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## REDEFINING COASTAL WETLAND POLICY IN SEARCH OF ECONOMIC AND ENVIRONMENTAL HARMONY

*Paul J. Morrow, Esq.\**

LAWYERS, SWAMPS, AND MONEY: U.S. WETLAND LAW, POLICY, AND POLITICS. By Royal C. Gardner. Washington, D.C.: Island Press. 2011. Pp. 1, 199. \$35.00

### I. INTRODUCTION

In recent years, environmental awareness has come to the forefront as society continues to realize the negative environmental impacts that arise from the uninhibited growth of modern economies. Terms such as “green electricity,” “hybrid,” “Energy-Star,” and “organic” have come into common use. Likewise, concerns about global warming, ocean pollution, and Arctic melting have resulted in political activism across the world. At the same time, the benefits derived from modern economic development create an implicit need to balance the costs of such development with environmental sustainability. Like it or not, mankind’s impact on the environment will never be eliminated. Instead, creative solutions must be found to enable society to better harmonize economic development with environmental protection. To date, the development of environmental enforcement standards has been inconsistent, and the complexity of economic and environmental coexistence has created difficulties for regulators and politicians alike. This review focuses on the legal, economic, and social implications of the use of wetlands, as analyzed by Professor Royal C. Gardner in his book, *Lawyers, Swamps, and Money: U.S. Wetland Law, Policy, and Politics*.<sup>1</sup> As Professor Gardner states:

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[W]etlands pay society's bills. Wetlands provide a host of ecosystem services, functions that benefit people. Long viewed as the mosquito-breeding nuisances that must be drained, wetlands have recently had their reputations rehabilitated. We now recognize that wetlands provide important habitat for animals and plants, support the seafood industry, protect homes and businesses from floods, and help improve water quality. Sadly, we often appreciate the value of wetlands and their ecosystem services only after they are gone (or degraded).<sup>2</sup>

Professor Gardner's book takes on the laudable goal of providing its reader with a fundamental understanding of the inner-workings of wetland policy. It accomplishes this task in the short span of 200 pages, bringing the reader through the regulatory framework of wetland law and into the world of definitions and mitigation techniques. Along the way, Gardner entertains us with various cases and political stories that have helped to define the field. The result is that Professor Gardner's unique perspective makes this book a must-read for any individual interested in wetland law.

## II. HISTORICAL TREATMENT OF WETLANDS

Gardner's analysis begins with a well rounded historical examination of the public perception of wetlands.<sup>3</sup> Early perceptions of wetlands were bleak, and perhaps no case better displays this than the 1900 case of *Leovy v. United States*, in which the Supreme Court stated "that swamps and stagnant waters are the cause of malarial and malignant fevers, and that the police power is never more legitimately exercised than in removing such nuisances."<sup>4</sup> The Court further noted that conversion of the swamp land in question to agricultural land would increase its value from \$5,000 to \$300,000.<sup>5</sup>

Such a negative view of wetlands was not atypical of the times. In fact, some scholars posit that we have lost more than half of the wetlands in the United States since the 1780s.<sup>6</sup> For at least ten states, this number

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1. ROYAL C. GARDNER, *LAWYERS, SWAMPS AND MONEY: U.S. WETLAND LAW, POLICY, AND POLITICS* (2011).

2. *Id.* at 1-2.

3. *Id.* at 5.

4. 177 U.S. 621, 636 (1900).

5. *Id.* at 628.

6. GARDNER, *supra* note 1, at 95.

rises to as high as seventy percent.<sup>7</sup> Much of the reason for this loss can be traced to farmers, who sought out wetlands as nutrient-rich soils.<sup>8</sup> Gardner states:

With government subsidies and price supports, farmers continued to drain and convert wetlands well into the twentieth century. Between 1950 and 1970, annual wetland losses attributable to agricultural activities were about 250,000 acres. By the 1970s and the 1980s, the rate of loss was still 290,000 acres per year. Only recently . . . has farming ceased to be the primary cause of wetland losses.<sup>9</sup>

Wetlands were also extensively developed to accommodate commercial and residential development as developers sought out wetlands as a cheaper alternative to dry land.<sup>10</sup> Today, rural and urban development has taken the lead in the destruction of wetlands.<sup>11</sup> Additionally, the introduction of invasive species,<sup>12</sup> oil exploration,<sup>13</sup> coal removal,<sup>14</sup> and road construction projects<sup>15</sup> have also contributed to the loss of wetland habitat.

In recent years, however, wetlands have enjoyed a more positive public image. Not only have scientific advances brought to light the importance of wetlands as animal habitats, and thus piqued the interest of environmentalists the world over,<sup>16</sup> they have also revealed the importance of wetlands to the sustainability of commercial fisheries.<sup>17</sup> As Gardner points out, “75 percent of commercial fish and shellfish in the United States rely on estuaries and coastal wetland systems.”<sup>18</sup> This fact was heavily highlighted by the national media<sup>19</sup> and academics

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7. *Id.*

8. *Id.*

9. *Id.* (internal citations omitted).

10. *Id.*

11. *Id.*

12. *Id.* at 97.

13. *Id.* at 96.

14. *Id.*

15. *Id.*

16. *Id.* at 8.

17. *Id.* at 11.

18. *Id.*

19. John M. Broder, *House Panel Faults Administration Spill Response*, N.Y. TIMES (June 2, 2011, 2:22 PM), <http://green.blogs.nytimes.com/2011/06/02/house-panel-faults-administration-spill-response/>.

during the 2010 *Deepwater Horizon* disaster.<sup>20</sup> Likewise, wetland bird-related activity accounts for nearly \$32 billion in annual economic spending.<sup>21</sup> Wetlands have also been found to improve water quality, mitigate flood damages by absorbing water, and provide recreational value to millions each year.<sup>22</sup>

These factors have combined to foster a government policy of achieving “no net loss” of wetland acreage.<sup>23</sup> To realize this goal, Congress implemented the “Swampbuster” program in 1985, whereby farmers were penalized in the form of cuts to their subsidies if they “drained or altered a wetland.”<sup>24</sup> Similarly, the Wetlands Reserve Program protected wetlands by paying farmers who “restor[ed] and protect[ed] wetlands.”<sup>25</sup> This program allowed the government to pay for up to a hundred percent of the restoration costs, depending on the level of wetland protection provided by a farmer.<sup>26</sup> Since 1992, the Wetlands Reserve Program has resulted in the protection of “almost 2 million acres at a cost of approximately \$2.1 billion,” and both programs have generally been regarded as successes.<sup>27</sup>

Non-farming projects have proven a more difficult challenge. One method of offsetting wetland losses from rural and urban construction has been through “compensatory mitigation.”<sup>28</sup> When issuing a section 404 permit, the Army Corps of Engineers (Corps) will require a developer to offset any wetland damage it causes by “restor[ing], enhanc[ing], creat[ing], and/or preserv[ing] other wetlands.”<sup>29</sup> In this way, the Corps hopes to grant permits while still realizing “no net loss.”<sup>30</sup> However, several studies suggest that the section 404 mitigation program has not worked.<sup>31</sup> Enforcement of mitigation commitments has been “almost nonexistent,”<sup>32</sup> and even when permittees have restored wetlands, the long-term effects of that restoration remain questionable.<sup>33</sup>

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20. Edward B. Barbier, *Coastal Wetland Restoration and the Deepwater Horizon Oil Spill*, 64 VAND. L. REV. 1821, 1832 (2011).

21. GARDNER, *supra* note 1, at 56.

22. *Id.* at 11-12.

23. *Id.* at 93.

24. *Id.* at 100.

25. *Id.*

26. *Id.* at 100-01.

27. *Id.* at 101 (internal citations omitted).

28. *Id.*

29. *Id.*

30. *Id.* at 102.

31. *Id.* at 106.

32. *Id.* at 109.

33. *Id.* at 108.

Gardner highlights two creative solutions that have arisen to resolve the problems associated with compensatory mitigation.<sup>34</sup> One is the idea of mitigation banking, which enables developers to offset the impact of wetland development by purchasing environmental credits from other developers who have restored wetlands.<sup>35</sup> Under this theory, performance mitigation credits are granted to a developer once they satisfactorily restore a wetland.<sup>36</sup> These credits can be banked for future use, allowing the developer to offset damages from wetland projects in advance.<sup>37</sup> Beginning in 1993, this concept was taken a step further when the first entrepreneurial mitigation bank began to sell mitigation credits to developers from restoration projects it had completed.<sup>38</sup> Congress demonstrated its support of this process in 1998 when it passed the Transportation Equity Act for the 21st Century,<sup>39</sup> which expressly created a market for mitigation banks.<sup>40</sup>

The other creative solution currently competing with mitigation banking is in-lieu fee mitigation.<sup>41</sup> Here, a third party takes on the obligations to restore wetlands that the developer incurs in exchange for a fee.<sup>42</sup> The third party is typically a nonprofit organization or government agency, and the funds received from the developer are deposited into an account for use on a later project.<sup>43</sup> Thus, unlike in mitigation banking, the restoration is not completed at the front. While this is one downside of in-lieu fee mitigation, the program does provide better protection than the compensatory mitigation program because payment from the developer is still received before the development project begins.<sup>44</sup> However, Gardner points out that the success of the in-lieu fee program has not been on par with that of mitigation banking.<sup>45</sup>

In attempting to provide coherence among these three programs, the Environmental Protection Agency (EPA) and Corps issued a final rule in 2008 governing compensatory mitigation and expressly providing for

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34. For an extensive discussion of the merits of all three mitigation options, see generally, Travis E. Booth, *Compensatory Mitigation: What is the Best Approach?*, 11 U. BALT. J. ENVTL. L. 205 (2004).

35. GARDNER, *supra* note 1, at 13.

36. *Id.* at 112-13.

37. *Id.*

38. *Id.* at 115.

39. 23 U.S.C. § 108 (2006).

40. GARDNER, *supra* note 1, at 119.

41. *Id.* at 129.

42. *Id.* at 130.

43. *Id.*

44. *Id.*

45. *Id.* at 131.

mitigation banking and in-lieu fee mitigation.<sup>46</sup> Mitigation banking was given primacy in the regulation (meaning a mitigation banking credit was given more value than other mitigation credits) over in-lieu fee mitigation, with more traditional compensatory mitigation coming in as the least favorable option.<sup>47</sup> Thus, at present, developers have three options: buy a mitigation banking credit up front, pay for in-lieu fee credits, or conduct compensatory mitigation actions on their own.

### III. REGULATORY FRAMEWORK

Professor Gardner's book dedicates itself largely to the task of describing the regulatory framework governing wetland policy. This comprehensive coverage includes a detailed exploration into the realm of administrative law, which largely governs wetland law.<sup>48</sup> Agencies make, apply, regulate, and enforce the rules, and while courts may review final agency decisions, they are often reluctant to overturn them.<sup>49</sup> This canon of review gives the EPA and Corps enormous power to regulate the spirit of economic development. Accordingly, Professor Gardner emphasizes the importance of "understanding administrative law [as] a prerequisite for understanding wetland law and policy."<sup>50</sup>

Providing a short course in administrative law, Gardner cuts through the complexities of the process to highlight the importance that it plays in wetland law.<sup>51</sup> He quickly focuses the reader on political realities by pointing out that Congress provides the authority and funding, while the President provides the political appointments for administrative agencies.<sup>52</sup> While agencies are partially insulated from political pressures by virtue of their corps of career specialists, Gardner points to examples of instances where even career employees were not immune from political backfire.<sup>53</sup> That being said, Gardner accepts the presence of politics in the administrative process because of the legitimacy it brings to agency actions affecting private and public property rights.<sup>54</sup>

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46. *Id.* at 151 (referencing 33 C.F.R. § 332.3(b) (2012)).

47. *Id.* at 156.

48. *Id.* at 16.

49. *Id.*

50. *Id.*

51. *Id.* at 15.

52. *Id.* at 18.

53. *Id.* at 20. (pointing to Michael Davis, former Deputy Assistant Secretary of the Army for Civil Works).

54. *Id.* at 22.

Next, *Lawyers, Swamps, and Money* turns to the origins of wetland law. Here, a brief synopsis is appropriate. In 1972, Congress passed the Clean Water Act over the veto of President Nixon in order to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”<sup>55</sup> To accomplish this task, Congress established specialized permitting processes for various forms of pollutants.<sup>56</sup> The EPA was given authority to grant permits for point sources of pollutants through the National Pollutant Discharge Elimination System (NPDES) under section 402.<sup>57</sup> However, as it soon became apparent that “dredge and fill material” from construction projects harmed wetlands as extensively as more traditional sources of toxic pollutants, Congress enacted section 404 and placed authority to issue permits for such materials with the Corps.<sup>58</sup> To forge a compromise between the House (which favored the Corps because of its experience with construction projects under the Rivers and Harbors Act) and Senate (which favored the EPA because of its focus on environmental issues), section 404 was drafted to provide the EPA with veto power over the Corps’ decisions.<sup>59</sup>

Gardner’s characterization of the EPA and Corps as “strange bedfellows” governing the realm of wetland law strikes true because it recognizes the complexities of co-management that exist between an organization with construction as its lifeblood (the Corps) and one with environmental protection at its core (the EPA).<sup>60</sup> For the government to have its act together, the system must be coherent in authority. As a solution, “the Corps and the EPA signed an enforcement memorandum of agreement (MOA) in 1989 that delineated their roles and responsibilities.”<sup>61</sup> Pursuant to this agreement,

the Corps agreed to be the lead agency for actions involving section 404 permit violations terms and conditions, which made sense since the Corps is the permit-issuing agency. For unpermitted discharges (i.e. when someone filled a wetland and failed to apply for a permit), the MOA left open which agency would be lead. It stated that the Corps would serve as lead agency, unless the case involved a repeat violator or a flagrant violation, and then the EPA would step in. The EPA would also

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55. *Id.* at 23.

56. *Id.*

57. *Id.*

58. *Id.*

59. *Id.* at 74-75.

60. *Id.* at 73-74.

61. *Id.* at 160.

be the lead agency, however, if it simply requested a particular case.<sup>62</sup>

*A. Waters of the United States*

Gardner turns next to the questions of definition that have plagued the field of wetland law. Under the Rivers and Harbors Act, the Corps had long ago established that the definition of “navigable waters” would mean those waters that could be traversed “in the traditional sense: navigable in fact (used in commerce), navigable in the future with reasonable improvements, navigable in the past, and subject to the ebb and flow of the tide.”<sup>63</sup> Like the Rivers and Harbors Act, the Clean Water Act also included the language “navigable waters,” and the Corps quickly interpreted this to mean that its jurisdiction under that Act extended only to navigable waters falling within its Rivers and Harbors Act definition.<sup>64</sup> This left wetlands that were adjacent to navigable waters, but un-navigable themselves, in a precarious situation. Opponents of the Corps’ interpretation quickly latched onto the fact that, unlike in the Rivers and Harbors Act, Congress defined “navigable waters” to mean “waters of the United States” in the Clean Water Act.<sup>65</sup> Thus, the Corps’ interpretation was challenged in *Natural Resources Defense Council v. Callaway*, and the U.S. District Court ruled that the Corps’ definition was incorrect.<sup>66</sup> Thereafter, Gardner states, the Corps defined “waters of the United States” to include “wetlands adjacent to traditional navigable waters and their tributaries, as well as all other isolated wetlands (having no hydrological connection to other waterbodies) that had some nexus to interstate commerce.”<sup>67</sup>

This newfound harmony, however, was short-lived as private property owners and developers soon challenged the reasonableness of the Corps’ interpretation. In *United States v. Riverside Bayview Homes*,<sup>68</sup> when a property owner challenged an injunction by the Corps from developing on marshland, the Supreme Court upheld the Corps’ decision to include “adjacent wetlands” in the definition of “waters of the

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62. *Id.*

63. *Id.* at 38.

64. *Id.*

65. *Id.*

66. *Id.*

67. *Id.*

68. 474 U.S. 121 (1985).

United States.”<sup>69</sup> However, the Corps fared worse in the face of a challenge to its inclusion of “isolated waters” in the definition of its wetland jurisdiction on the basis of the Migratory Bird Rule.<sup>70</sup> Here, a consortium of Chicago-area communities seeking to utilize the site of a blue heron rookery to deposit nonhazardous waste challenged the Corps’ Migratory Bird Rule, claiming that it was not a reasonable interpretation of the Clean Water Act.<sup>71</sup> The Supreme Court agreed and struck down the Corps’ interpretation on the basis that isolated waters, as defined by the Migratory Bird Rule, lacked “a significant nexus” to the navigable waters of the United States.<sup>72</sup> As a result, the Corps was forced to refocus its jurisdiction over isolated waters by basing it on the hydrologic connection of those waters to navigable waters.<sup>73</sup>

The Supreme Court considered the Corps’ definition of “waters of the United States” again in *Rapanos v. United States*, when challenges were made to the Corps’ jurisdiction over wetlands located near man-made drainage ditches that discharged in navigable waters.<sup>74</sup> The Court was unable to come to a majority decision as to which waters fell within the jurisdiction of the Corps under the Clean Water Act.<sup>75</sup> Four justices stated that a wetland must be “a relatively permanent body of water connected to traditional interstate navigable waters”<sup>76</sup> and having “a continuous surface connection . . . making it difficult to determine where the ‘water’ ends and the ‘wetland’ begins.”<sup>77</sup> Four other justices believed that the Corps’ interpretation was “a quintessential example of the Executive’s reasonable interpretation of a statutory provision.”<sup>78</sup> Finally, Justice Kennedy, who cast the deciding vote, believed that a showing of a “significant nexus” must be made for jurisdiction to rest with the

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69. GARDNER, *supra* note 1, at 43 (referencing *Riverview Bayview Homes*, 474 U.S. at 135).

70. *Id.* at 44 (referencing *Solid Waste Agency of N. Cook Cnty. v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001)). The Migratory Bird Rule stemmed from the announcement by the Corps that it would “regulate activities in isolated waters (including wetlands) that are or would be used as habitat by other migratory birds which cross state lines.” *Id.* The focus on “use” by migratory birds, rather than the nexus between the isolated water and navigable waters, would prove to be the Migratory Bird Rule’s downfall. *Id.* at 45.

71. *Id.* at 45.

72. *Solid Waste Agency of N. Cook Cnty.*, 531 U.S. at 167.

73. GARDNER, *supra* note 1, at 46.

74. 547 U.S. 715, 722 (2006).

75. *Id.*

76. *Id.* at 732.

77. *Id.* at 742.

78. *Id.* at 788 (Stevens, J., dissenting).

Corps.<sup>79</sup> As a result, the Corps was left in a precarious situation with no clear guidance as to its jurisdictional authority. To cover all of the bases, the Corps announced that its “significant nexus analysis would focus on whether the waters in question ‘significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters.’”<sup>80</sup>

Of course, the root cause of much of the debate surrounding wetland definitions stems from the fact that what constitutes a wetland can vary greatly depending upon the methodology used to define it.<sup>81</sup> For instance, Gardner points out that in 1987, for purposes of defining wetland boundaries, the Corps delineation manual focused its analysis on “hydrology, vegetation, and soils,” while the EPA placed a greater reliance on vegetation.<sup>82</sup> Even when a joint agency manual was released in 1989, regulatory interpretation of that manual resulted in large-scale reclassification of wetland areas, which in turn resulted in the implementation of a public notice-and-comment rulemaking requirement by the Bush Administration.<sup>83</sup> With so much debate even within the scientific community, it should come as little surprise that the Supreme Court has found this issue to be a difficult one as well.

Gardner suggests that the solution to the definitional strife created by the Clean Water Act is for Congress to resolve the ambiguity itself.<sup>84</sup> Another solution, espoused by Chief Justice Roberts in his *Rapanos* concurrence, would be for the Corps to utilize its rulemaking authority to establish an outer boundary to the “reach of [its] authority. . . . [rather than] adher[ing] to its essentially boundless view of the scope of its power.”<sup>85</sup> Both solutions, it seems, would resolve the problem. Gardner’s suggestion would be the purist’s solution. But, the likelihood of such a clarification coming from Congress is minimal because the ambiguities that exist within the Clean Water Act are political kryptonite.<sup>86</sup> As a result, the most timely solution may well be for the Corps and EPA to make some effort to limit their own authority through a comprehensive rulemaking process. What such an action would do toward protecting the environment is another question entirely. While

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79. *Id.* at 767.

80. GARDNER, *supra* note 1, at 53.

81. *Id.* at 36.

82. *Id.*

83. *Id.*

84. *Id.* at 54.

85. *Rapanos v. United States*, 547 U.S. 715, 758 (2006) (Roberts, C.J., concurring).

86. Gardner recognizes the political difficulties presented by the Congressional amendment process. GARDNER, *supra* note 1, at 56.

this solution would not prove painless, it presents a more likely resolution to the definitional question.

*B. Dredge and Fill*

While operating within the “waters of the United States” will bring one within the geographical jurisdiction of the Clean Water Act, it will not necessarily make one subject to regulation under the Act.<sup>87</sup> Among the activities prohibited by the Clean Water Act is the “point source discharge” of “dredged or fill material.”<sup>88</sup> Thus, removing vegetation, excavating, dredging, and draining wetlands is not itself illegal.<sup>89</sup> The illegality arises with the discharge of materials.<sup>90</sup> Here, too, definitions have proven problematic.<sup>91</sup> The Act defines “point source” as “any discernible, confined and discrete conveyance,”<sup>92</sup> and discharge has been defined as “an addition of a pollutant from a point source.”<sup>93</sup> Thus, when a North Carolina developer wanted to drain 700 acres of wetland to construct a housing development he simply dug ditches around the property and hauled the dredged material offsite to avoid the section 404 process.<sup>94</sup> The Corps observed these activities but determined that it lacked jurisdiction because the developer was not discharging the material on the wetland itself.<sup>95</sup> Once the wetland was drained, the developer had it reclassified and built his development.<sup>96</sup> After this incident, the Corps established a final rule that interpreted the addition of dredge and fill material to include “incidental fallback” materials (those materials that fell to the ground during removal), but this rule was soon overturned by the U.S. Court of Appeals for the D.C. Circuit in *National Mining Association v. U.S. Army Corps of Engineers* as an invalid interpretation of the Clean Water Act.<sup>97</sup>

The Supreme Court had a chance to weigh in on the definitional question in *Borden Ranch Partnership v. U.S. Army Corps of*

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87. *Id.* at 58.

88. *Id.* at 57.

89. *Id.*

90. *Id.*

91. *Id.*

92. 33 U.S.C. § 1362(14) (2006).

93. *Id.* § 1362(12).

94. GARDNER, *supra* note 1, at 61.

95. *Id.*

96. *Id.*

97. *Id.* at 62 (citing 145 F.3d 1399, 1410 (D.C. Cir. 1998)).

*Engineers*.<sup>98</sup> In this case, the question was whether relocating topsoil through the process of “deep ripping” constituted an addition of dredge or fill material within the meaning of the Act.<sup>99</sup> The decision was a 4-4 split, as Justice Kennedy had to recuse himself because he was a friend of the landowner.<sup>100</sup> Thus, Gardner says, whether “deep plowing results in an addition of pollutant remains an open question.”<sup>101</sup>

The above are just some of the definitional questions explored by Gardner in his book. There are, as one can imagine, numerous other examples worth exploring, and Gardner does each great service by providing a clear explanation of the factors that have driven the debates.

#### IV. RECOMMENDATIONS AND CONCLUSION

In his conclusion, Gardner makes several recommendations for improving the system:

- Congress should pass the Clean Water Restoration Act to remove doubts about federal jurisdiction over wetlands by deleting the reference to “navigable waters” in the Clean Water Act.
- The Corps should reorient its regulatory philosophy.
- The Corps needs to emphasize avoidance of wetland impacts and deny more permits.
- The EPA should maintain its veto authority of wetland impacts and not hesitate to unsheathe it.
- The Corps should eliminate NWP 21.
- The Corps should make permit decisions on a watershed basis, taking into account cumulative impacts.
- The Corps and EPA should identify minimization best practices.
- The Corps should implement the regulatory preference for compensation from mitigation banks; at the same time, the Corps should tighten up on early credit releases.
- Compensatory mitigation sites must be monitored by the agencies.
- The Corps and other agencies should focus on the long-term stewardship of compensatory mitigation sites.

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98. 261 F.3d 810 (9th Cir. 2001), *aff'd*, 537 U.S. 99 (2002).

99. *Id.* at 812.

100. GARDNER, *supra* note 1, at 65.

101. *Id.* at 65.

- The Corps should encourage and accept preservation of high quality wetlands as compensatory mitigation, including “preservation only” packages.
- The federal government should create and maintain incentives for wetland restoration, including the possibility of ecosystem credit stacking.
- Congress should discontinue perverse incentives that contribute to wetland destruction.
- The Corps and EPA should increase enforcement efforts and use technology to do so.
- The Corps should provide more transparency in the section 404 program.<sup>102</sup>

Gardner’s recommendations are sound. He envisions a process that involves participants at every level while recognizing the importance that agency discretion plays in the outcome.<sup>103</sup> While these recommendations would require considerable financial commitments by Congress, their implementation would almost certainly create a better process as a whole. That being said, one must assume that in this imperfect world, no such perfect system will ever exist. However, great strides could be made if only a few of these recommendations were implemented, and the fates of several of them are chained together. For example, if Congress were to clarify federal jurisdiction under the Clean Water Act by removing the term “navigable waters,” the Corps and EPA would be more able to provide transparency to the section 404 program and reorient their regulatory philosophy.

One serious hurdle to Gardner’s recommendations is the economic strain that stems from a society that is already struggling against a recession. Expansion of federal jurisdiction over wetlands would subject more development projects to the section 404 permitting process. This in turn slows down economic development in the interest of environmental protection. Such would also be the case if the Corps were to cut back on the number of permits it issues. The result is that these regulatory changes would likely garner little in the way of political support at present.

The obvious alternative to stronger regulation is to optimize the use of the mitigation banking system, as Gardner suggests. While the overall viability of mitigation banking is still in question, the process does at least result in the preservation and restoration of wetlands. It also promotes economic activity rather than restraining it. Gardner’s

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102. *Id.* at 191-96.

103. *Id.* at 197.

suggestion of credit stacking presents an intriguing option for promoting both the economic and environmental interests that are at stake here.

Credit stacking generally refers to establishing two or more different types of ecosystem credits on the same parcel of property. For example, one spatially overlapping area might produce wetland, endangered species, water quality, and/or carbon sequestration credits. Credit stacking would permit the owner of the credits to sell them in different markets and thus have a diversified revenue stream. One environmental benefit of stacking is that it may provide a financial incentive for some property owners to conserve their land when they might otherwise be reluctant to do so. The danger is that the property owner might be essentially selling the same environmental benefit multiple times.<sup>104</sup>

It is probably true that under a stacking program a lower aggregate number of acreage would be protected because a single acre could qualify for several programs. However, it is also probably true that more property owners would be enticed to protect their property through a stacking program because of the greater reward for doing so. Such a program would come at a minimal cost to the government and would expand the market for energy and environmental credits. As such, Gardner's stacking proposal presents an option that should be strongly considered by policy makers.

In conclusion, *Lawyers, Swamps, and Money* is both comprehensive and complete. Professor Gardner brings to bear his considerable experience in wetland law to create a book that is both concise and refreshing in its treatment of the issues at hand. Throughout the book, Gardner's humor adds a pleasant touch that keeps the reader turning the pages. In the end, the reader is left with a strong impression that wetland policy is in need of change; just how to implement that change in the face of economic and environmental pressures is the intellectual challenge. In short, this book is a must read for anyone interested in learning about or hoping to change wetland policy in the United States.

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104. *Id.* at 195.