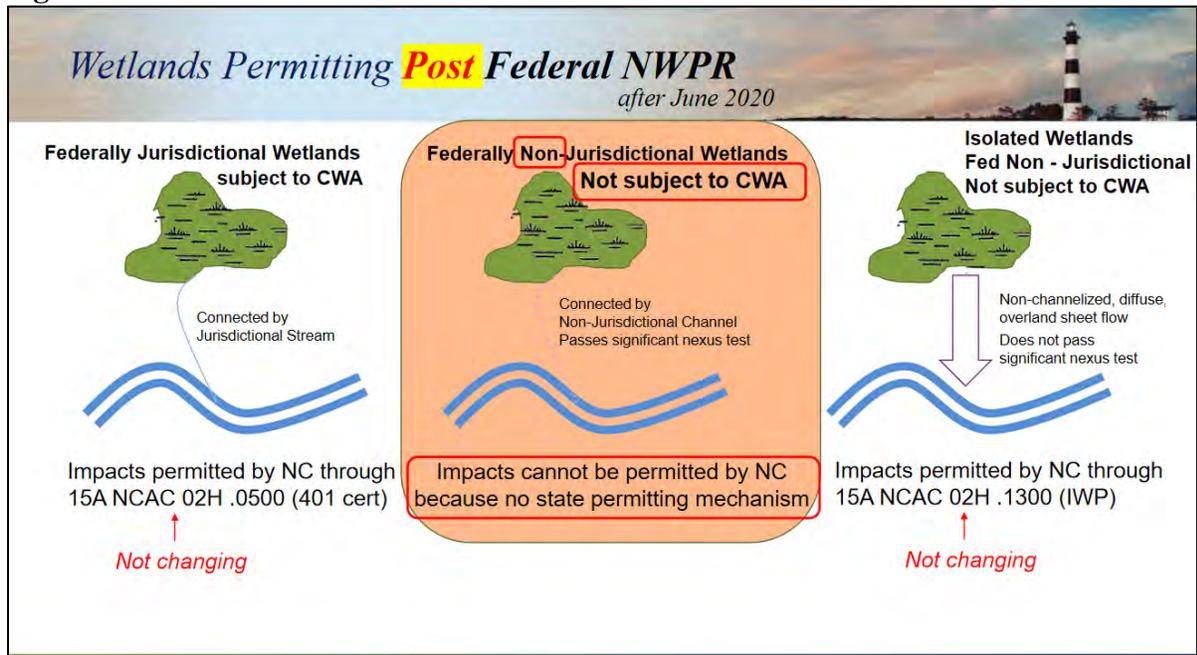


Source: NC DEQ, Presentation to the N.C. Environmental Management Commission Water Quality Committee, Mar. 10, 2021.

The Navigable Waters Protection Rule “establish[es] the boundary between regulated ‘waters of the United States’ and the waters subject solely to State and tribal authority ....”<sup>58</sup> The narrowed WOTUS definition in the Navigable Waters Protection Rule removed some waters from federal jurisdiction, but it did not affect the existing scope of the NC Waters of the State protections. Following the change, § 401 permits continue to apply to wetlands adjacent to Clean Water Act jurisdictional waters but no longer apply to “significant nexus” wetlands—wetlands that remain subject to 15A NCAC 02B .0231. (Figure 2) This created a permitting gap in North Carolina.

<sup>58</sup> Navigable Waters Protection Rule, 85 Fed. Reg. at 22,269.

Figure 2.



Source: NC DEQ, Presentation to the N.C. Environmental Management Commission Water Quality Committee, Mar. 10, 2021.

The lack of permitting authority has caused some projects that would impact wetlands to stall because they were unable to receive a permit authorizing replacement of the wetland through mitigation.<sup>59</sup> DEQ proposed temporary rules in March 2021 to reestablish a permitting mechanism for projects impacting waters subject to state wetlands protections but no longer covered by the federal WOTUS definition.<sup>60</sup>

### III. RECOMMENDATIONS

The fluctuations in federal wetlands jurisdiction, and uncertainty regarding state wetlands permitting authority, risk undermining protections for wetlands at a time when North Carolina policymakers are seeking strategies to prepare the state for future storms. The following

<sup>59</sup> Hearing Officer's Report of Proceedings Public Hearing and Comment Period, Adoption of Temporary Rules 15A NCAC 02H .1400 Discharges to Federally Non-Jurisdictional Wetlands and Federally Non-Jurisdictional Classified Surface Waters AND Adoption of Temporary Amendment to Rule 15A NCAC 02H .1301 Discharges to Isolated Wetlands and Isolated Waters: Purpose and Scope, NC Environmental Management Commission (Apr. 21, 2021), at A-6 & A-7,

[https://files.nc.gov/ncdeq/Environmental%20Management%20Commission/EMC%20Meetings/2021/may2021/attachments/AttachA to 21-17 HORwith attachments correction.pdf](https://files.nc.gov/ncdeq/Environmental%20Management%20Commission/EMC%20Meetings/2021/may2021/attachments/AttachA%20to%2021-17%20HORwith%20attachments%20correction.pdf).

<sup>60</sup> Proposed Temporary Rule Amendments to 15A NCAC 02H Section 1400 "Discharges to Federally Non-Jurisdictional Wetlands and Federally Non-Jurisdictional Classified Surface Waters" (.1401 through .1405), [https://files.nc.gov/ncdeq/Environmental%20Management%20Commission/Water Quality Committee Meetings/2021/march/agenda-attach-minutes/Attachment-A---Temporary-Rules-15A-NCAC-02H-.1401-.1405--new---1-.pdf](https://files.nc.gov/ncdeq/Environmental%20Management%20Commission/Water%20Quality%20Committee%20Meetings/2021/march/agenda-attach-minutes/Attachment-A---Temporary-Rules-15A-NCAC-02H-.1401-.1405--new---1-.pdf); Proposed Temporary Rule Amendments to 15A NCAC 02H .1301 "Discharges to Isolated Wetland and Isolated Waters: Purpose and Scope", [https://files.nc.gov/ncdeq/Environmental%20Management%20Commission/Water Quality Committee Meetings/2021/march/agenda-attach-minutes/Attachment-B---Temporary-Rule-15A-NCAC-02H-.1301--revision---1-.pdf](https://files.nc.gov/ncdeq/Environmental%20Management%20Commission/Water%20Quality%20Committee%20Meetings/2021/march/agenda-attach-minutes/Attachment-B---Temporary-Rule-15A-NCAC-02H-.1301--revision---1-.pdf).

recommendations identify four options to maintain and enhance the role of wetlands in the state's flood resilience strategy.

**Recommendation 1: Maintain Existing Wetland Protections and Mitigation Requirements.**

Maintaining existing protections for wetlands and streams is a critical first step to enhancing natural systems for flood mitigation, particularly as North Carolina lawmakers seek cost-effective strategies to improve the state's resilience to major storms. DEQ's proposed temporary permitting rule would achieve that goal in the near-term.

Implementing permanent rules that ensure ongoing wetlands protections and clarify permitting requirements would result in multiple benefits for the state. First, many existing wetlands contribute to flood mitigation and deliver additional ecosystem and economic advantages. Reducing regulatory requirements could undermine state flood resilience goals. Doing so could also increase the cost of achieving similar levels of flood mitigation potential. The current wetland and stream mitigation requirements allocate the cost of wetland impacts to the actors directly causing the impacts. Reducing wetland and stream protections would, therefore, place the costs on taxpayers in order to replace wetland acreage rather than the project developers.

Second, maintaining existing protections would provide certainty for the regulated community, stakeholders, and government officials overseeing permitting requirements. As noted in Section II, federal Clean Water Act jurisdiction has expanded and contracted over time, and judicial interpretations of the Clean Water Act's WOTUS requirements have created confusion and different rules for different parts of the country. Because North Carolina's Waters of the State rules remain in place even as federal requirements shift, state rules can maintain constancy and certainty. The General Assembly could provide a greater degree of regulatory certainty by enacting legislation to codify the existing wetland and stream protections. It is important to note that legislative changes limiting CEQ's NC Waters of the State authority could have the opposite effect, increasing the state's vulnerability to changes in federal regulations.

Third, maintaining existing protections would provide stability for wetland mitigation protect developers and the Division of Mitigation Service's in-lieu fee program. DMS contracts with private companies to develop large mitigation projects and purchases mitigation credits if necessary to facilitate timely options to the regulated community.<sup>61</sup> These projects may take years to develop. If near-term jurisdictional changes reduce demand for private mitigation and DMS in-lieu fee mitigation. In turn, this could shrink the pipeline of available projects, thus delaying or preventing development if wetland rules become more stringent in the future.

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<sup>61</sup> DEQ, *DMS Vendors: Business Practices for Compensatory Mitigation*, <https://deq.nc.gov/about/divisions/mitigation-services/dms-vendors>.

**Recommendation 2:** Provide Funding for Flood Storage Capacity Projects Authorized in the 2020 Water/Wastewater Public Enterprise Reform Act (HB 1087)

The 2020 Water/Wastewater Public Enterprise Reform Act (HB 1087) established an innovative new program to increase flood storage capacity. The law builds upon the in-lieu fee mitigation program and expands the types of projects the DMS may invest in to include flood storage projects that “create[] or restore[] a quantify of flood storage capacity expressed in acre-feet.”<sup>62</sup> These projects may include “the creation or restoration of wetlands, streams, and riparian areas, temporary flooding of fields, pastures, or forests, and other nature-based projects that can demonstrably increase flood storage capacity.”<sup>63</sup>

The flood capacity programs authorized in HB 1087 are distinct from the Clean Water Act and Waters of the State protections for wetlands and streams, allowing DMS to fund projects based on flood water retention capacity rather than ecological function. While HB 1087 focuses on water retention rather than ecological function, wetlands conservation and construction should qualify if they meet the retention requirements.

HB 1087 authorizes the new program but does not appropriate funding for projects. DMS is funded by fees collected through the in-lieu mitigation program, which is driven by the regulatory requirement to mitigate stream and wetland impacts. The flood storage program is voluntary, so the success of the flood storage projects will depend either upon state appropriations or federal funding.

Initial funding could focus on demonstration projects in different watersheds to evaluate project design and identify long-term funding needs, or prioritize early projects in the highest priority areas.

**Recommendation 3:** Expand Opportunities for Landowners and Local Governments to Protect Natural Systems that Contribute to Flood Mitigation

The preceding recommendations focus on regulatory requirements or project implementation by DMS and private sector wetland mitigation providers. Expanding incentives for private landowners and local governments to participate in wetland restoration and creation could complement the first two recommendations and significantly expand protected areas that contribute to flood mitigation.

There are existing incentive programs and funding mechanisms that the General Assembly could expand to increase flood mitigation projects. For example, the Conservation Reserve Enhancement Program (CREP), a US Department of Agriculture cost share program, funds conservation measures to “improve water quality, reduce soil erosion, reduce the amount of sediment, phosphorous and other pollutants entering waterbodies, improve wildlife habitat and

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<sup>62</sup> G.S. § 143-214.11A(a).

<sup>63</sup> *Id.*

restore wetlands.”<sup>64</sup> In North Carolina, CREP enrollment covers 76 counties in NC, including the following river basins: Yadkin-Pee Dee, Roanoke, Cape Fear, Neuse, Lumber, White Oak, Tar-Pamlico, Chowan, and Pasquotank.<sup>65</sup> Landowners voluntarily enter into a conservation easement with the state and receive annual payments and reimbursement for conservation expenses.<sup>66</sup> Easements may last for 10, 15, or 30 years, or be permanent.<sup>67</sup>

In order to qualify for CREP, “land must be located in the project area and be either cropland or marginal pastureland. Cropland must meet cropping history criteria and be physically and legally capable of being planted in a normal manner to an agricultural commodity. Marginal pastureland along streams may also be eligible for enrollment.”<sup>68</sup> The N.C. CREP has a goal of enrolling 85,000 acres of riparian and 15,000 acres of non-riparian wetlands.<sup>69</sup> As of Sept. 30, 2019, total CREP enrollment included 30,977 acres.<sup>70</sup> Cumulative enrollment (including acreage no longer enrolled) included 26,794 acres of riparian buffer and 2,171 acres of wetland restoration. Increasing resources for outreach to landowners could help achieve the CREP enrollment goals. CREP could also be a model for a state-funded flood mitigation-focused program that covers lands that do not qualify for CREP. This type of voluntary program could complement the HB 1087 flood control projects funded by DMS and enable more private landowners to participate in flood mitigation efforts.

The General Assembly could also expand existing state programs that fund conservation and working land protections. For example, the NC Land and Water Fund (NCLWF) (formerly the Clean Water Management Trust Fund) provides grants for purchasing property or conservation easements. The NCLWF funding covers numerous ecological and cultural goals. Flood mitigation is not an explicit goal, but the priorities include protecting and improving water quality and creating riparian buffers. Similarly, the NC Agriculture Development and Farmland Preservation Trust Fund helps preserve working lands in the state. Like the NCLWF, this program does not focus on flood mitigation, but the working lands protected by the program could still assist with water absorption and retention. Both grant programs provide funding for conservation easements, and the NCLWF also provides funding for purchasing property. Unlike CREP, however, these programs do not include the annual payments for lands enrolled in temporary or permanent easements. The General Assembly could expand funding the programs and potentially increase the mission of either program to include flood mitigation.

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<sup>64</sup> Farm Service Agency, *Conservation Reserve Enhancement Program – North Carolina* (Mar. 2018), [https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdafiles/FactSheets/2018/crep\\_north\\_carolina\\_factsheet\\_mar2018.pdf](https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdafiles/FactSheets/2018/crep_north_carolina_factsheet_mar2018.pdf)

<sup>65</sup> NC Dept. of Agriculture & Consumer Services, NC CONSERVATION RESERVE ENHANCEMENT PROGRAM 2019 ANNUAL REPORT, <http://www.ncagr.gov/SWC/easementprograms/CREP/documents/2019CREPAnnualReport.pdf>

<sup>66</sup> NC Dept. of Agriculture & Consumer Services, *Conservation Easement - Conservation Reserve Enhancement Program*, <http://www.ncagr.gov/SWC/easementprograms/CREP/>.

<sup>67</sup> *Id.*

<sup>68</sup> Farm Service Agency, *Conservation Reserve Enhancement Program – North Carolina*, *supra* note 66.

<sup>69</sup> [https://www.ncforestservice.gov/Managing\\_your\\_forest/crep.htm](https://www.ncforestservice.gov/Managing_your_forest/crep.htm)

<sup>70</sup> NC Dept. of Agriculture & Consumer Services, NC CONSERVATION RESERVE ENHANCEMENT PROGRAM 2019, *supra* note 67, at 3, table 1.

Generally, local governments and non-profit organizations must acquire and monitor conservation easements. These governments or organizations must have the staff resources to do so, and the conservation easements must meet their organizational goals. If the state expands resources for flood control-focused conservation easements, it may also need to assess the ability of these governments or organizations to acquire additional easements. Organization support, or potentially allowing state agencies to hold the easements (similar to CREP), may be necessary. Furthermore, conservation easements have financial benefits for landowners (via payments for the easement and/or tax benefits), but may reduce local property tax revenue depending on the amount of land in easements and whether or not the land was in present use valuation programs prior to establishing the easement. This could create a disincentive for local governments to pursue additional conservation easements. Including this option as part of the state's flood mitigation strategy may require local government support to replace lost tax revenue.

The Clean Water State Revolving Fund (CWSRF) is another potential source of support for local government investments in natural system flood mitigation projects.<sup>71</sup> Each state has a CWSRF that combines federal and state funds that revolve to provide a continuous and replenishing source of funds. Initially focused on providing funding for water treatment facilities, states now use the CWSRF to support a variety of projects to protect water quality. In 2016, the EPA announced a Green Infrastructure Policy for the Revolving Fund, recognizing the benefits of protecting natural areas, including flood protection.<sup>72</sup> North Carolina could look to other states innovating in the use of their CWSRF to explore opportunities to support both water quality and flood mitigation goals in watersheds.

Numerous other funding opportunities and conservation-focused programs could serve as models for North Carolina to expand protections for wetlands and other flood mitigation strategies.<sup>73</sup>

#### **Recommendation 4: Provide Local Governments with Capacity Building and Coordination Support**

Local governments are responsible for many of the decisions that shape landscapes. Through land use planning, mitigation planning, and municipal infrastructure investments, these governments are on the front line of storm response and mitigation measures. State funding can help local governments develop the staff expertise to identify, evaluate, and implement priority projects for natural system flood mitigation. Local governments may also need additional

<sup>71</sup> EPA, *Clean Water State Revolving Fund (CWSRF) Resources*, <https://www.epa.gov/cwsrf/clean-water-state-revolving-fund-cwsrf-resources#policy>.

<sup>72</sup> Memorandum from Andrew D. Sawyers to Water Management Division Directors, Jan. 6, 2016, [https://www.epa.gov/sites/production/files/2016-01/documents/cwsrf\\_green\\_infrastructure\\_policy\\_final.pdf](https://www.epa.gov/sites/production/files/2016-01/documents/cwsrf_green_infrastructure_policy_final.pdf). For examples of revolving fund programs, see JOHN FELDMANN, INNOVATIVE STATE-LED EFFORTS TO FINANCE AGRICULTURAL CONSERVATION, ENVIRONMENTAL DEFENSE FUND, at 14-18 (Sept. 2019), [innovative-state-led-efforts-finance-agricultural-conservation.pdf](https://www.edf.org/sites/default/files/2019-09/innovative-state-led-efforts-finance-agricultural-conservation.pdf).

<sup>73</sup> See, e.g., FEMA, *Building Resilient Infrastructure and Communities (BRIC)*, <https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities>; FEMA, *Innovative Drought and Flood Mitigation Projects*, Jan. 25, 2017, [https://www.fema.gov/sites/default/files/documents/fema\\_innovative-drought-flood-mitigation-projects.pdf](https://www.fema.gov/sites/default/files/documents/fema_innovative-drought-flood-mitigation-projects.pdf); EPA, *Clean Water State Revolving Fund (CWSRF) Resources: Additional Resources*, <https://www.epa.gov/cwsrf/clean-water-state-revolving-fund-cwsrf-resources#resources>

capacity to develop proposals for federal funding, such as FEMA’s Building Resilient Infrastructure and Communities (BRIC) program.<sup>74</sup> Coordination support for local governments could further help optimize the role of natural systems at a watershed level.

Numerous existing North Carolina institutions provide training and support for landowners and local governments. For example, the NC Cooperative Extension Service offers education and technical assistance on a variety of conservation and land management objectives. The regional councils of government assist with planning and coordination. The UNC School of Government regularly provides training, research, and education to assist local governments across the state, including capacity building for environmental service providers offered by the School of Government’s Environmental Finance Center. Additional resources could help position these institutions, as well as additional university programs and government agencies, assist local communities as they expand natural flood mitigation options.

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<sup>74</sup> FEMA, Building Resilient Infrastructure and Communities (BRIC), *supra* note 75.