



ENVIRONMENTAL  
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## **State Wetland Protection**

*Status, Trends, & Model Approaches*

*A 50-state study by the  
Environmental Law Institute*

*With support from the  
U.S. Environmental Protection Agency*

2008

# **Appendix: State Profiles**

# New Jersey

## I. Overview

Although an estimated 39 percent of the state's wetlands have been lost to agricultural, residential, and industrial development over the last two centuries, New Jersey retains a diversity of tidal and freshwater wetlands, as well as important wetland complexes such as the New Jersey Pinelands and the Hackensack Meadowlands District.<sup>1</sup> In 1994, New Jersey became the second state to assume authority to administer dredge and fill permits under §404 of the Clean Water Act (CWA).<sup>2</sup> The state's wetland permitting programs are administered by the New Jersey Department of Environmental Protection (NJDEP) and "play an important role in the state's overall environmental protection strategy."<sup>3</sup>

## II. Regulatory Programs

### *Wetland definitions and delineation*

In the state's water quality rules, New Jersey defines "waters of the state" as "the ocean and its estuaries, all springs, streams, wetlands, and bodies of surface or ground water, whether natural or artificial, within the boundaries of the State of New Jersey or subject to its jurisdiction."<sup>4</sup> The state regulates all freshwater wetlands under the Freshwater Wetlands Protection Act.<sup>5</sup> In addition, NJDEP is responsible for administering the §404 program in "delegable waters," which include:

all waters of the United States...within New Jersey, except waters which are presently used, or are susceptible to use in their natural condition or by reasonable improvement, as a means to transport interstate or foreign commerce, shoreward to their ordinary high water mark. This term includes all waters which are subject to the ebb and flow of the tide, shoreward to their mean high water mark, including wetlands that are partially or entirely located within 1000 feet of their ordinary high water mark or mean high tide.<sup>6,7</sup>

State laws provide definitions for regulated "freshwater wetlands"<sup>8</sup> and "coastal wetlands."<sup>9</sup>

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<sup>1</sup> U.S. Environmental Protection Agency, *Status and Trends*, at <http://www.epa.gov/OWOW/wetlands/vital/status.html> (last visited Sept. 10, 2007).

<sup>2</sup> Michigan became the first state to assume regulatory authority under §404 of the Clean Water Act in 1984. *See* 40 C.F.R. § 233.70.

<sup>3</sup> New Jersey Department of Environmental Protection, *Land Use Regulation Program*, at <http://www.state.nj.us/dep/landuse/> (last visited Sept. 10, 2007).

<sup>4</sup> N.J. ADMIN. CODE. § 7:9B-1.4.

<sup>5</sup> N.J. STAT. ANN. § 13:9B.

<sup>6</sup> N.J. ADMIN. CODE. § 7:7A-1.4.

<sup>7</sup> In "non-delegable waters," the U.S. Army Corps of Engineers retains jurisdiction under federal law, and both federal and state requirements apply. N.J. ADMIN. CODE. § 7:7A-2.1(c). Waters that are not delegable waters include, but are not limited to "the entire length of the Delaware River within the State of New Jersey;" "waters of the United States under the jurisdiction of the Hackensack Meadowlands Development Commission;" and "Greenwood Lake." N.J. ADMIN. CODE. § 7:7A-1.4.

<sup>8</sup> "Freshwater wetlands" include areas that are "inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation; provided, however, that the [NJDEP], in designating a wetland, shall use the 3-parameter approach (i.e. hydrology,

The New Jersey Pinelands, an area of over one million acres in the southeastern part of the state, is governed by additional legislation that outlines separate definitions for coastal and inland wetlands within the area's boundaries.<sup>10</sup>

With the exception of the New Jersey Pinelands, New Jersey relies on the 1989 *Federal Manual for Identifying and Delineating Jurisdictional Wetlands*<sup>11</sup> for wetlands delineation.<sup>12</sup> The New Jersey Pinelands utilizes the 1991 *New Jersey Pinelands Commission Manual for Identifying and Delineating Pineland Area Wetlands*.<sup>13</sup>

### ***Wetland-related laws and regulations***

New Jersey protects freshwater wetlands and their buffers under the Freshwater Wetlands Protection Act.<sup>14</sup> The state has also adopted a separate law for coastal wetlands, the Wetland Act of 1970.<sup>15</sup> The Pinelands Protection Act,<sup>16</sup> Hackensack Meadowlands Reclamation and Development Act,<sup>17</sup> and Highlands Water Protection and Planning Act<sup>18</sup> outline additional wetland-related provisions that apply only within designated areas of the state—the Pinelands,<sup>19</sup> Meadowlands,<sup>20</sup> and Highlands Region,<sup>21</sup> respectively.

*Freshwater Wetlands Protection Act.*<sup>22</sup> Under the Freshwater Wetlands Protection Act (FWPA), a permit from the NJDEP is required for certain “regulated activities”<sup>23</sup> in all freshwater

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soils and vegetation) enumerated in the April 1, 1987 interim-final draft ‘Wetland Identification and Delineation Manual’ developed by USEPA.” N.J. STAT. ANN. § 13:9B.

<sup>9</sup> A “coastal wetland” is defined as “any bank, marsh, swamp, meadow, flat or other low land subject to tidal action in the State of New Jersey along the Delaware bay and Delaware river, Raritan bay, Barnegat bay, Sandy Hook bay, Shrewsbury river including Navesink river, Shark river, and the costal inland waterways extending southerly from Manasquan Inlet to Cape May Harbor, or any inlet, estuary or tributary waterway or any thereof, including those areas now or formerly connected to tidal waters whose surface is at or below an elevation of 1 foot above local extreme high water, and upon which may grow or is capable of growing any of a list of enumerated plant species.” N.J. STAT. ANN. § 13:9A.

<sup>10</sup> See N.J. ADMIN. CODE. §§ 7:50-6.3 - 7:50-6.5.

<sup>11</sup> Federal Interagency Committee for Wetland Delineation (U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, U.S. Soil Conservation Service), *Federal Manual for Identifying and Delineating Jurisdictional Wetlands* (1989), *unofficial copy available at* <http://www.wetlands.com/pdf/89manv3b.pdf>.

<sup>12</sup> N.J. STAT. ANN. § 13:9B; N.J. ADMIN. CODE. § 7:7A-2.3(a).

<sup>13</sup> N.J. ADMIN. CODE. § 7:50-6.3.

<sup>14</sup> N.J. STAT. ANN. § 13:9B.

<sup>15</sup> *Id.* § 13:9A.

<sup>16</sup> *Id.* §§ 13:18A-1 to 13:18A-29.

<sup>17</sup> *Id.* § 12:17-1 *et seq.*

<sup>18</sup> *Id.* § 13:20-1 *et seq.*

<sup>19</sup> For more information on the New Jersey Pinelands area, see: New Jersey Pinelands Commission, *New Jersey Pinelands Commission*, at <http://www.state.nj.us/pinelands/index.shtml> (last visited Jan. 10, 2006).

<sup>20</sup> For more information on the New Jersey Meadowlands, see: New Jersey Meadowlands Commission, *New Jersey Meadowlands*, at <http://www.meadowlands.state.nj.us/> (last visited April 12, 2007).

<sup>21</sup> For more information on the Highlands Region and Preservation Area, see: New Jersey Department of Environmental Protection, *DEP Guidance for the Highlands Water Protection and Planning Act*, at <http://www.state.nj.us/dep/highlands/> (last updated Mar. 12, 2007).

<sup>22</sup> N.J. STAT. ANN. § 13:9B; N.J. ADMIN. CODE. § 7:7A.

<sup>23</sup> Regulated activities may include: “the removal, excavation, disturbance or dredging of soil, sand, gravel, or aggregate material of any kind. . . the drainage or disturbance of the water level or water table. . .the dumping,

wetlands and state open waters, as well as for “prohibited activities” in upland buffers adjacent to the wetlands.<sup>24</sup> In non-delegable waters, the U.S. Army Corps of Engineers (Corps) retains jurisdiction under CWA §404; thus, both federal and state requirements apply in these areas.<sup>25</sup>

FWPA permits are based on a classification system described in the state statute. Criteria distinguish wetlands of “exceptional resource value,” “intermediate resource value,” and “ordinary resource value.” While all classifications require a permit, higher classification levels may have more requirements.<sup>26</sup> The statute also requires a “transition area waiver” for regulated activities that occur in wetland buffers – 150 feet for wetlands of exceptional resource value and 50 feet for freshwater wetlands of immediate resource value.<sup>27</sup>

The state makes approximately 5,000 permit decisions per year (though it can vary from 4,000 to 7,000), including coastal permits (~2,000), flood hazards (~500), and wetlands (~1,000). For example, in 2004, 7,334 permit applications were received (1,311 for coastal permits, 754 for flood hazards, and 1,412 for freshwater wetlands, and the remainder for freshwater wetland jurisdictional determinations). Decisions made for the same period totaled 4,518 (1,420 coastal, 529 flood hazards, 1,028 freshwater wetlands, and the remainder for freshwater wetland jurisdictional determinations).<sup>28</sup> Permit decisions are made based on quantitative and qualitative parameters established in the rules.<sup>29</sup>

*Wetland Act of 1970.*<sup>30</sup> The Wetland Act of 1970 requires a permit for all “regulated activities,” as defined in the Act<sup>31</sup> and generally applies to the state’s coastal wetlands.<sup>32,33</sup> All wetlands protected under the Act are mapped, and those wetland areas that are not mapped fall under the jurisdiction of the FWPA.

*Pinelands Protection Act.*<sup>34</sup> The New Jersey Pinelands Protection Act outlines regulatory policies that specifically protect the “significant and unique natural, ecological, agricultural, archaeological, historical, scenic, cultural, and recreational resources of the Pinelands.” This includes some wetland-related provisions that apply in addition to other state and federal

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discharging or filling with any materials. . . the driving of pilings. . .the placing of obstructions. . . and the destruction of plant life which would alter the character of a freshwater wetland, including the cutting of trees.” N.J. STAT. ANN. § 13:9B.

<sup>24</sup> N.J. STAT. ANN. § 13:9B-1 *et seq.*

<sup>25</sup> N.J. ADMIN. CODE. § 7:7A-2.1(c).

<sup>26</sup> N.J. STAT. ANN. § 13:9B-7.

<sup>27</sup> N.J. STAT. ANN. § 13:9B-17(b).

<sup>28</sup> Personal communication with Susan Lockwood, N.J. Dept of Env'tl Prot. (Nov. 21, 2005).

<sup>29</sup> Personal communication with Robert Piel, N.J. Dept of Env'tl Prot. (Feb. 2, 2005).

<sup>30</sup> N.J. STAT. ANN. § 13:9A.

<sup>31</sup> A “regulated activity” under the Wetlands Act of 1970 includes but is not limited to “draining, dredging, excavation or removal of soil, mud, sand, gravel, aggregate of any kind or depositing or dumping therein any rubbish or similar material or discharging therein liquid wastes, either directly or otherwise, and the erection of structures, drivings of pilings, or placing of obstructions, whether or not changing the tidal ebb and flow.” Regulated activities do not include “continuance of commercial production of salt hay or other agricultural crops or activities [related to mosquito control].” N.J. STAT. ANN. § 13:9A-4(a).

<sup>32</sup> N.J. STAT. ANN. § 13:9A.

<sup>33</sup> *Id.*

<sup>34</sup> N.J. STAT. ANN. §§ 13:18A-1 -13:18A-29.

protections, such as land use planning requirements, development prohibitions, and specifications on impact types and requirements.<sup>35</sup>

*Hackensack Meadowlands Reclamation and Development Act.*<sup>36</sup> The Hackensack Meadowlands Reclamation and Development Act mandates “the preservation of the delicate balance of nature” and “the provision of special protection from air and water pollution” in the Meadowlands.<sup>37</sup> The Act created the Hackensack Meadowlands Development Commission, renamed the New Jersey Meadowlands Commission (NJMC) in 2001, and authorized the preparation and adoption of a master plan for the district. “[R]egulations emphasize smart growth principles, minimal fill of wetlands, and. . . sustainability.”<sup>38</sup>

*Highlands Water Protection and Planning Act.*<sup>39</sup> New Jersey passed the Highlands Water Protection and Planning Act in 2004 to protect water resources and open space in the state. The act regulates “Highlands Open Waters,”<sup>40</sup> including wetlands, requiring a 300-foot buffer adjacent to all Highlands Open Waters and strictly limiting development activities that may impact these waters.<sup>41</sup> The Act also created the Highlands Water Protection and Planning Council (“Highlands Council”).

### ***Organization of state agencies***

The lead wetland agency in the state is NJDEP. The New Jersey Pineland Commission and the New Jersey Meadowlands Commission conduct wetland regulatory and non-regulatory activities within their respective jurisdictions as well.

*New Jersey Department of Environmental Protection.* NJDEP’s Division of Land Use Regulation (DLUR) oversees the implementation of the FWPA and Wetlands Protection Act of 1970 for the state, as well as numerous other land use regulatory and non-regulatory activities. Other offices within the NJDEP conduct some wetland-related activities as well, such as the Division of Science Research and Technology (some monitoring and assessment research) and the Communications Office (some education and outreach activities); however, DLUR is the primary wetland office in the agency.<sup>42</sup> DLUR operates from a central office in Trenton, and enforcement activities are conducted both from Trenton and from a field office in Toms River in southern New Jersey.<sup>43</sup>

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<sup>35</sup> See N.J. ADMIN. CODE §§ 7:50-6.1- 7:50-6.15.

<sup>36</sup> N.J. STAT. ANN. § 12:17-1 *et seq.*

<sup>37</sup> The Meadowlands, approximately 19,730 acres that includes 8,400 acres of wetland complexes, is located in northern New Jersey and represents one of the largest contiguous blocks of open space in the highly developed landscape of the New York City metropolitan area. .

<sup>38</sup> New Jersey Meadowlands Commission, *New Jersey Meadowlands - Land Use and Planning*, at [http://www.meadowlands.state.nj.us/land\\_use/index.cfm](http://www.meadowlands.state.nj.us/land_use/index.cfm) (last visited Sept. 12, 2007).

<sup>39</sup> N.J. STAT. ANN. § 13:20-1 *et seq.*

<sup>40</sup> “Highlands Open Waters” include “all springs, streams including intermittent streams, wetlands, and bodies of surface water, whether natural or artificial, located wholly or partially within the boundaries of the Highlands Region, but shall not mean swimming pools.” New Jersey Department of Environmental Protection, *DEP Guidance for the Highlands Water Protection and Planning Act – Highlands Terms*, at [http://www.state.nj.us/dep/highlands/faq\\_info.htm](http://www.state.nj.us/dep/highlands/faq_info.htm) (last visited Sept. 12, 2007).

<sup>41</sup> New Jersey Department of Environmental Protection, *supra* note 21.

<sup>42</sup> Piel, *supra* note 29.

<sup>43</sup> Personal communication with Susan Lockwood, N.J. Dep’t Env’tl. Prot. (Feb. 16, 2005).

DLUR has about 80 permitting staff for three programs. About 75 percent of these staff work directly on wetlands. Approximately ten full-time-equivalents (FTEs) work on enforcement. Two FTEs in Division of Science Research and Technology work on wetland monitoring and assessment.<sup>44</sup> Because many wetland-related activities are folded into the agency's greater program structure, a wetland-specific budget is not available.<sup>45</sup> Funding is provided by state appropriations (permitting fees feed into the state's general fund).<sup>46</sup>

*Region-specific agencies.* Within the Pinelands,<sup>47</sup> the New Jersey Pinelands Commission (NJPC) implements the rules outlined in the Pinelands Protection Act. For activities conducted in the Pinelands' wetlands, NJPC will conduct a review and may apply a general permit. If an individual permit is required, NJDEP must provide a review. NJDEP and NJPC hold a Memorandum of Agreement that outlines the roles and responsibilities of each agency regarding Pinelands wetlands.<sup>48</sup> NJPC has about 30 FTEs that perform some wetland-related activity, including permitting (both technical assistance to permit applicants and permit review for NJDEP), wetland assessment and delineation, planning, and research. Because most wetland activities are folded into the agency's greater program structure, a wetland-specific budget is not available.<sup>49</sup> Funding is derived mostly from state and federal (Department of Interior) appropriations. NJDEP occasionally provides funding for specific tasks. NJPC has also recently instituted a fee program for permit review.<sup>50</sup>

The NJMC oversees and/or monitors several natural resource, smart growth, and sustainable development activities in the Meadowlands District, including various wetland-related activities. Jurisdiction for the §404 program remains at the federal level in the Meadowlands District; DLUR reviews §401 water quality certification (essentially, equivalent to the FWPA permit) and Coastal Zone Management consistency for activities being conducted under CWA §404.<sup>51</sup>

The Highlands Council is tasked with adopting a Regional Master Plan that includes goals to protect, restore, and enhance the quality and quantity of surface and ground waters in the Highlands region and to protect the natural, scenic and other resources of the region including forests, wetlands, vegetated stream corridors, steep slopes, and critical habitat for fauna and flora.<sup>52</sup>

### ***§401 certification***

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<sup>44</sup> Piel, *supra* note 29.

<sup>45</sup> The annual budget for all land use programs, including wetlands, is approximately \$10 million.

<sup>46</sup> Lockwood, *supra* note 43.

<sup>47</sup> See New Jersey Pinelands Commission, *supra* note 19.

<sup>48</sup> Lockwood, *supra* note 43.

<sup>49</sup> Funding for the agency as a whole was \$4.19 million in fiscal year 2004; other years are available in the NJPC annual reports. See New Jersey Pinelands Commission, *Annual Reports and Newsletters*, at <http://www.state.nj.us/pinelands/infor/annual/> (last visited Sept. 12, 2007).

<sup>50</sup> Personal communication with Staff, N.J. Pinelands Comm'n (Mar. 11, 2005).

<sup>51</sup> New Jersey Meadowlands Commission, *supra* note 38.

<sup>52</sup> Personal communication with Susan Lockwood, N.J. Dep't of Env'tl Prot. (June 7, 2007).

Because New Jersey is a delegated state under §404 of the CWA, §401 water quality certification is not the primary wetland regulatory mechanism. However, the FWPA does have a §401 “surrogate” written into the rules.

### ***General permits***

Because permit reviews are always conducted under state law (in both delegable and non-delegable waters), federal Nationwide Permits (NWP) are not applicable in New Jersey; instead, NJDEP issues statewide General Permits (GPs).<sup>53</sup> GPs, listed in the state regulations,<sup>54</sup> are generally equivalent to or more stringent than federal NWP.<sup>55</sup>

### ***Mitigation***

New Jersey’s extensive mitigation requirements are outlined in the FWPA and include provisions for type, amount, timing, location (in-kind is preferred), banking and in-lieu-fee requirements, and administrative terms.<sup>56</sup>

The FWPA also establishes the Mitigation Council, a state in-lieu-fee program (independent of the NJDEP) for impacts to freshwater wetlands and state open water impacts.<sup>57</sup> Under state rules, an approved applicant may make a land donation or monetary contribution in lieu of conducting compensatory mitigation.<sup>58</sup> The council also reviews and approves the establishment of freshwater wetland mitigation banks in the state.<sup>59</sup> The bank approval process is also outlined in the rules.<sup>60</sup>

In the Meadowlands District, the Meadowlands Interagency Mitigation Advisory Committee (MIMAC), a group composed of representatives from the NJMC, NJDEP, Corps (New York District), U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration (NOAA) – National Marine Fisheries Service, and U.S. Environmental Protection Agency (EPA), coordinates all mitigation, including banking activities. MIMAC was established by written agreement in 1997 and has been meeting on a monthly basis since 1998.<sup>61</sup>

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<sup>53</sup> The FWPA states that NJDEP “shall issue a general permit for an activity in a freshwater wetland which is not a surface water tributary system discharging into an inland lake or pond, or a river or stream, and which would not result in the loss or substantial modification of more than one acre of freshwater wetland, provided that this activity will not take place in a freshwater wetland of exceptional resource value.” N.J. STAT. ANN. § 13:9B-23(b).

<sup>54</sup> General permits are listed in the FWPA rules at N.J. ADMIN. CODE. § 7:7A-5 *et seq.*

<sup>55</sup> Lockwood, *supra* note 43.

<sup>56</sup> See N.J. ADMIN. CODE. § 7:7A-15 *et seq.*

<sup>57</sup> New Jersey Department of Environmental Protection – Division of Land Use Regulation, *Mitigation*, at <http://www.state.nj.us/dep/landuse/fww/mitigate/mcouncil.html> (last updated Dec. 28, 2006). The council, which meets in public bi-monthly meetings, comprises seven members, including the NJDEP Commissioner and six New Jersey citizens appointed by the Governor. The six citizens must serve a three-year term and must include: two members recommended by recognized building and development organizations, two members recommended by recognized environmental and conservation organizations, and two members from New Jersey institutions of higher learning. See *Id.*

<sup>58</sup> In-lieu fee applicants must have demonstrated that all other on- and off-site mitigation options, including the purchase of bank credits within the service area, are not possible. N.J. ADMIN. CODE. § 7:7A-15.

<sup>59</sup> New Jersey Department of Environmental Protection, *supra* note 57.

<sup>60</sup> N.J. ADMIN. CODE. § 7:7A-15.

<sup>61</sup> Personal communication with Ross Feltes, N. J. Meadowlands Comm’n (Oct. 20, 2005).

### ***Compliance and enforcement***

Both the FWPA and the Wetlands Act of 1970 (coastal wetlands) outline penalties for violations that are enforceable by the NJDEP. Enforcement options under the FWPA include administrative orders as well as civil and criminal actions.<sup>62</sup> Coastal wetlands violations are punishable by fine and the cost of restoration.<sup>63</sup> Since 2001, the number of enforcement cases has increased notably. Typical outcomes involve bringing the violator into compliance by issuing a permit or ordering restoration.<sup>64</sup>

NJPC does not handle enforcement and compliance matters. If activities are exempt under the Pinelands Act, violations are forwarded to the NJDEP for enforcement under the Freshwater Wetlands Act; if not, the Pinelands Act does have some enforcement provisions but no fining capability. Typically, NJPC will work with local governments to address compliance problems, as they typically have some fining capability. In actual fact, fining is rare for violations to the Pinelands Act.<sup>65</sup>

### ***Tracking systems***

NJDEP operates a state permit tracking system called the New Jersey Environmental Management System (NJEMS). NJEMS is an “integrated transactional Oracle database” that includes databases from NJDEP’s main programs and includes a mapping component.<sup>66</sup> For wetland permits, acreage, various mitigation requirements, deed restrictions, watershed, and permit status are among the data fields.<sup>67</sup>

The state is also developing and testing a mitigation tracking system (separate from NJEMS) that will include data fields for permit requirements, impacts, acreage, wetland type, mitigation success, donations, geographic source of donation, impacted watershed, reports, monitoring, site visits, correspondence, and other information.<sup>68</sup> The system will contain a spatial component that integrates GPS and GIS data. Data is collected from permits, site inspections, data submission requirements, performance reviews,<sup>69</sup> corrective actions, and other sources.<sup>70</sup>

### ***Watershed coordination***

DLUR mitigation staff coordinate regularly with NJDEP’s watershed programs in order to maintain awareness of ongoing watershed activities and identify potential mitigation/restoration sites for permittees or grantees.<sup>71</sup>

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<sup>62</sup> N.J. ADMIN. CODE. § 7:7A-16.

<sup>63</sup> N.J. STAT. ANN. § 2A:58-1 *et seq.*

<sup>64</sup> Piel, *supra* note 29.

<sup>65</sup> New Jersey Pinelands Commission, *supra* note 50.

<sup>66</sup> See generally ESRI, *Environmental Data Delivery Using ArcIMS and WebIntelligence*, at <http://gis.esri.com/library/userconf/proc02/pap0155/p0155.htm> (last visited Sept. 12, 2007).

<sup>67</sup> Lockwood, *supra* note 43.

<sup>68</sup> *Id.*; Personal communication with Jill Aspinwall, N. J. Dep’t of Env’tl. Prot. (May 23, 2007); Personal communication with Jill Aspinwall, N. J. Dep’t of Env’tl. Prot. (Mar. 2, 2005).

<sup>69</sup> Mitigation construction and performance standards are evaluated according to FWPA rules, permit requirements, and the approved mitigation plan. Personal communication with JoDale Legg, N. J. Dep’t of Env’tl. Prot. (Nov. 2, 2005).

<sup>70</sup> Piel, *supra* note 29.

<sup>71</sup> Aspinwall, *supra* note 68.



### III. Water Quality Standards

The State of New Jersey does not have wetland-specific water quality standards, designated uses, or antidegradation policies;<sup>72</sup> FWPA permits constitute water quality certifications under New Jersey law. Activities exempt from the FWPA but still requiring water quality certification are permitted under the same rules.<sup>73</sup>

### IV. Monitoring and Assessment

In response to the EPA's 2003 guidance on state water quality monitoring and assessment, the State of New Jersey developed a ten-year, long-term water monitoring strategy for the state that includes goals and objectives for wetlands and streams, as well as rivers, lakes, groundwater, and other state waters. The strategy results from a comprehensive assessment of the state's ambient water monitoring programs, and it includes goals and objectives for wetland monitoring.<sup>74</sup>

#### *Monitoring and assessment for wetlands*

New Jersey actively monitors wetlands, but has no specific wetlands monitoring program. The state also is conducting research to identify appropriate quantitative methods for assessing wetland function and to identify what methods could be used to relate wetland and water quality for the purpose of watershed assessment.<sup>75</sup>

In 2006, NJDEP also published *Wetlands Biological Indicators for New Jersey, Case Study: Forested Riparian Wetland Areas in the Highlands of New Jersey*. The study is a collaboration of NJDEP and Rutgers University and represents a first step in developing wetland biological assessments. The research built upon existing wetland assessment studies and the biological assessments will assist with developing a rapid assessment protocol for wetland condition.<sup>76</sup>

Coordination, communication, and collaboration are important elements of the developing program. NJDEP participates on the Mid-Atlantic Wetlands Working Group and the National Wetlands Workgroup. The state has also formed a Wetlands Research Advisors Group to help provide insight into the program's development. The groups meet on a regular basis.

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<sup>72</sup> New Jersey's surface water quality standards may be found at N.J. ADMIN. CODE. § 7:9B *et seq.*

<sup>73</sup> N.J. ADMIN. CODE. § 7:7A-2.1(d).

<sup>74</sup> See NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION – WATER MONITORING AND STANDARDS PROGRAM, *WATER MONITORING & ASSESSMENT STRATEGY (2005-2014) (2004)*, available at <http://njedl.rutgers.edu/ftp/PDFs/4040.pdf>.

<sup>75</sup> See NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION, *NEW JERSEY INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT 2006 (2006)*, available at <http://www.state.nj.us/dep/wms/bwqsa/docs/2006IntegratedReport.pdf>.

<sup>76</sup> RUTGERS UNIVERSITY AND NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION, *WETLANDS BIOLOGICAL INDICATORS FOR NEW JERSEY, CASE STUDY: FORESTED RIPARIAN WETLAND AREAS IN THE HIGHLANDS OF NEW JERSEY, FINAL REPORT SR03-042 (2006)*, available at <http://www.state.nj.us/dep/dsr/wetlands2/report-2006.pdf>.

The water monitoring strategy also identifies the resources necessary to continue program development efforts, including additional research and staff to guide the program and continue methods development<sup>77</sup>

NJMC has been monitoring water quality in the District since 1993. It now conducts continuous monitoring at a few stations and performs seasonal monitoring at several. Surveys of the distribution and abundance of various plant and animal taxa, as well as concentrations of contaminants in sediments and animal tissues, also are carried out by the NJMC.<sup>78</sup>

### ***Monitoring and assessment for streams***

The ten-year strategy also describes New Jersey's well-developed rivers and streams monitoring programs. Monitoring objectives and design, quality assurance measures, core and supplemental water quality indicators, data management and analysis, reporting, program evaluation, and general support and infrastructure planning are outlined and discussed at length for the Ambient Stream Monitoring Network, Supplemental Ambient Surface Water Monitoring Network, Ambient Biological Monitoring Network, Ecoregion Reference Station Program, Fish Index of Biotic Integrity Network, and Lower Delaware Nonpoint Source Monitoring Project.<sup>79</sup>

### ***Citizen monitoring***

The NJDEP's Division of Watershed Management – Office of Education and Outreach coordinates the Watershed Watch Network, an umbrella group for all volunteer monitoring programs in the state. This program provides water quality monitoring protocols, and quality control and assurance for volunteers submitting data to the NJDEP. A “four-tiered” approach allows volunteers to pick their level of involvement based on the purpose of their monitoring program and the intended use of the data.<sup>80</sup> Although not specific to wetlands, the program applies to wetlands, as well as lakes, streams, and estuaries.<sup>81</sup>

## **V. Restoration and Partnerships**

NJDEP's Office of Natural Resource Restoration (ONRR) was established in the 1990s to restore damages caused by oil spills and discharges to natural resources, including wetlands and habitat, groundwater, species, and public uses. When damages occur, ONRR assesses the “injuries”<sup>82</sup> and coordinates restoration efforts with those responsible for the damage, other

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<sup>77</sup> *Id.* at 95.

<sup>78</sup> Personal communication with Ross Feltes, N. J. Meadowlands Comm'n (June 1, 2007)

<sup>79</sup> NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION – WATER MONITORING AND STANDARDS PROGRAM, *supra* note 74.

<sup>80</sup> See New Jersey Department of Environmental Protection – Division of Watershed Management, *Volunteer Monitoring*, at <http://www.state.nj.us/dep/wms/bfbm/vm/index.html> (last visited Sept. 12, 2007).

<sup>81</sup> See Danielle Donkersloot, New Jersey Department of Environmental Protection, *Watershed Watch Network*, available at

[http://www.state.nj.us/dep/watershedmgt/DOCS/volmon/Donkersloot,%20Danielle%20\(Watershed%20Watch\).pdf](http://www.state.nj.us/dep/watershedmgt/DOCS/volmon/Donkersloot,%20Danielle%20(Watershed%20Watch).pdf) (last visited Sept. 12, 2007).

<sup>82</sup> “Natural resource injuries” include “any adverse change or impact of a discharge into or on a natural resource or impairment of natural resource services, whether direct or indirect, long-term or short-term, and includes the partial or complete destruction or loss of the natural resource. Injuries can be ecological based, such as the contamination of a stream habitat and/or use based, such as the public's inability to use the same stream for fishing.” See New Jersey

NJDEP programs (e.g., the Site Remediation Program, Division of Fish and Wildlife, and Green Acres Program), and other groups, including environmental organizations, community groups, and others with expertise or knowledge on the issue. ONRR also provides technical and litigation support to the New Jersey Attorney General's Office in pursuing natural resource damage claims and restoration settlements.<sup>83</sup>

NJMC is partnering with the Corps on the restoration of degraded wetland sites in the Meadowlands District as part of the Hudson-Raritan Estuary project. The project includes the production of a Meadowlands Comprehensive Restoration Implementation Plan.<sup>84</sup> A draft of the plan has gone through a stakeholder review, and the NJMC currently is working on a final draft of the plan.<sup>85</sup> NJMC is also performing ecological enhancement at sites independent of the Hudson-Raritan Estuary project.<sup>86</sup>

## VI. Education and Outreach

NJDEP adopted a general education outreach plan in 1996, and, as of 2005, was in the process of updating the plan. NJDEP's Office of Communications oversees general education and outreach program development, provides public assistance, and provides assistance to divisions within the agency conducting education and outreach efforts. Water-related education/outreach efforts are conducted by the Division of Watershed Management (DWM).<sup>87,88</sup>

While the NJDEP DWM does not have a strategic education and outreach program in place specifically for wetlands, it does conduct water- and stream-related activities and programs, including the following:

- Project WET (Water Education for Teachers) – a teacher education program that includes workshops and mini-grants for teachers;
- Watershed Ambassadors Program – a community-oriented AmeriCorps environmental program designed to raise awareness about water issues in New Jersey;
- Watershed Education/Urban Fishing Program – a youth education program designed to teach students living in the Newark Bay Complex and other urban areas about the hazards of eating contaminated fish and help them to discover the beauty of the resource;
- Clean Water Rangers Program – a program for educators that provides information on watersheds and nonpoint source pollution, as well as teaching materials for elementary school age students; and

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Department of Environmental Protection - Office of Natural Resource Restoration, *Program Overview*, at <http://www.nj.gov/dep/nrr/about/overview.htm> (last visited Sept. 12, 2007).

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

<sup>84</sup> Feltes, *supra* note 61.

<sup>85</sup> Personal communication with Ross Feltes, New Jersey Meadowlands Commission (May 29, 2007).

<sup>86</sup> Feltes, *supra* note 78.

<sup>87</sup> In a related effort, the Communications Office is currently working with the state nonpoint source control program on a public education campaign for stormwater. The campaign will include a website for K-12 educators and a statewide mailing to teachers. The website will offer lessons on stormwater, nonpoint source issues, watershed issues, and the water cycle and will promote DWM's other water education offerings.

<sup>88</sup> Personal communication with Tanya Oznovich, N.J. Dep't Env'tl. Prot. (Feb. 23, 2005).

- Watershed Watch Network – a citizen water quality monitoring program (also described in *Monitoring and Assessment* section above).<sup>89</sup>

DWM also provides multiple handouts and publications for youth, communities, the regulated public, environmental professionals, educators, and others.<sup>90</sup> NJDEP DLUR staff coordinate with Rutgers University to hold continuing education training sessions for the regulated public, consultants, and others. Finally, NJDEP’s Bureau of Coastal and Land Use Compliance and Enforcement staff hold presentations in conjunction with local governments or planning bodies for towns with higher-than-average enforcement problems.<sup>91</sup>

NJPC also conducts some education and outreach activities related to wetlands and streams. Most notably, the agency hosts the annual World Water Monitoring Day in cooperation with the U.S. Geological Survey. Volunteer monitoring groups, water quality agencies, students, and the general public are invited to test water quality indicators in their area.<sup>92</sup>

Finally, NJMC works with Ramapo College on a cooperative education and outreach program at the Meadowlands Environment Center.<sup>93</sup> The program offers organized events, as well as tools, outreach materials, and assistance to educators, youth, and the general public.<sup>94</sup> The NJMC Wetlands Group provides outreach service through narrated water tours of the District, birding events, and assistance to community or educational groups on natural resource-related activities.

## VII. Coordination with State and Federal Agencies

New Jersey state agencies regularly coordinate both with each other and with federal agencies. NJPC and NJDEP meet one to two times a year on regulatory and non-regulatory issues.<sup>95</sup> NJDEP holds a Memorandum of Understanding (MOU) with the New Jersey Department of Transportation (NJDOT) on permitting issues, and there is a unit within the NJDEP wetlands program to specifically address transportation projects. NJDEP also holds an MOU with the EPA and the Corps, as required by the assumption of CWA §404. NJDEP works closely with both agencies—EPA regarding the oversight rule, annual reporting, etc. and the Corps regarding jurisdictional issues, etc. EPA also holds periodic workgroup meetings that are attended by numerous agencies, including the NJDOT, NJDEP, Corps, National Marine Fisheries Service, NJMC, and others. Finally, NJDEP also works closely with the U.S. Fish and Wildlife Service on their role in the DLUR program and permit review for impacts to threatened and endangered species.<sup>96</sup>

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<sup>89</sup> See New Jersey Department of Environmental Protection – Division of Watershed Management, *Outreach & Education*, at [http://www.state.nj.us/dep/watershedmgt/outreach\\_education.htm](http://www.state.nj.us/dep/watershedmgt/outreach_education.htm) (last visited Sept. 12, 2007).

<sup>90</sup> Personal communication with Kyra Hoffman, N.J. Dep’t of Env’tl. Prot. (March, 7, 2005).

<sup>91</sup> Lockwood, *supra* note 43.

<sup>92</sup> New Jersey Pinelands Commission, *supra* note 50; America’s Clean Water Foundation, *World Water Monitoring Day*, at <http://www.worldwatermonitoringday.org/> (last visited Sept. 12, 2007).

<sup>93</sup> New Jersey Meadowlands Commission, *Meadowlands Environment Center*, at <http://www.meadowlands.state.nj.us/ec/index.cfm> (last visited Sept. 12, 2007).

<sup>94</sup> Feltes, *supra* note 78.

<sup>95</sup> New Jersey Pinelands Commission, *supra* note 50.

<sup>96</sup> Lockwood, *supra* note 43; Piel, *supra* note 29.

NOAA and the Port Authority of New York and New Jersey have provided funds to assist the NJMC in acquiring property for preservation or enhancement. EPA has funded research and enhancement by the NJMC. Finally, the NJMC financed development of natural resources management planning by the NJDEP.<sup>97</sup>

### **VIII. Acronyms and Abbreviations**

CWA – Clean Water Act  
Corps – U.S. Army Corps of Engineers  
DLUR – Division of Land Use Regulation  
DWM – Division of Watershed Management  
EPA – U.S. Environmental Protection Agency  
FTE – Full-Time Equivalent  
FWPA – Freshwater Wetlands Protection Act  
MOU – Memorandum of Understanding  
NJDEP – New Jersey Department of Environmental Protection  
NJDOT – New Jersey Department of Transportation  
NJMC – New Jersey Meadowlands Commission  
NJPC – New Jersey Pinelands Commission  
NOAA – National Oceanic and Atmospheric Administration  
NWP – Nationwide Permit  
ONRR – Office of Natural Resource Restoration

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<sup>97</sup> Feltes, *supra* note 78.