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# MITIGATION BANKING: IS STATE ASSUMPTION OF PERMITTING AUTHORITY MORE EFFECTIVE?

ADRIENNE M. SAKYI\*

## INTRODUCTION

Many Americans dream of having the perfect home with a beautiful waterfront view. Few realize that obtaining the property is only the first step in building that dream home or development that may serve as the dream home to several people. Developers are required under section 404 of the Clean Water Act to obtain permits whenever a project will have an impact on aquatic resources or require discharge of fill or dredged land into water resources.<sup>1</sup> Developers are also required to perform mitigation for any unavoidable damage to aquatic resources.<sup>2</sup>

The Clean Water Act, along with its mitigation requirements, was established in response to decades of programs designed to encourage the use of wetlands for agricultural production and other uses.<sup>3</sup> The goal of the Clean Water Act is to preserve aquatic resources and maintain the chemical, biological, and aesthetic integrity of the nation's water sources.<sup>4</sup> More than fifty percent of the original 221 million acres of wetlands in the contiguous United States have been destroyed in the past two hundred years.<sup>5</sup> Originally, wetlands were blamed for a variety of afflictions from

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<sup>1</sup> 33 U.S.C. § 1344 (2006).

<sup>2</sup> *Id.*

<sup>3</sup> Travis E. Booth, Comment, *Compensatory Mitigation: What is the Best Approach?*, 11 U. BALT. J. ENVTL. L. 205 (2004) [hereinafter Booth]; Douglas R. Williams & Kim Diana Connolly, *Federal Wetlands Regulation: An Overview*, in WETLANDS LAW AND POLICY: UNDERSTANDING SECTION 404 1,1 (Kim Diana Connolly, Stephen M. Johnson & Douglas R. Williams eds., 2005). [hereinafter Williams & Connolly]. A primary motive for draining and destroying wetlands was agricultural production. *Id.* at 3. The United States Department of Agriculture assisted with the organization of 103 million acres of wetlands into drainage systems. *Id.*

<sup>4</sup> 40 C.F.R. § 230 (2009).

<sup>5</sup> Michael J. Podolsky, Comment, *U.S. Wetlands Policy, Legislation and Case Law as Applied to the Wise Use Concepts of the Ramsar Convention*, 52 CASE W. RES. L. REV. 627, 627-28 (2001).

flooding to diseases.<sup>6</sup> In 1900, the Supreme Court stated in *Leovy v. United States*<sup>7</sup> that swamps were “the cause of malarial and malignant fevers,” and professed the public health’s interest in reclamation of swamps and overflowed lands.<sup>8</sup> The Court went on to say that the police power of the government is “never more legitimately exercised than in removing such nuisances.”<sup>9</sup>

The first rumblings of wetlands preservation occurred within the context of migratory bird protection, through a series of acts designed to allow the government to acquire and protect important wetland resources.<sup>10</sup> These rumblings led to the enactment of the Federal Water Pollution Control Act in 1972, which later became known as the Clean Water Act.<sup>11</sup> Section 404 of the Act governs permitting requirements and commanded control over “navigable waters.”<sup>12</sup> The control was originally narrowly construed by the Corps to exclude most of the nation’s wetlands, but in *Natural Resources Defense Council v. Callaway*,<sup>13</sup> the D.C. Circuit Court of Appeals struck down the narrow construction in favor of Congress’s more liberal intent.<sup>14</sup> Once wetlands were accepted as clearly within the definition of section 404 and thus within the control of the United States Environmental Protection Agency (“EPA”), procedures needed to be implemented to address wetland destruction when such destruction was inevitable. The goal of “No Net Loss,” developed by the National Wetlands Policy forum, was first presented during President George H.W. Bush’s 1988 presidential campaign, and was subsequently adopted as a policy by the EPA in 1989.<sup>15</sup> Since adoption, “No Net Loss”

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<sup>6</sup> Williams & Connolly, *supra* note 3, at 2.

<sup>7</sup> *Leovy v. U.S.*, 177 U.S. 621 (1900).

<sup>8</sup> *Id.* at 636.

<sup>9</sup> *Id.*

<sup>10</sup> Williams & Connolly, *supra* note 3, at 3. The acts included “the Migratory Bird Treaty Act of 1918, the Migratory Bird Conservation Act of 1929, and the Migratory Bird Hunting Stamp Act of 1934.” *Id.*

<sup>11</sup> Williams & Connolly, *supra* note 3, at 4.

<sup>12</sup> 33 U.S.C. § 1344 (2006). *Rapanos v. United States*, 547 U.S. 715 (2006), which had a plurality opinion, has cast new turmoil onto the definition of navigable waters and the extent of federal jurisdiction over particular wetlands. LINDA A. MALONE, ENVIRONMENTAL REGULATION OF LAND USE 4–24 (Lisa A. Fiening ed., Thomson Reuters/West) (2008).

<sup>13</sup> *Natural Res. Def. Council v. Callaway*, 392 F. Supp. 685 (D.D.C. 1975).

<sup>14</sup> See Jamie J. Janisch, *Scope of Federal Jurisdiction Under Section 404 of the Clean Water Act: Rethinking “Navigable Waters” After Rapanos v. United States*, 11 U. DENV. WATER L. REV. 91, 99 (2007).

<sup>15</sup> JULIE M. SIBBING, NATIONAL WILDLIFE FOUNDATION, NOWHERE NEAR NO-NET-LOSS 1 (2004), <http://cf.nwf.org/wildlife/pdfs/NowhereNearNoNetLoss.pdf> (last visited Mar. 28, 2010).

has been the standard the government strives towards, utilizing mitigation methods as a necessary tool.<sup>16</sup>

When a developer's negative impact on wetlands is unavoidable, compensatory mitigation is required to offset the harmful impacts on function and losses of aquatic resources that result from the authorized activity in order to prevent a net loss of wetlands.<sup>17</sup> Compensatory mitigation does not only affect commercial developers, as government and municipalities are also subject to the Clean Water Act's mandates.<sup>18</sup> The core concepts of compensatory mitigation are: avoidance by requiring parties to choose the least environmentally damaging practical alternative; minimization when the impact is unavoidable; and mitigation compensation for harm done.<sup>19</sup> In 2005, an average of 2.7 acres of compensation was required for every impacted acre under the Clean Water Act.<sup>20</sup>

Under federal law, compensatory mitigation can be carried out through "restoration of a previously-existing wetland or other aquatic site, the enhancement of an existing aquatic site's functions, the establishment . . . of a new aquatic site, or the preservation of an existing aquatic site."<sup>21</sup> There are three methods for carrying out compensatory mitigation

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<sup>16</sup> *Id.*

<sup>17</sup> Compensatory Mitigation for Losses of Aquatic Resources, 73 Fed. Reg. 19,594, 19,675 (Apr. 10, 2008) (codified at 40 C.F.R. 230); NAT'L MITIGATION BANKING ASS'N, NEW WETLAND MITIGATION RULES 2 (2006), [http://www.mitigationbanking.org/pdfs/New Wetland Mitigation Rules.pdf](http://www.mitigationbanking.org/pdfs/New%20Wetland%20Mitigation%20Rules.pdf).

<sup>18</sup> *See, e.g.*, 33 U.S.C. § 1344 (2003). The recently passed American Recovery and Reinvestment Act of 2009 will cause a significant amount of required compensatory mitigation, largely in the form of mitigation banking, because the bill calls for twenty-seven billion dollars for highway and bridge projects and twenty-five billion dollars for other infrastructure projects. Press Release, United States Congress, The American Recovery and Reinvestment Act of 2009 (Feb. 12, 2009) *available at* <http://appropriations.house.gov/pdf/PressSummary02-12-09.pdf>. Mitigation bank owners hope that the Act will fill some of the void left by the slowdown in development during the past few years. Alice Kenney, *Will U.S. Stimulus Package Lift Mitigation Banks?* ECOSYSTEM MARKETPLACE, Feb. 1, 2009, [http://ecosystemmarketplace.com/pages/article.news.php?component\\_id=6510&component\\_version=9730&language\\_id=12](http://ecosystemmarketplace.com/pages/article.news.php?component_id=6510&component_version=9730&language_id=12).

<sup>19</sup> Royal C. Gardner, *Mitigation*, in WETLANDS LAW AND POLICY: UNDERSTANDING SECTION 404, *supra* note 3, at 253, 255.

<sup>20</sup> DEP'T OF THE ARMY, ARMY CORPS OF ENGINEERS, FINAL ENVIRONMENTAL ASSESSMENT, FINDING OF NO SIGNIFICANT IMPACT, AND REGULATORY ANALYSIS FOR THE COMPENSATORY MITIGATION REGULATION (2008), *available at* [http://www.usace.army.mil/CECW/Documents/cecwo/reg/news/comp\\_mitig\\_analysis.pdf](http://www.usace.army.mil/CECW/Documents/cecwo/reg/news/comp_mitig_analysis.pdf). In 2005, the Corps issued permits affecting 20,754 acres of wetlands and 56,693 acres of compensatory mitigation were required as conditions for the permits. *Id.* The 2005 mitigation requirement represents an increase from the traditional requirement, which hovered between 2.0 and 2.3 acres from 1999 to 2004. *Id.* at 4.

<sup>21</sup> Compensatory Mitigation for Losses of Aquatic Resources, 73 Fed. Reg. at 19,594.

when it is required by a permit: permittee-responsible compensatory mitigation, in-lieu fee programs, and mitigation banks.<sup>22</sup> Permittee-responsible compensatory mitigation is the most common form of mitigation, and involves the individual retaining the responsibility to ensure mitigation requirements are met at, or adjacent to, the site of impact.<sup>23</sup> In-lieu fee programs and mitigation banks refer to off-site programs to which a developer contributes in order to shift the responsibility of compliance from themselves to a third party known as an in-lieu fee sponsor or a mitigation bank.<sup>24</sup> In April 2008, the EPA and the Army Corps of Engineers ("the Corps") promulgated a final rule that will affect regulation of the highly controversial and complex area of compensatory mitigation, particularly mitigation banking.<sup>25</sup> State assumption of permitting authority under section 404 of the Clean Water Act and extensive state legislation<sup>26</sup> further complicate analysis of the expected effects of the new rule.

Part I of this note will discuss the changes made in the recently promulgated final rule, and the methods for effectuating its purpose. Part II will assess the implementation and effect of the final rule on Michigan's compensatory mitigation regulations under the state's wetlands program. Michigan is the first state to assume permitting authority for nontidal waters that are not involved in interstate commerce or transportation under section 404 of the Clean Water Act. The EPA and the Corps' recently promulgated regulation of compensatory mitigation of the loss of aquatic resources will not have a direct effect in Michigan because the state has a stringent program that already encompasses the regulations promulgated. Part III will assess the implementation and effect of the final rule on compensatory mitigation in Virginia, a state exemplifying the norm of declining to assume permitting authority under section 404, and instead creating wetlands legislation independent of the Clean Water Act. The EPA and the Corps' recently promulgated regulations will have a direct effect in Virginia because the federal agencies retain jurisdiction, and Virginia usually adopts federal approaches, even when it is not bound to do so. Because assumption of permitting authority creates myriad obstacles to effective enforcement of regulations, states seeking to protect their wetlands should opt for supplementing federal regulations to retain flexibility and avoid significant burdens and costs.

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<sup>22</sup> *Id.*

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

<sup>24</sup> *Id.*

<sup>25</sup> *Id.*

<sup>26</sup> Rolf R. Von Oppenfeld, *State Roles in the Implementation of the Section 404 Program*, in *WETLANDS LAW AND POLICY: UNDERSTANDING SECTION 404*, *supra* note 3, at 321.

## I. ORIGINAL RULE AND CHANGES EFFECTUATED BY FINAL RULE

The original rules regulating mitigation banks consisted of a Memorandum of Agreement in 1993,<sup>27</sup> the 1995 Mitigation Banking Guidance,<sup>28</sup> the 2000 In-Lieu-Fee Guidance,<sup>29</sup> and the Regulatory Guidance Letter 02-02,<sup>30</sup> as well as other guidance documents. Together these documents governed mitigation bank procedures, which created a disjointed effect.<sup>31</sup> Because mitigation banks had higher technological standards and were more expensive, when developers were given a choice, they usually elected to do the mitigation themselves or enroll in an in-lieu fee program.<sup>32</sup> In 2003, estimates were that “60 percent of required compensatory mitigation was provided through permittee-responsible compensatory mitigation, 33 percent was provided by mitigation banks, and 7 percent was provided by in-lieu fee programs.”<sup>33</sup>

The original system also had a preference for on-site mitigation, which removed the option of mitigation banks in most circumstances.<sup>34</sup> On-site mitigation involves creating, restoring, or enhancing wetlands adjacent to those being impacted,<sup>35</sup> and was preferred because it is designed to replace lost wetlands in the same location with new wetlands that possess the same functions and values.<sup>36</sup> Evaluations have shown, however, that on-site mitigation has not been an effective tool in preventing a net loss of wetlands.<sup>37</sup> On-site mitigation has been unsuccessful from an ecological

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<sup>27</sup> Establishment and Use of Wetland Mitigation Banks in the Clean Water Act Section 404 Regulatory Program, 60 Fed. Reg. 13,711 (Mar. 14, 1995).

<sup>28</sup> Federal Guidance for the Establishment, Use and Operation of Mitigation Banks, 60 Fed. Reg. 58,605 (Nov. 28, 1995).

<sup>29</sup> Federal Guidance on Use of In-Lieu-Fee Arrangements for Compensatory Mitigation Under Section 404 of the Clean Water Act and the Rivers and Harbors Act, 65 Fed. Reg. 66914 (Nov. 7, 2000).

<sup>30</sup> U.S. ARMY CORPS OF ENGINEERS, REGULATORY GUIDANCE LETTER NO. 02-02 (2002), available at <http://www.fws.gov/habitatconservation/RGL2-02.pdf>.

<sup>31</sup> See DEP'T OF THE ARMY, *supra* note 20, at 4 (noting that the Corps does not track impacts and mitigation measures consistently across different Corps programs).

<sup>32</sup> NAT'L MITIGATION BANKING ASS'N, *supra* note 17, at 1.

<sup>33</sup> DEP'T OF THE ARMY, *supra* note 20, at vi.

<sup>34</sup> Booth, *supra* note 3, at 210 (in 2004, when the article was written, on-site mitigation was the preferred method of mitigation).

<sup>35</sup> *Id.* citing Michael G. Le Desma, Note, *A Sound of Thunder: Problems and Prospects in Wetlands Mitigation Banking*, 19 COLUM. J. ENVTL. L. 497, 498 (1994).

<sup>36</sup> *Id.*

<sup>37</sup> Booth, *supra* note 3, at 211; Matthew H. Bonds & Jeffrey J. Pompe, *Calculating Wetland Mitigation Banking Credits: Adjusting for Wetland Function and Location*, 43 NAT. RESOURCES J. 961, 962 (2003); DEP'T OF THE ARMY, *supra* note 20, at 23.

perspective because of unforeseen negative consequences such as fragmentation, isolation, degradation of water quality, and lack of oversight of mitigation projects.<sup>38</sup> Development activities may change an area's ability to sustain aquatic resources and reduce the utility of on-site mitigation.<sup>39</sup> Because motile species need space to move through different habitats, when the surrounding area is developed, the ability to move decreases and the area can no longer sustain that particular motile species.<sup>40</sup>

Scholars and professionals rallied for comprehensive reform of the mitigation banking system and restructuring of the ad hoc decision-making process and piecemeal guidance offered through memoranda and letters in the 1990's and early 2000's.<sup>41</sup> The government responded to the demands for reform in 2004 with the passage of section 314 of the National Defense Authorization Act for Fiscal Year 2004.<sup>42</sup> Section 314 required the Secretary of the Army, acting through the Chief of Engineers, to issue regulations that established performance standards and criteria for the use of both on-site and off-site mitigation, in-lieu fee mitigation, and mitigation banking as compensation for lost wetlands functions in accordance with section 404 of the Clean Water Act.<sup>43</sup>

Two years later, in March 2006, the EPA and the Corps released a proposed rule with the purpose of setting standards and criteria for all methods of compensatory mitigation for damages to water sources resulting from permitted activity.<sup>44</sup> The rule also proposed requiring in-lieu fee

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<sup>38</sup> Booth, *supra* note 3, at 212. Water degradation caused by human manipulation of water-courses, replacement of natural water sources with man-made sources, and generally unsustainable water and land use practices have been inadvertent consequences of ambitious efforts to mitigate wetland destruction. A. Dan Tarlock, *Putting Rivers Back in the Landscape: The Revival of Watershed Management in the United States*, 14 HASTINGS W.-NW. J. ENVTL. L. & POL'Y 1059, 1061 (2008).

<sup>39</sup> DEP'T OF THE ARMY, *supra* note 20, at vii-viii.

<sup>40</sup> NAT'L MITIGATION BANKING ASS'N, *supra* note 17, at 2.

<sup>41</sup> See, e.g., Michael G. Le Desma, Note, *A Sound of Thunder: Problems and Prospects in Wetland Mitigation Banking*, 19 COLUM. J. ENVTL. L. 497 (1994); Jonathan Silverstein, Comment, *Taking Wetlands to the Bank: The Role of Wetland Mitigation Banking in a Comprehensive Approach to Wetlands Protection*, 22 B.C. ENVTL. AFF. L. REV. 129 (1994); Dustin J. Edwards, Comment, *Wetland Mitigation Banking: Is the Current System Beyond Repair?*, 16 TUL. ENVTL. L.J. 445 (2003). A frequent complaint of the system was that it was designed to conserve water, but not the ecosystem and landscape in the surrounding areas. Tarlock, *supra* note 38, at 1061.

<sup>42</sup> National Defense Authorization Act for Fiscal Year 2004, Pub. L. No. 108-136, § 314, 117 Stat. 1430 (2004).

<sup>43</sup> *Id.*

<sup>44</sup> Compensatory Mitigation for Losses of Aquatic Resources, 71 Fed. Reg. 15,520, 15,522 (proposed Mar. 28, 2006).

programs to meet the same standard as mitigation banks over a five year transition period.<sup>45</sup> The proposed rule did not alter the circumstances that trigger compensatory mitigation requirements.<sup>46</sup>

Changes in the proposed rule aimed at eliminating the previous ease of on-site mitigation under permittee-responsible and in-lieu fee programs by creating higher burdens, requiring more advanced technical capabilities, and adding potential for increased long-term liability.<sup>47</sup> These changes included higher standards of procedural and technical performance of permittee-responsible mitigation similar to the standards that were already in place for mitigation banks.<sup>48</sup> The proposed rule also reduced excessive regulation of mitigation banks to increase investment in the banks and efficiency in bank operation.<sup>49</sup>

One of the National Research Council's recommendations in formulation of the proposed rule was that wetland functions would be better addressed and understood in the context of larger scale watersheds.<sup>50</sup> The proposed rule aimed to implement this recommendation to increase the positive impact of mitigation efforts.<sup>51</sup> One problem with this approach was that, at the time of the proposal, formal watershed plans were not available in all states.<sup>52</sup> The National Research Council proposed a plan that did not require a formal watershed plan,<sup>53</sup> but the EPA and the Corps expressed a desire to work with states and other organizations to create watershed plans on a more consistent basis.<sup>54</sup> The EPA and the Corps released the final rule in April 2008,<sup>55</sup> which implemented many of the proposed changes and considered public comments to the proposed rule.<sup>56</sup>

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<sup>45</sup> *Id.* at 15,520.

<sup>46</sup> *Id.* at 15,522.

<sup>47</sup> NAT'L MITIGATION BANKING ASS'N, *supra* note 17, at 2.

<sup>48</sup> *Id.*

<sup>49</sup> *Id.* at 3. A study performed by Michigan State University and the Michigan Department of Environmental Quality revealed that rigorous and constantly changing standards are the most cited hindrance to expansion. Michael D. Kaplowitz, Frank Lupi & Deborah Bailey, What the Nation's Bankers Think About Mitigation Banks, <http://www.mde.maryland.gov/assets/document/WetlandsWaterways/2006workshop/VII/kaplowitz.ppt> (last visited Mar. 28, 2010).

<sup>50</sup> DEP'T OF THE ARMY, *supra* note 20, at 22–23, 29.

<sup>51</sup> *Id.* at 29.

<sup>52</sup> NAT'L MITIGATION BANKING ASS'N, *supra* note 17, at 7.

<sup>53</sup> DEP'T OF THE ARMY, *supra* note 20, at 29.

<sup>54</sup> NAT'L MITIGATION BANKING ASS'N, *supra* note 17, at 7.

<sup>55</sup> Compensatory Mitigation for Losses of Aquatic Resources, 73 Fed. Reg. 19,594 (Apr. 10, 2008) (codified at 40 C.F.R. pt. 230).

<sup>56</sup> *Id.* at 19,594–19,595. Note that any mitigation projects already in operation and projects approved within ninety days of the publication of the final rule will be allowed to continue



Two of the major goals of the final rule were a) to produce a consistent set of regulations of mitigation banking to replace the previous “rules,” which consisted of numerous documents that conflicted and superceded each other<sup>57</sup> and b) to create equality in requirements for all compensatory mitigation tools.<sup>58</sup>

Clearly, the first goal of producing a consistent set of regulations was accomplished by the actual passage of the rule which replaced the numerous guidance letters and memoranda. The second goal of standardized mitigation mechanisms is addressed in two ways. The first way the new rule aims to meet the goal of standardized mitigation mechanisms is by requiring applicants of any mitigation methods to create a “mitigation plan[], which include[s] the same [twelve] fundamental components: objectives; site selection criteria; site protection instruments,” such as conservation easements; “baseline information for (impact and compensation sites); credit determination methodology; a mitigation work plan; a maintenance plan; ecological performance standards; monitoring requirements; a long-term management plan; an adaptive management plan; and financial assurances.”<sup>59</sup>

The second way the new rule aims to meet the goal of standardized mitigation mechanisms is by removing the incentive for permittee-responsible compensatory mitigation by articulating a hierarchy of preference with mitigation bank credits first, in-lieu fee programs second, and permittee-responsible mitigation third.<sup>60</sup> Mitigation banks are listed first because they are viewed as least risky, and they provide the opportunity to perform aggregate mitigation for damage done to aquatic resources in a watershed.<sup>61</sup> Mitigation banks are also preferred because they decrease enforcement and monitoring costs and provide mitigation before the wetland

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to operate under the existing documents for two years following publication of the final rule, unless the project undergoes substantial changes, such as addition or expansion of the site. Sheppard, Mullin, Richter & Hampton, LLP, *Corps and EPA Issue Important New Mitigation Rule*, April 16, 2008, <http://www.realestatelanduseandenvironmentallaw.com/recent-cases-environmental-corps-and-epa-issue-important-new-mitigation-rule.html>.

<sup>57</sup> U.S. ARMY CORPS OF ENGINEERS, U.S. ARMY CORPS OF ENGINEERS COMPENSATORY MITIGATION RULE: IMPROVING, RESTORING, AND PROTECTING THE NATION'S WETLANDS AND STREAMS QUESTIONS AND ANSWERS 3 (2008), available at [http://www.wetlandstudies.com/portals/4/docUpload/MitigationRule\\_QandA2008.pdf](http://www.wetlandstudies.com/portals/4/docUpload/MitigationRule_QandA2008.pdf).

<sup>58</sup> *Id.* at 3.

<sup>59</sup> *Id.* at 2.

<sup>60</sup> *Id.*

<sup>61</sup> *Id.* at 3.

destruction.<sup>62</sup> The provisions in the proposed rule regarding reduced restrictions on mitigation banks and increased requirements for permittee-responsible and in-lieu fee programs were adopted in the final rule.<sup>63</sup>

Although the goals were not altered during the transition from proposed to final rule, several aspects of the rule were modified.<sup>64</sup> The final rule differs from the proposed rule in its more holistic approach to watershed management, clarifying stream mitigation standards, and placement of a stronger emphasis on avoiding aquatic impacts.<sup>65</sup>

One critical area that was *not* directly addressed by the proposed or final rule is the need for increased monitoring and compliance of mitigation projects.<sup>66</sup> There is no current system in place to ensure that mitigation projects are actually completed or performing at the promised level of efficiency.<sup>67</sup> Studies differ in their estimates of site visits and monitoring of mitigation sites, but a survey of monitoring within seven states found that six of those states had less than fifty percent monitoring by the regional Corps office.<sup>68</sup> Before construction pursuant to a permit begins, the Corps has the authority to visit sites to ensure compliance with avoidance and minimization requirements.<sup>69</sup> To reduce the number of necessary field visits by government personnel, the Corps field office may ask the party responsible for mitigation to provide periodic monitoring of the physical condition of the site and to “certify” that mitigation is being conducted

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<sup>62</sup> For a discussion of the advantages and disadvantages of mitigation banking, see Booth, *supra* note 3, at 214–21.

<sup>63</sup> See Sheppard, Mullin, Richter & Hampton, LLP, *supra* note 56.

<sup>64</sup> See *id.*

<sup>65</sup> See *id.*

<sup>66</sup> COMM. ON MITIGATING WETLAND LOSSES, BOARD ON ENVTL. STUDIES AND TOXICOLOGY, WATER SCIENCE AND TECH. BOARD, NAT’L RESEARCH COUNCIL, COMPENSATING FOR WETLAND LOSSES UNDER THE CLEAN WATER ACT, at 8 (National Academy Press 2001). On-site mitigation is particularly problematic because permits are issued without any party ultimately responsible for preventing failure if the mitigation is never begun or continued. Booth, *supra* note 3, at 212. There is a general lack of supervision of these individual projects and a lack of staff to do so. *Id.*

<sup>67</sup> See generally, U.S. GOV’T AND ACCOUNTABILITY OFFICE, WETLANDS PROTECTION: CORPS OF ENGINEERS DOES NOT HAVE AN EFFECTIVE OVERSIGHT APPROACH TO ENSURE THAT COMPENSATORY MITIGATION IS OCCURRING, REPORT TO THE RANKING DEMOCRATIC MEMBER, COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE, HOUSE OF REPRESENTATIVES (2005) available at <http://www.gao.gov/new.items/d05898.pdf>.

<sup>68</sup> COMM. ON MITIGATING WETLAND LOSSES, *supra* note 66, at 110–11. There were also a few extreme examples on both ends of the spectrum, such as Louisiana, which had less than ten percent monitoring of sites, and California, which had at least one monitoring visit to most sites. *Id.*

<sup>69</sup> *Id.*

according to agreed standards.<sup>70</sup> This method of monitoring has been criticized as largely ineffective and overly dependent on the mitigating party's good faith.<sup>71</sup>

In response to calls for increased monitoring and enforcement, the new rule requires submission of a maintenance plan, ecological performance standards, monitoring requirements, and a long-term management plan as part of a mitigation plan.<sup>72</sup> Regardless of the party's disclosure of these plans during the permitting process, however, the EPA and the Corps still rely heavily on the good faith of permit recipients when approving permits subject to mitigation.<sup>73</sup> The preference for mitigation banking over other methods is an indirect response to criticisms of lack of enforcement.<sup>74</sup> Mitigation banks are preferable because they offer advance mitigation and require less personnel to effectively monitor multiple permit requirements.<sup>75</sup>

The final rule governing compensatory mitigation is designed to create a uniform set of rules and create equal standards for all forms of compensatory mitigation,<sup>76</sup> but these goals can be seriously undermined or assisted by the environmental regulations of individual states.<sup>77</sup>

## II. ASSUMPTION OF PERMITTING AUTHORITY: MICHIGAN'S PROGRAM

Michigan has over five million acres of wetlands, even after the state lost a staggering fifty percent of its original 11,200,000 acres.<sup>78</sup> Michigan has decided to take an aggressive step toward controlling wetlands loss in the state by assuming permitting authority under section 404 of the Clean Water Act.<sup>79</sup> Section 404 of the Clean Water Act is marked by broad non-preemption clauses that generally permit the states to enforce common law restrictions on use of water resources, and to adopt standards

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<sup>70</sup> *Id.*

<sup>71</sup> *Id.*; U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 67, at 27.

<sup>72</sup> U.S. ARMY CORPS OF ENGINEERS, *supra* note 57 at 2–3.

<sup>73</sup> U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 67, at 27.

<sup>74</sup> Booth, *supra* note 3, at 214–16.

<sup>75</sup> *Id.* at 216. “The multitude of small, isolated wetlands constructed under the current regulatory scheme are nearly impossible to monitor and evaluate effectively. Consolidating these isolated wetlands into mitigation banks enables the Corps and EPA to more efficiently monitor mitigation projects.” *Id.*

<sup>76</sup> See *supra* notes 56–64 and accompanying text.

<sup>77</sup> See, e.g., *infra* Part II for a discussion of how Michigan's permitting authority interacts with the federal goals of compensatory mitigation.

<sup>78</sup> Association of State Wetlands Managers, State Wetlands Programs: Michigan, <http://www.aswm.org/swp/michigan9.htm> (last visited Mar. 28, 2010).

<sup>79</sup> *Id.*

that are more rigorous than those mandated by federal law, if the state chooses to do so.<sup>80</sup>

Under section 404(g) of the Clean Water Act, a state can assume authority to administer its own general and individual permits for activities that would have required federal permitting under section 404, such as the discharge of dredge or fill material into the navigable waters within the state's jurisdiction.<sup>81</sup> Waters in the state's jurisdiction include nontidal waters and waters not usable for transport in interstate or foreign commerce.<sup>82</sup> This is a monumental task for a state to undertake.<sup>83</sup> A state cannot implement a partial program, but must instead completely regulate all discharges of dredged or fill materials that are not specifically excluded from state jurisdiction.<sup>84</sup> Thus far, only New Jersey<sup>85</sup> and Michigan<sup>86</sup> have undertaken this assumption of full permitting authority.<sup>87</sup> Factors that may influence a state's decision not to assume permitting authority include inadequate funding and administrative resources, concerns about permit denials qualifying as takings without just compensation<sup>88</sup> in violation of the Fifth and Fourteenth Amendments of the Constitution of the United States,<sup>89</sup> and resistance,

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<sup>80</sup> Rolf R. Von Oppenfeld, *State Roles in the Implementation of the Section 404 Program*, in *WETLANDS LAW AND POLICY: UNDERSTANDING SECTION 404*, *supra* note 3, at 321.

<sup>81</sup> *Id.* at 323.

<sup>82</sup> *Id.* at 322.

<sup>83</sup> *Id.*

<sup>84</sup> *Id.* at 323.

<sup>85</sup> 40 C.F.R. § 233.71 (2008).

<sup>86</sup> 40 C.F.R. § 233.70 (2008).

<sup>87</sup> Environmental Council of the States, *State Delegations—Clean Water Act*, [http://www.ecos.org/section/states/enviro\\_actlist/states\\_enviro\\_actlist\\_cwa](http://www.ecos.org/section/states/enviro_actlist/states_enviro_actlist_cwa) (last visited Mar. 28, 2010).

<sup>88</sup> The Fifth and Fourteenth Amendments require the government to pay just compensation when its actions deprive landowners of their property. U.S. CONST. amend. V; U.S. CONST. amend. XIV. This issue arises when the government condemns land and also when regulatory actions effectively deprive a landowner of use of their property or substantial value of the property. Silverstein, *supra* note 41, at 139.

<sup>89</sup> States' concerns over takings are warranted. Courts, including the Supreme Court, have found takings resulting from permitting requirements on several occasions based either on deprivation of full economic use of the land, or a lack of a substantial nexus between the condition imposed and the asserted public purpose. *MALONE*, *supra* note 12, at 4-47 to 4-64.2 (citing *Nollan v. Cal. Coastal Comm'n*, 483 U.S. 825 (1987); *Loveladies Harbor, Inc. v. U.S.*, 21 Cl. Ct. 153 (1990), *aff'd*, 28 F.3d 1171 (Fed. Cir. 1994); *Fla. Rock Indus., Inc. v. U.S.*, 791 F.2d 893 (Fed. Cir. 1986)). Mitigation banking has proven a compromise between a landowner's right to utilize property as he chooses and the public interest in preservation of wetlands. Booth, *supra* note 3, at 206. This has, however, led to an additional layer of takings litigation, in which landowners and taxpayers challenge the government's authority to condemn land for mitigation banks. *See State v. Keeven*, 895 S.W.2d 587, 589 (Mo. 1995); *Dep't of Transp. v. LaSalle Nat'l Bank*, 251 Ill. App. 3d

actual or perceived, by the Corps to give up any of its authority over the program.<sup>90</sup>

Michigan assumed authority for permitting activities in nontidal waters and waters not involved in interstate or foreign commerce under section 404 of the Clean Water Act in 1984<sup>91</sup> and recently passed a bill that renews the assumption.<sup>92</sup> Currently, the state processes approximately 5,000 to 6,000 permits each year.<sup>93</sup> The Land and Water Management Division of the Michigan Department of Environmental Quality administers the program, and closely monitors federal rules and developments to assure consistency with the federal agencies that administer the federal wetlands program.<sup>94</sup> The Corps has retained jurisdiction over the Great Lakes and the connecting and adjacent channels, waters, and wetlands.<sup>95</sup> Michigan asserts concurrent jurisdiction of waters that are involved in interstate commerce; therefore, individuals seeking to discharge fill or dredged land into those water resources must seek both a federal *and* state permit.<sup>96</sup>

The most significant legislation on wetlands protection passed in Michigan is the Goemaere-Anderson Wetland Protection Act of 1979,<sup>97</sup> now part 303 of the National Resources and Environmental Protection Act.<sup>98</sup> The act provides for preservation, management, and use of wetlands,

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901, 623 N.E.2d 390 (Ill. 1993); *Dep't of Transp. v. H P/Meachum Land Ltd. P'ship*, 614 N.E.2d 485 (Ill. App. Ct. 1993).

<sup>90</sup> Oppenfeld, *supra* note 80 at 325.

<sup>91</sup> Ellen C. Lindquist, *Wetlands Mitigation Banking as Part of a Watershed Approach to Improve Water Quality: A Michigan Story*, 1997 MICH. ST. L. REV. 1125, 1139 (1997).

<sup>92</sup> 2009 Mich. Pub. Acts 120, § 30304b. The renewal was protested by the Michigan Chamber of Commerce as a high cost program that was merely "duplicative of federal efforts" and a barrier to economic development. Press Release, Michigan Chamber of Commerce, Michigan Chamber of Commerce Expresses Strong Opposition to Passage of Legislation to Retain State Control of Permitting for Wetlands Projects (Sept. 19, 2009), available at <http://www.michamber.com/mx/sept09#wetlands>. The Act also creates additional general permits for minor development projects, eliminates some areas of joint jurisdiction, and creates more uniformity in the terminology of federal and state law. Michigan Chamber of Commerce, *Reforms to Michigan's Wetlands Program*, <http://www.michamber.com/docs/homepage/Wetlands.pdf> (last visited Mar. 28, 2010).

<sup>93</sup> Association of State Wetlands Managers, *supra* note 78.

<sup>94</sup> Lindquist, *supra* note 91, at 1139. The Michigan Department of Environmental Quality was called the Michigan Department of Natural Resources at the time of enactment. *Id.*

<sup>95</sup> Association of State Wetlands Managers, *supra* note 78.

<sup>96</sup> *Id.*; Michigan Department of Environmental Quality, *Wetland Permits*, [http://www.michigan.gov/deq/0,1607,7-135-3313\\_3687-10813--,00.html](http://www.michigan.gov/deq/0,1607,7-135-3313_3687-10813--,00.html) (last visited Mar. 28, 2010).

<sup>97</sup> Goemaere-Anderson Wetland Protection Act, MICH. COMP. LAWS ANN. § 281.701 (West 1996).

<sup>98</sup> MICH. COMP. LAWS ANN. §§ 324.30301–324.30323 (West 1999); Mich. Admin. Code

defined as “land characterized by the presence of water at a frequency and duration sufficient to support and that under normal circumstances does support wetland vegetation or aquatic life and is commonly referred to as a bog, swamp, or marsh. . . .”<sup>99</sup> Michigan’s program is also based on several other statutes including the Shorelands Protection and Management Act,<sup>100</sup> the Water Resources Commission Act;<sup>101</sup> the Inland Lakes and Streams Act of 1972;<sup>102</sup> and the Thomas J. Anderson, Gordon Rockwell Environmental Protection Act of 1970.<sup>103</sup> Mitigation for harm to wetlands is explicitly required by the Administrative Rules for the Wetland Protection Part of the National Resources and Environmental Protection Act.<sup>104</sup> The Administrative Rules also regulate mitigation banking within the state.<sup>105</sup> In addition to these requirements, Michigan’s program features a mitigation banking handbook, form templates, and specific guidelines for creation of banks.<sup>106</sup>

#### A. *Compensatory Mitigation under Michigan’s Program*

The recently promulgated rules on compensatory mitigation by the EPA and the Corps will not greatly affect the actual rules in Michigan on mitigation banking because the program is broader and more stringent than the federal program.

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§§ 281.921–281.925.

<sup>99</sup> MICH. COMP. LAWS ANN. § 324.30301(p) (West 1999). Compare to the federal definition. “[A]reas that are inundated or saturated by 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. Wetlands generally include swamps, marshes, bogs, and similar areas.” 40 C.F.R. § 230.3(t) (1996). *See also* Merry Goodenough, *Public Participation in State-Assumed Wetlands Permit Programs: The Michigan Example*, 10 J. ENVTL. L. & LITIG. 221 (1995) (noting the difference between Michigan’s definition and the federal government’s). The EPA has found these definitions to be adequately consistent. Association of State Wetlands Managers, *supra* note 78.

<sup>100</sup> MICH. COMP. LAWS ANN. §§ 324.32301–324.32315 (West 1999); MICH. ADMIN. CODE r. §§ 281.21–281.24 (1999).

<sup>101</sup> MICH. COMP. LAWS ANN. §§ 323.1–323.13a (West 2007).

<sup>102</sup> MICH. COMP. LAWS ANN. §§ 281.951–281.966 (West 1996).

<sup>103</sup> MICH. COMP. LAWS ANN. §§ 691.1201–691.1207 (West 2000).

<sup>104</sup> MICH. ADMIN. CODE r. § 281.925 (2008); Association of State Wetlands Managers, *supra* note 78.

<sup>105</sup> MICH. ADMIN. CODE r. § 281.951–281.961; Association of State Wetlands Managers, *supra* note 78.

<sup>106</sup> ENVIRONMENTAL LAW INSTITUTE, STATE WETLAND PROGRAM EVALUATION: PHASE I 72–73 (2005), available at [http://www.elistore.org/topics\\_list.asp?topic=Wetlands](http://www.elistore.org/topics_list.asp?topic=Wetlands).

Michigan uses a sequencing approach that requires avoidance through “feasible and prudent” alternatives<sup>107</sup> and minimization of impact before considering compensatory mitigation like the federal program.<sup>108</sup> Michigan’s requirements for compensatory mitigation have a preference for restoration over creation and do not have enhancement of existing wetlands as an option for wetland mitigation.<sup>109</sup> Michigan no longer has a mandatory preference for on-site mitigation, following the federal approach, and instead requires on-site mitigation on an ad hoc basis—only when it is practicable and beneficial to the site.<sup>110</sup> Mitigation requirements may be waived if the affected area is less than one third of an acre.<sup>111</sup>

The standard compensatory mitigation ratio is in line with the federal government’s average of two acres for each forested or coastal wetlands acre impacted.<sup>112</sup> Michigan’s wetlands compensatory mitigation program also features some requirements that go above and beyond the federal program. One example is the special category of mitigation for impact on “rare or imperiled” wetlands.<sup>113</sup> This special category requires five acres of mitigation for each affected acre.<sup>114</sup> The requirements also call for an increase if mitigation is in a different ecological type than the impacted wetlands.<sup>115</sup> Additionally, if the mitigation is in the form of preservation, the permittee is required to mitigate ten acres.<sup>116</sup> This represents one of the

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<sup>107</sup> See MICH. COMP. LAWS ANN. § 324.30311 (West 1999). This terminology differs from the federal standard that requires an applicant to take all “appropriate and practicable steps” to avoid and minimize impact before proceeding to mitigation. Compensatory mitigation for Losses of Aquatic Resources, 73 Fed. Reg. 19596 (Apr. 10, 2008) (to be codified at 40 C.F.R. § 230.10(d) (2006)). Legislation was recently passed to reconcile the state and federal definition and standard to avoid what the Michigan Chamber of Commerce and other supporters of the bill deemed unfair disadvantages to developers in Michigan. 2009 Mich. Pub. Act. 120; Michigan Chamber of Commerce, Reforms to Michigan’s Wetlands Program, *available at* <http://www.michamber.com/docs/homepage/Wetlands.pdf> (last visited Mar. 28, 2010).

<sup>108</sup> Michigan Department of Environmental Quality, Wetland Mitigation, [http://www.michigan.gov/deq/0,1607,7-135-3313\\_3687-86447--,00.html](http://www.michigan.gov/deq/0,1607,7-135-3313_3687-86447--,00.html) (last visited Mar. 28, 2010).

<sup>109</sup> *Id.*

<sup>110</sup> ENVIRONMENTAL LAW INSTITUTE, *supra* note 106, at 73.

<sup>111</sup> *Id.* at 72. The Michigan Department of Environmental Quality may also waive mitigation requirements if the basic purpose of the activity is to create or restore wetlands or increase wildlife habitat. Michigan Department of Environmental Quality, *supra* note 108.

<sup>112</sup> See *supra* note 20 and accompanying text; Michigan Department of Environmental Quality, *supra* note 108.

<sup>113</sup> Michigan Department of Environmental Quality, *supra* note 108.

<sup>114</sup> *Id.*

<sup>115</sup> *Id.*

<sup>116</sup> *Id.*

advantages of state assumption of permitting authority—substantial discretion in determining standards and priorities in wetlands management.

The goals of Michigan's mitigation banking system have been enumerated as: "reducing permit processing time and costs due to increased certainty regarding the availability of adequate mitigation sites; providing for the establishment of new wetlands in advance of losses; consolidating mitigation projects into better designed and managed sites; and encouraging the integration of watershed and mitigation planning."<sup>117</sup> Credits may only be utilized for mitigation of damage done in that watershed.<sup>118</sup> Pursuant to a 2001 study conducted by the Michigan Department of Environmental Quality that found several flaws in Michigan's compensatory mitigation system in general,<sup>119</sup> the state has taken several steps to clarify and improve the mitigation banking system, including adoption of new rules for mitigation banking, requiring financial assurance from all mitigation projects, and creation of the electronic mitigation tracking system.<sup>120</sup>

Although Michigan has set clear standards for mitigation banking and embraced the method, it only houses 11 out of 380 mitigation banks in the United States.<sup>121</sup> This number is quite low when compared to other states, which face the same national deterrents.<sup>122</sup> One factor that can be ruled out as a cause for the limited mitigation banking participation is regional positioning; several of Michigan's neighboring states, including Illinois and Ohio, have thriving mitigation banking systems that outnumber Michigan's level of participation.<sup>123</sup>

One possible explanation for the low number of mitigation banks is that the size of Michigan's watersheds contributes to the limited number of mitigation banks. In line with the federal program, Michigan created a

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<sup>117</sup> ENVIRONMENTAL LAW INSTITUTE, *supra* note 106, at 73.

<sup>118</sup> Association of State Wetlands Managers, *supra* note 78.

<sup>119</sup> ENVIRONMENTAL LAW INSTITUTE, *supra* note 106, at 73. The flaws included "a lack of accurate record keeping; inadequate selection of sites due to the on-site mitigation preference; permit issuance prior to completion of mitigation projects; and high workloads for permitting staff and issuance of incomplete permits." *Id.*

<sup>120</sup> *Id.* at 73. See also Michigan Department of Natural Resources and Environment, Wetland Mitigation Banking Registry, available at [http://www.michigan.gov/documents/deq/lwm-wetlands-regOct08\\_255104\\_7.pdf](http://www.michigan.gov/documents/deq/lwm-wetlands-regOct08_255104_7.pdf) (last visited Mar. 28, 2010).

<sup>121</sup> Kaplowitz, Lupi, & Bailey, *supra* note 49. Michigan does not have the least developed mitigation banking system; 25 states have five or fewer mitigation banks. M. D. Kaplowitz, F. Lupi, & D. Bailey, *Wetland Mitigation Banking: The Bankers' Perspective*, J. SOIL & WATER CONSERV. May–June 2008, at 164.

<sup>122</sup> See *supra* Introduction and Part I.

<sup>123</sup> JESSICA WILKINSON & JARED THOMPSON, ENVIRONMENTAL LAW INSTITUTE, 2005 STATUS REPORT ON COMPENSATORY MITIGATION IN THE UNITED STATES (2006) 3, available at [http://www.elistore.org/topics\\_list.asp?topic=Wetlands](http://www.elistore.org/topics_list.asp?topic=Wetlands).



watershed map in 1997,<sup>124</sup> which divides Michigan's 58,110 square miles<sup>125</sup> into over sixty-three watersheds.<sup>126</sup> The requirement that mitigation banking credits can only be used in that bank's watershed decreases the number and size of banks created because it reduces demand and the number of potential customers.<sup>127</sup> The number of watersheds in a state is, of course, not a factor that can be changed because watersheds are by definition, naturally occurring and determined,<sup>128</sup> but it may still be a contributing factor in the number of mitigation banks present in a state.

Another possible explanation for the low number of mitigation banks in Michigan is that the stricter mitigation requirements in the state discourage development of the banks. A study performed by Michigan State University and the Michigan Department of Environmental Quality revealed that mitigation bank owners most frequently cite rigorous and constantly changing standards as the primary hindrance to expansion of mitigation banks.<sup>129</sup> Stricter regulation may increase the cost of creating the mitigation banks and discourage entrepreneurs from creating mitigation banks in the state.

Michigan has certainly outlined specific requirements for mitigation banks and promulgated a preference for mitigation banking in line with the federal program; however, these efforts have not led to the level of participation enjoyed by other states. Further, Michigan encounters many difficulties in implementation and enforcement of its wetlands mitigation program.

#### *B. Implementation and Enforcement<sup>130</sup> of the Regulations*

Although a significant benefit of Michigan's state assumption program is the higher opportunity for public participation when states assume

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<sup>124</sup> Michigan Department of Environmental Quality, Wetland Mitigation Watershed Map, available at [http://www.michigan.gov/documents/deq/lwm-wetlands-watershedmap\\_261696\\_7.pdf](http://www.michigan.gov/documents/deq/lwm-wetlands-watershedmap_261696_7.pdf) (last visited Mar. 28, 2010).

<sup>125</sup> Michigan Department of Natural Resources and Environment, Michigan FAQ, available at [http://www.michigan.gov/dnr/0,1607,7-153-54463\\_54466\\_20829-54118--,00.html](http://www.michigan.gov/dnr/0,1607,7-153-54463_54466_20829-54118--,00.html) (last visited Mar. 28, 2010).

<sup>126</sup> Michigan Department of Environmental Quality, *supra* note 124.

<sup>127</sup> See *infra* Part III.A (for a comparison to Virginia, North Carolina and Tennessee).

<sup>128</sup> EPA defines watersheds as "the area that drains to a common waterway, such as a stream, lake, estuary, wetland, or, ultimately, the ocean." United States Environmental Protection Agency, Watershed Planning, <http://iaspub.epa.gov/watershedplan/watershedPlanning.do?pageId=48&navId=35> (last visited Mar. 28, 2010).

<sup>129</sup> Kaplowitz, Lupi, & Bailey, *supra* note 49.

<sup>130</sup> For the purpose of this note, "enforcement" refers to the ability to compel observance of permit requirements, as opposed to enforcement actions resulting from non-compliance with permit requirements.

federal programs,<sup>131</sup> it also creates problems of enforcement. Ineffective enforcement of mitigation requirements is a common complaint of critics of the federal program, and on the state level, enforcement becomes more difficult for several reasons.<sup>132</sup> The idea that enforcement and implementation would be more difficult on a state level seems counter-intuitive because there is less area to police; however, Michigan is attempting to enforce requirements equal to or more stringent than federal requirements without federal funding.<sup>133</sup> In addition to facing the same problems the national program would face,<sup>134</sup> state government is also more susceptible to the complaints from affected landowners and constituents, and county prosecutors may be adamantly opposed to the section 404 program, creating obstacles for enforcement.<sup>135</sup> Additionally, the lack of federal funding has proven difficult because of the expenses of recording and reporting data required to exhibit compliance with section 404 (b) (1) and coordination with federal rules and regulations.<sup>136</sup>

The rules recently promulgated by the EPA and the Corps will not directly affect the actual rules in Michigan because the program is broader and more stringent than the federal program; however, the logistics of state assumption cast doubt on whether there is adequate enforcement to ensure that the federal goals for compensatory mitigation and mitigation banking requirements are fulfilled. Because of the immense burden associated with state assumption, states looking to increase their protection of wetlands should create supplemental programs that allow extensive legislation without the rigorous standards involved with assumption.

### III. SUPPLEMENTING THE CLEAN WATER ACT WITH STATE LEGISLATION—VIRGINIA'S PROGRAM

If a state decides that assumption of permitting authority is too great of an undertaking, the state is not simply at the mercy of the

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<sup>131</sup> Goemaere-Anderson Wetland Protection Act, Mich. Comp. Laws Ann. § 281.701 (1979); *see generally* Goodenough, *supra* note 99.

<sup>132</sup> Oliver A. Houck & Michael Rolland, *Federalism in Wetlands Regulation: A Consideration of Delegation of Clean Water Act Section 404 and Related Programs to the States*, 54 MD. L. REV. 1242, 1269 (1995).

<sup>133</sup> *Id.* at 1269. Funding for Michigan's program is derived from state funding and permit fees. *Id.*

<sup>134</sup> *See supra* Introduction and Part I.

<sup>135</sup> Houck & Rolland, *supra* note 132, at 1272–74.

<sup>136</sup> *Id.* at 1274. Michigan Department of Environmental Quality, like the EPA, does make efforts to conduct visits to section 404 permit sites prior to permit issuance, so the state has the authority to accommodate annual, follow-up visits to mitigation banking sites to increase enforcement if it chooses to do so. *Id.* at 1275.

federal government in the administration of the Clean Water Act. Because of the broad non-preemption clauses in the Act, state governments have discretion to control their involvement in wetland protection.<sup>137</sup> State programs have taken on an increasingly important role pursuant to the Supreme Court's rulings in *Solid Waste Agency v. U.S. Army Corps of Engineers*<sup>138</sup> and *Rapanos v. United States*,<sup>139</sup> which limited the scope of the Corps' jurisdiction in wetlands regulation.<sup>140</sup> Virginia is an example of a state that has enacted substantial legislation protecting wetlands. Virginia currently has over one million acres of wetlands,<sup>141</sup> even after losing over forty percent of its wetlands to agriculture, industry, and development.<sup>142</sup>

Unlike the program in Michigan where the state is required to keep requirements equal to or exceeding federal requirements,<sup>143</sup> Virginia has more flexibility in its program. In exchange, the Corps retains permitting authority of all navigable waters in the state,<sup>144</sup> while Virginia retains authority to veto any permit issued under the federal program in the form of a certification requirement under section 401 of the Clean Water Act.<sup>145</sup> Virginia has chosen to protect its wetlands by supplementing the federal regulations and adopting most federal approaches to create a second, equally stringent program in the commonwealth of Virginia without the tremendous burdens and costs associated with assumption.

Virginia's program is designed to supplement the federal regulations on compensatory mitigation discussed above,<sup>146</sup> and primarily consists of

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<sup>137</sup> See *supra* Part II.

<sup>138</sup> 531 U.S. 159 (2001).

<sup>139</sup> 547 U.S. 715 (2006).

<sup>140</sup> See Paula Schauweker, *Shifting the Focus of Wetlands Protection to State and Local Governments*, 22 NAT. RESOURCES & ENV'T 66, 67 (2008).

<sup>141</sup> Association of State Wetlands Managers, *State Wetlands Programs: Virginia*, <http://www.aswm.org/swp/virginia9.htm> (last visited Mar. 28, 2010).

<sup>142</sup> *Id.*

<sup>143</sup> See *supra* Part I.

<sup>144</sup> Booth, *supra* note 3. Note that under 33 U.S.C. § 1344(c), the EPA possesses the power to veto the Corps' permit approval if it finds that the permit will have "an unacceptable adverse effect" on wildlife, water supplies, fishery areas, or recreational areas. 33 U.S.C. § 1344(c) (2006).

<sup>145</sup> 33 U.S.C. § 1341(c) (1) (2006) ("Any applicant for a Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the State in which the discharge originates or will originate. . ."). See *Arkansas v. Oklahoma*, 503 U.S. 91 (1992), for a discussion of the role of downstream states in the state certification or veto process.

<sup>146</sup> See *supra* Part I.

four regulations—the Virginia Tidal Waters Act,<sup>147</sup> the Virginia State Water Control Act,<sup>148</sup> the Nontidal Wetlands Act,<sup>149</sup> and the Chesapeake Bay Preservation Act.<sup>150</sup> Virginia also uses a Statewide Programmatic General Permit program, which is used to manage applications for general permits that purport to have minimal adverse environmental impacts both individually and cumulatively.<sup>151</sup> Additionally, general permits from the Virginia Water Protection Permit program are available for activities that are determined to have minimal impact to the environment and human health, subject to requirements and exceptions.<sup>152</sup>

A. *Compensatory Mitigation Under Virginia's Program*

The EPA and the Corps' recently promulgated regulations will have a direct effect in Virginia because the federal agencies retain jurisdiction and Virginia generally adopts federal approaches, even when it is not bound to do so.

Compensatory mitigation in Virginia is controlled by the State Water Control Act and requires compensatory mitigation requirements to reach a goal of “No Net Loss”—an adoption of the longstanding federal approach.<sup>153</sup> The State Water Control Act has adopted the definition of wetlands directly from the Corps as “those areas that are inundated or saturated by surface or groundwater 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. Wetlands generally include swamps, marshes, bogs and similar areas.”<sup>154</sup>

Virginia has also adopted the federal sequencing approach, which requires avoidance and minimization before compensatory mitigation can

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<sup>147</sup> VA. CODE ANN. §§ 28.2-1300–1320 (2010).

<sup>148</sup> VA. CODE ANN. § 62.1-44.2 (2010).

<sup>149</sup> *Id.*

<sup>150</sup> 9 VA. ADMIN. CODE §§ 10.1-2100–2116.

<sup>151</sup> Houck & Rolland, *supra* note 132, at 1282 n.289.

<sup>152</sup> ENVIRONMENTAL LAW INSTITUTE, STATE WETLAND PROGRAM EVALUATION: PHASE III, 166 (2007), available at [http://www.elistore.org/topics\\_list.asp?topic=Wetlands](http://www.elistore.org/topics_list.asp?topic=Wetlands). Virginia has currently issued four of these permits: Permit One allows temporary or permanent actions that impact less than one-half of an acre of nontidal wetlands or open water; Permit Two regulates temporary and permanent impact related to maintenance and construction of utility lines; Permit Three deals with impact resulting from the Virginia Department of Transportation or other linear transportation projects; Permit Four deals with various forms of mining and natural resource gathering. *Id.* at 167.

<sup>153</sup> VA. CODE ANN. § 62.1-44.15.21 (2010).

<sup>154</sup> VA. CODE ANN. § 62.1-44.3; 33 C.F.R. § 328.3(b) (2010).

be utilized.<sup>155</sup> Once compensatory mitigation is required, it may include restoration or creation of wetland resources,<sup>156</sup> contribution to an in-lieu fee program, purchasing credits in a mitigation bank, or preservation.<sup>157</sup> It can also include preservation when used in conjunction with another method of mitigation.<sup>158</sup> Like Michigan, Virginia does not offer enhancement as a method of mitigation.<sup>159</sup>

Virginia has a particularly extensive mitigation banking system. Currently, the state has forty approved nontidal mitigation banks, two tidal mitigation banks, and approximately twenty proposed mitigation banks.<sup>160</sup> Virginia hosts far more mitigation banks than other states with similar size and watershed division.<sup>161</sup> Compare Tennessee, which splits its 42,146 square miles<sup>162</sup> into 55 watersheds<sup>163</sup> and features only 8 mitigation banks,<sup>164</sup> and North Carolina, which splits its 52,669 square miles<sup>165</sup> into 58 watersheds<sup>166</sup> and features only 12 mitigation banks<sup>167</sup> to Virginia, which splits its 42,326 square miles<sup>168</sup> into 53 watersheds<sup>169</sup> and

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<sup>155</sup> 9 VA. ADMIN. CODE § 25-210-10 (2010); Guidance Memo No. 09-2004 from Ellen Gilinsky, Director, VIRGINIA DEP'T OF ENVTL. QUALITY, WATER DIVISION, to Regional Directors (Mar. 9, 2009), *available at* [http://www.deq.state.va.us/export/sites/default/wetlands/pdf/GM09-2004\\_Mitigation\\_Rule\\_Guidance.pdf](http://www.deq.state.va.us/export/sites/default/wetlands/pdf/GM09-2004_Mitigation_Rule_Guidance.pdf); ENVIRONMENTAL LAW INSTITUTE, *supra* note 152, at 168.

<sup>156</sup> Restoration is favored over creation of wetlands. UNITED STATES ARMY CORPS OF ENGINEERS, NORFOLK DISTRICT, Public Notice: Virginia Off-site Mitigation Location Guidelines (Mar. 5, 2008), *available at* <http://www.deq.virginia.gov/wetlands/mitigate.html>. If a wetland is created, guidelines specify that it should not be an isolated water source. *Id.*

<sup>157</sup> ENVIRONMENTAL LAW INSTITUTE, *supra* note 152, at 168.

<sup>158</sup> *Id.*

<sup>159</sup> *See supra* Part II; ENVIRONMENTAL LAW INSTITUTE, *supra* note 152, at 168.

<sup>160</sup> ENVIRONMENTAL LAW INSTITUTE, *supra* note 152, at 168.

<sup>161</sup> *See infra*, notes 161–69.

<sup>162</sup> About Tennessee's Geography, Tennessee.gov, <http://www.tennesseeanytime.org/homework/geography.html> (last visited Mar. 28, 2010).

<sup>163</sup> Tennessee Department of Environment and Conservation, Watershed Management Approach, <http://www.state.tn.us/environment/wpc/watershed/> (last visited Mar. 28, 2010).

<sup>164</sup> ENVIRONMENTAL LAW INSTITUTE, *supra* note 123, at 47.

<sup>165</sup> North Carolina State Library, North Carolina Geography, <http://statelibrary.ncdcr.gov/NC/GEO/GEO.htm> (last visited Mar. 28, 2010).

<sup>166</sup> EPA, Surf Your Watershed—North Carolina, <http://cfpub.epa.gov/surf/state.cfm?statepostal=NC> (last visited Mar. 28, 2010).

<sup>167</sup> Association of State Wetlands Managers, State Wetlands Programs: North Carolina, <http://aswm.org/swp/northcarolina9.htm> (last visited Mar. 28, 2010).

<sup>168</sup> Geography, Merriam-Webster's Atlas, <http://www.merriam-webster.com/cgi-bin/nytmaps.pl?virginia> (last visited Mar. 28, 2010).

<sup>169</sup> EPA, Surf Your Watershed—Virginia, <http://cfpub.epa.gov/surf/state.cfm?statepostal>

features over 40 mitigation banks.<sup>170</sup> One factor that may have caused the high number of mitigation banks is the explosion of development between Norfolk, Virginia and Washington, D.C.<sup>171</sup> Northern Virginia has increased its population by twenty-five percent to two million in the past ten years.<sup>172</sup> Total population in Virginia also increased almost 10 percent since 2000 to 7.7 million.<sup>173</sup> These increases in population were accompanied by increased expansion, development, and construction,<sup>174</sup> which necessarily require mitigation for harm done to the wetlands during development, and increases the demand for mitigation banks.

The increased development and demand for credits is reflected in the cost of mitigation banking credits. Costs of mitigation bank credits are not tracked or made publicly available by any agency; agency in-lieu fee prices, which are used when no acceptable mitigation opportunity is available, are an indicator of the value of mitigation credits within a geographical area.<sup>175</sup> National prices vary widely, with estimates ranging from \$3,000 to over \$600,000 per credit.<sup>176</sup> Costs vary greatly around the

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=VA (last visited Mar. 28, 2010).

<sup>170</sup> ENVIRONMENTAL LAW INSTITUTE, *supra* note 152, at 168.

<sup>171</sup> See generally Northern Virginia Economic Development Coalition, Home Page, <http://www.northernvirginia.org/> (last visited Mar. 28, 2010).

<sup>172</sup> *Id.* Northern Virginia includes Alexandria, Arlington, City of Fairfax, Fairfax County, City of Falls Church, Fauquier County, Town of Leesburg, Loudoun County, City of Manassas, Prince William County, and Vint Hill. *Id.*

<sup>173</sup> United States Census Bureau, State and County Quick Facts—Virginia, <http://quickfacts.census.gov/qfd/states/51000.html> (last visited Mar. 28, 2010). In comparison, Tennessee has a similar sized area, but a population of only 6.2 million. United States Census Bureau, State and County Quick Facts—Tennessee, <http://quickfacts.census.gov/qfd/states/47000.html> (last visited Mar. 28, 2010).

<sup>174</sup> See, e.g., Maura Webber Sadovi, *Northern Virginia Development Soars as Metro Area Sprawls*, WALL ST. J., June 06, 2006, available at [http://www.realestatejournal.com/columnists\\_com/blueprint/20060706-blueprint.html](http://www.realestatejournal.com/columnists_com/blueprint/20060706-blueprint.html); SMART MOBILITY, INC. & ANITA KRAMER & ASSOCIATES, MORE SPRAWL, MORE TRAFFIC, NO RELIEF: AN ANALYSIS OF PROPOSED POTOMAC RIVER CROSSINGS, Executive Summary, available at [http://www.edf.org/documents/2383\\_ExecSum.pdf](http://www.edf.org/documents/2383_ExecSum.pdf) (last visited Mar. 28, 2010). The future shows no signs of a decrease in development, but officials have indicated intent to create spokes of development off of the main hub of the city as opposed to a general expansion outward. WASHINGTON COUNCIL OF GOVERNMENTS, REGION FORWARD: GREATER WASHINGTON 2050: COG'S VISION FOR THE NATIONAL CAPITAL REGION IN THE TWENTY-FIRST CENTURY 6, available at [http://www.greaterwashington2050.org/Reports/GW2050\\_LastUpdatedv2.pdf](http://www.greaterwashington2050.org/Reports/GW2050_LastUpdatedv2.pdf) (last visited Mar. 28, 2010).

<sup>175</sup> The Katoomba Group's Ecosystem Marketplace, US Wetland Banking, [http://www.ecosystemmarketplace.com/pages/dynamic/web.page.php?section=biodiversity\\_market&page\\_name=uswet\\_market](http://www.ecosystemmarketplace.com/pages/dynamic/web.page.php?section=biodiversity_market&page_name=uswet_market) (last visited Mar. 28, 2010).

<sup>176</sup> *Id.*

country based on several factors, including the resource being impacted, the difficulty in performing compensatory mitigation for that resource, demand for the mitigation bank credits, availability of suitable sites, and technical aspects of the project.<sup>177</sup> In-lieu fee prices in Virginia are some of the most expensive in the nation, costing an estimated \$400,000 to \$653,000 per acre of tidal wetland.<sup>178</sup> In Northern Virginia, estimates range from \$125,000 to \$150,000 per acre of nontidal wetland.<sup>179</sup> Compare these prices to North Carolina where estimates for riparian wetland range from \$36,000 to \$63,000 per acre and \$156,000 per acre of coastal wetland.<sup>180</sup>

Mitigation bank permitting is regulated by the Virginia Mitigation Banking Review Team, which primarily consists of representatives from the EPA, the Corps, Virginia Department of Environmental Quality, United States Fish and Wildlife Service, Virginia Institute of Marine Science, and other interested parties.<sup>181</sup> Virginia has refined mitigation banking requirements by passing legislation and entering into various agreements with the Norfolk District of the Corps, including the creation of specific guidelines<sup>182</sup> and a template to assist in development of banks.<sup>183</sup> All of these elements work together to further the goals of the EPA's new federal regulation, which augments involvement in mitigation banking by increasing availability of banks and creating more uniform rules, here between state and federal government.

The additional goal of the EPA's final rule is to level regulation of methods of compensatory mitigation by removing the preference for permittee-responsible mitigation and encourage the development of

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<sup>177</sup> DEP'T OF THE ARMY, *supra* note 20, at vii; *but see* Morgan M. Robertson, *Emerging Ecosystem Service Markets: Trends in a Decade of Entrepreneurial Wetland Banking*, 4 FRONTIERS IN ECOLOGY AND THE ENV'T 279, 299 (2006) (suggesting that the price of mitigation bank credits is not responsive to traditional economic indicators of commodity costs, such as supply, demand or the purchaser's options).

<sup>178</sup> The Katoomba Group, *supra* note 175.

<sup>179</sup> *Id.* Nontidal wetland in Southeast Virginia is far lower priced with estimates of \$55,000 to \$65,000 per acre. *Id.*

<sup>180</sup> *Id.*

<sup>181</sup> ENVIRONMENTAL LAW INSTITUTE, *supra* note 152, at 168.

<sup>182</sup> Letter from J. Robert Hume, Regulatory Branch Chief, Norfolk District Army Corps of Engineers, to Prospective Wetlands Bankers and Consultants, *available at* <http://www.deq.virginia.gov/wetlands/pdf/mitigation.pdf> (last visited Mar. 28, 2010).

<sup>183</sup> Virginia Dep't of Env't. Quality, Template Mitigation Banking Instrument, [http://www.nao.usace.army.mil/technical%20services/Regulatory%20branch/Mitigation%20Banks/MBI\\_template\\_5-04.doc](http://www.nao.usace.army.mil/technical%20services/Regulatory%20branch/Mitigation%20Banks/MBI_template_5-04.doc) (last visited Mar. 28, 2010).

mitigation banking.<sup>184</sup> Virginia, like the federal government<sup>185</sup> and other states, used to have a preference for on-site, in-kind mitigation.<sup>186</sup> In line with the new rule, Virginia has removed this preference for both its general and project specific permits.<sup>187</sup> Additionally, Virginia's program encourages mitigation banking by requiring that in-lieu funds be contributed to a project in the permittee's watershed and used as a last resort.<sup>188</sup> Virginia also requires a mitigation plan from all mitigation projects, similar to the federal plan, which requires details on long-term maintenance and ecological factors, which further levels requirements.<sup>189</sup>

The EPA's final rule for section 404 mitigation encourages, but does not require, states and localities to adopt a watershed approach to the evaluation of the utility of wetlands mitigation projects which are compelled pursuant to issuance of permits.<sup>190</sup> Virginia has already shown a willingness to adopt this new approach, as it has adopted many other federal approaches, by instituting a series of guidelines implementing the approach during the interim proposed rule period,<sup>191</sup> and by creating a watershed map.<sup>192</sup> Adopting federal approaches creates a program comparable to assumption of permitting authority. Although the EPA retains

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<sup>184</sup> See Compensatory Mitigation for Losses of Aquatic Resources, 73 Fed. Reg. 19,594, 19,603 (Apr. 10, 2008) (codified at 40 C.F.R. pt. 230), available at [http://www.epa.gov/owow/wetlands/pdf/wetlands\\_mitigation\\_final\\_rule\\_4\\_10\\_08.pdf](http://www.epa.gov/owow/wetlands/pdf/wetlands_mitigation_final_rule_4_10_08.pdf); see also ENVIRONMENTAL PROTECTION AGENCY, NATIONAL WETLANDS MITIGATION PLAN (2002), <http://www.epa.gov/wetlands/pdf/map1226withsign.pdf>.

<sup>185</sup> James Salzman & J.B. Ruhl, *Currencies and Commodification of Environmental Law*, 53 STAN. L. REV. 607, 651 (2000).

<sup>186</sup> Guidance Memorandum No. 04-2007 from Larry G. Dawson, Director of Division of Water Quality, VIRGINIA DEP'T OF ENVTL. QUALITY, to Regional Directors (Feb. 6, 2004), available at <http://www.deq.state.va.us/wetlands/mitigate.html>.

<sup>187</sup> ENVIRONMENTAL LAW INSTITUTE, *supra* note 152, at 169. The Virginia Department of Environmental Quality issues a guidance memorandum instructing staff to adhere to the new hierarchical preferences until the Virginia Water Protection Permit program regulations can be updated. VIRGINIA DEP'T OF ENVTL. QUALITY, Guidance Memo No. 09-2004, *supra* note 155.

<sup>188</sup> ENVIRONMENTAL LAW INSTITUTE, *supra* note 152, at 169. "Contribution to an in-lieu-fee fund is authorized when on-site or off-site projects are deemed to be impracticable, provided that the fund is approved by the VA DEQ and is dedicated to the achievement of no net loss of wetland or stream acreage and function." *Id.* There are currently only two approved in-lieu mitigation programs in Virginia. ENVIRONMENTAL LAW INSTITUTE, *supra* note 123, at 94.

<sup>189</sup> ENVIRONMENTAL LAW INSTITUTE, *supra* note 152, at 168-69.

<sup>190</sup> 40 C.F.R. § 230 (2008).

<sup>191</sup> Letter from J. Robert Hume, *supra* note 182.

<sup>192</sup> EPA, *supra* note 169.



jurisdiction, states can also require developers to obtain state permits for development projects affecting nontidal waters that are not involved in interstate commerce or transportation.<sup>193</sup>

### B. *Implementation and Enforcement*

Virginia faces difficulties in implementing and enforcing the newly promulgated rule on mitigation banking, but the structure of the state's system facilitates better enforcement because the state has flexibility in utilizing its resources.

In the Virginia program, regulations and permits are primarily enforced in nontidal waters by the Virginia Department of Environmental Quality regional offices.<sup>194</sup> The Central Virginia Department of Environmental Quality's office conducts annual inspections of mitigation banking sites to ensure compliance with regulations and the banking instrument,<sup>195</sup> in addition to visitation of all sites applying for Statewide Programmatic General Permits.<sup>196</sup> This practice exemplifies one of the main strengths of mitigation banking—facilitation of stricter enforcement. Virginia does not have the personnel available to annually visit every single site to which it issues *any* permit requiring mitigation due to the high volume,<sup>197</sup> but with mitigation banks, a greater number of permit mitigation requirements can be supervised with less expenditure of time, money, or resources. Additionally, since this is a service that the EPA is not prepared to perform, due to the sheer magnitude of the undertaking,<sup>198</sup> it is a good choice for Virginia to use resources on this service when supplementing the federal program. Virginia's flexibility in using resources has allowed the state

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<sup>193</sup> See *supra* notes 143–44 and accompanying text.

<sup>194</sup> ENVIRONMENTAL LAW INSTITUTE, *supra* note 152, at 170.

<sup>195</sup> *Id.*

<sup>196</sup> See US ARMY CORPS OF ENGINEERS, NORFOLK DISTRICT, FEDERAL PUBLIC NOTICE (2007), [http://www.nao.usace.army.mil/technical%20services/Regulatory%20branch/PN/SPGP\\_2007/07-SPGP-01\\_mod\\_PN.pdf](http://www.nao.usace.army.mil/technical%20services/Regulatory%20branch/PN/SPGP_2007/07-SPGP-01_mod_PN.pdf). This is not a mandatory feature of Statewide Programmatic General Permits, as states using the New England Model apply objective facts of size and effect of the activity to determine whether to grant the permit without an on-site visit. See, e.g., Massachusetts Office of Coastal Zone Management, U.S. Army Corps of Engineers Permits, <http://www.mass.gov/czm/permitguide/regs/engineers.htm> (last visited Mar. 28, 2010).

<sup>197</sup> The Corps' Norfolk District alone issues over 4,000 permits allowing activity affecting wetlands annually. Mike Saewitz, *Wetlands Destroyed, Wetlands Restored: Both Mean Big Profits*, PILOTONLINE.COM, Aug. 31, 2008, <http://hamptonroads.com/2008/08/wetlands-destroyed-wetlands-restored-both-mean-big-profits>.

<sup>198</sup> See *supra* Introduction.

to take measures that greatly increase the accountability of mitigation banking, which ultimately increases the effectiveness of the projects.

The recently promulgated rules by the EPA and the Corps will have a direct effect in Virginia because the federal government retains jurisdiction and the federal government's approaches are generally adopted within the state. The flexibility of Virginia's program creates more favorable circumstances for the effective implementation and enforcement of the new rule.

#### CONCLUSION

The EPA's recent promulgation of changes to the regulation of mitigation banking requirements are part of a larger effort to increase the effectiveness of wetlands mitigation, and to edge the United States closer to the "No Net Loss" standard, which has been the mantra of environmental organizations, activists, and politicians for twenty years.<sup>199</sup> This will be accomplished through the adoption of a watershed approach, clear and uniform mitigation requirements, and equal standards for all forms of compensatory mitigation.<sup>200</sup>

As with other aspects of the Clean Water Act, this federal rule will interact with and affect state environmental protection efforts. The two main programs within the United States, assumption of permitting, which has been adopted by Michigan, and supplementation of the federal program, which has been adopted by Virginia, entail different responsibilities, authority, and benefits.

Because of the authority conferred to the state under assumption of permitting authority to make a program more stringent than the federal program, the recently promulgated rule on compensatory mitigation will not directly affect Michigan's program; the program has already encompassed the new rule's requirements.<sup>201</sup> However, the increase in the federal program's requirements may indirectly affect the program by putting a higher enforcement burden on Michigan because the state is required to maintain a program as stringent—in legislation *and* in enforcement—as the federal program.<sup>202</sup>

In Virginia, the new rule will have a direct effect because the federal government retains jurisdiction and its regulations will be mimicked

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<sup>199</sup> See *supra* notes 15–16 and accompanying text.

<sup>200</sup> See *supra* Part I.

<sup>201</sup> See *supra* Part II.

<sup>202</sup> See *supra* Part II.B.

in the state's environmental protection plan; just as the state has chosen to adopt most of the federal approaches in the past.<sup>203</sup> As a result, Virginia features a program that has rules comparable to the protections offered in Michigan without the extensive financial obligation of assumption of permitting authority.

Although the value of the autonomy gained when a state assumes permitting authority under section 404 of the Clean Water Act is weighed by each state in the decision-making process, the majority of states have found that it does not warrant the resulting burdens and loss of flexibility.<sup>204</sup> To ensure that states do not undermine the goals and potential benefits of the rules, administrators of state programs assuming permitting authority, as well as state programs supplementing federal programs, should inspect their programs for loopholes to the federal requirements.<sup>205</sup>

Increased effectiveness of compensatory mitigation is a necessary requirement for long-term sustainability of the nation's wetlands. Mitigation banks are quickly becoming a favored method of mitigation because of their advance action, easier enforcement, increased flexibility for developers, and aggregate effect on a single watershed.<sup>206</sup> Unfortunately, factors such as price and the EPA's higher standards for this method of mitigation have prevented mitigation banking from flourishing in the past.<sup>207</sup> The recently promulgated rule stands to encourage this form of mitigation, but it cannot do so without cooperation and consistency with all of the corresponding state programs.

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<sup>203</sup> *See supra* Part III.

<sup>204</sup> *See supra* Part II.

<sup>205</sup> *See supra* Part II.A.

<sup>206</sup> *See supra* Part I.

<sup>207</sup> *See supra* Part I.