

# Ocean Protection in New Jersey



## A BLUEPRINT FOR STATE-LEVEL ACTION

### EXECUTIVE SUMMARY

#### **COASTAL OCEAN COALITION**

Conservation Law Foundation

Environmental Defense

Marine Conservation Biology Institute

Natural Resources Defense Council

#### **in partnership with**

Bayshore Regional Watershed Council

New Jersey Audubon Society

New Jersey Chapter, Sierra Club

New Jersey Environmental Lobby

New Jersey Public Interest Research Group

The Ocean Conservancy

Public Employees for Environmental Responsibility

Surfrider Foundation

*Cover photo by Stephen Voss*

*Our mission*

The Coastal Ocean Coalition is a network of environmental organizations working to conserve, protect and restore some of the nation's most vital marine environments: state waters. COC provides policy makers and community groups with the tools they need to help coastal states take the bold steps necessary to protect their ocean resources. COC is a project of the Conservation Law Foundation, Environmental Defense, the Marine Conservation Biology Institute and the Natural Resources Defense Council.

Coastal Ocean Coalition  
P.O. Box 73  
Atlantic Highlands, NJ 07716  
732-291-2163

©2005 Coastal Ocean Coalition

The complete report is available online at [www.OceanBluePrintNJ.org](http://www.OceanBluePrintNJ.org) and [www.CoastalOceanCoalition.org](http://www.CoastalOceanCoalition.org).

*Printed on paper that is 100% recycled (100% post-consumer), totally chlorine free.*

# Ocean Protection in New Jersey

## A BLUEPRINT FOR STATE-LEVEL ACTION

### EXECUTIVE SUMMARY

#### **COASTAL OCEAN COALITION**

Conservation Law Foundation  
Environmental Defense  
Marine Conservation Biology Institute  
Natural Resources Defense Council

#### **in partnership with**

Bayshore Regional Watershed Council  
New Jersey Audubon Society  
New Jersey Chapter, Sierra Club  
New Jersey Environmental Lobby  
New Jersey Public Interest Research Group  
The Ocean Conservancy  
Public Employees for Environmental Responsibility  
Surfrider Foundation

#### **Authors**

Sarah Clark Stuart, Amy Schick Kenney

#### **Editor**

Benson Chiles

## Acknowledgments

---

The authors would like to thank the following persons who provided constructive comment and suggestions on many drafts of this report. We are indebted to their feedback and thoughtful insights:

Priscilla Brooks, William Chandler, Alison Chase, Sarah Chasis, Benson Chiles, David Festa, Kathleen Goldstein, Linda Jantzen, Justin Kenney, Ted Korth, Heather Leslie, Bonnie McKay, Kelly McNicholas, Dena Mottola, Doug O'Malley, Michael Pisauro, Jr., Joseph

Reynolds, Eric Stiles, Jeff Tittel, John Weber, and Bill Wolfe.

Any errors are the responsibility of the authors, not the endorsing organizations.

Benson Chiles, director of the Coastal Ocean Coalition, played a pivotal role in the creation of this report. He brought the partner organizations together, and he guided the process of content development. Undoubtedly, without him, this report would not have happened.

## Executive summary

---



ISTOCKPHOTO/DANIEL NYDICK

The quality of life and the strength of the economy in New Jersey are challenged by persistent threats to the health and viability of one of its most cherished and fragile assets: its ocean resources. Despite regulatory efforts to date, New Jersey residents still face beach closings, seafood health advisories, and prohibitions on shellfishing in some areas because of pollution. In addition, pressures on fisheries due to overfishing and ecosystem destruction have jeopardized the future vitality of these resources.

New Jersey now has an opportunity to seize a leadership role in strengthening protections for its ocean resources, rebuilding valuable fish populations, and cleaning its coastal waters. Two national blue-ribbon panels, the Pew Oceans Commission (POC)<sup>1</sup> and the United States Commission on Ocean Policy (USCOP),<sup>2</sup> recently reviewed the state of our country's declining ocean resources and made recommendations to policy

makers about improving or overhauling existing ocean laws and management. While a majority of the commissions' recommendations are directed to the federal government, many can be undertaken directly at the state level.

State governance of coastal and ocean waters extends three miles from the shore. These environments function as critical habitat for many marine species and also represent the environment that humans use—and abuse—most. Indeed, both commissions stressed the importance of state policies and actions in abating the threats and restoring coastal and ocean fish populations, habitats and waters. Several states, including California and Massachusetts, have already taken steps toward implementing recommendations from these reports.

In April 2005, Governor Richard Codey released *New Jersey's Coast 2005*<sup>3</sup> (hereafter, the Plan), which outlines immediate actions his administration

proposes to take to protect the state's valuable coastal resources. This is an important and welcome first step. However, the Plan does not adequately reflect the urgency of the problems outlined in the USCOP and POC reports, and it fails to acknowledge many of the important policy recommendations that are applicable to state waters. For example, the Plan:

- lacks specificity about what regulatory actions the administration will take to clean up beaches and waterways for shellfish harvesting;
- offers little to enhance the protection of the state's fisheries; and
- lacks any new measures to curb coastal development.

Additionally, it does not reflect the main conclusion of both commission reports—that states need to embrace ecosystem protection as a primary policy goal.

The current condition of New Jersey's ocean ecosystems and the services they provide to the state's residents demand stronger protection and restoration. Bolder policy actions than those found in the Plan need to be taken (by both the administration and the legislature in Trenton) to effectively protect the "natural capital of the shore's economy."<sup>4</sup>

The next governor of New Jersey has a unique opportunity to make this state one of the country's leaders in state laws and policies that protect ocean resources to meet that demand.

*Ocean Protection in New Jersey: A Blueprint for State-Level Action* outlines the value and benefits of New Jersey's ocean resources. It then identifies the recommendations made by the two national ocean commissions that New Jersey should implement to ensure clean coastal waters and

beaches, healthy seafood, abundant fisheries, and effectively managed coastal and ocean zones.

We call upon New Jersey's governor and legislature to act immediately to:

#### **Protect coastal and bay waters:**

- Develop water quality criteria and sewage treatment plant permit limits for nutrients to ensure safe swimming, shellfish and fish harvesting;
- Create a long-term funding plan with increased technical and financial assistance to clean up contaminated stormwater; and
- Require enforceable management measures to reduce nonpoint source pollution.

#### **Restore fisheries:**

- Adopt an ecosystem-based approach to fisheries management;
- Broaden representation on fishery advisory bodies; and
- Require harvest limits based on ecosystem-level considerations that do not exceed scientific recommendations.

#### **Curb coastal sprawl:**

- Amend (and strengthen enforcement of) state laws to require improved land use planning and decision-making; and
- Reduce the individual and cumulative impacts of development on water supply and water quality, including the effects of stormwater runoff on ocean and bay resources.

#### **Strengthen ocean management:**

- Adopt as state policy the need to protect, maintain, and restore healthy coastal and ocean ecosystems; and

- Develop an ocean management policy that requires agency coordination, and incorporates ocean zoning, environmental review, and the principle of ecosystem-based management.

Several issues that are pertinent to New Jersey, but which were not directly discussed in the commissions' reports, also demand attention by the next administration and legislature:

#### **Public access**

- Ensure public access to the state's beaches by enforcement of the Public Trust Doctrine.

#### **Privatization of federal facilities**

- Protect the public's interests when federal facilities such as Sandy Hook are proposed for privatization.

#### **Beach replenishment**

- Ensure that public tax dollars are not used for private benefit in beach replenishment projects.

#### **Global warming**

- Reduce New Jersey's contribution of carbon dioxide emissions to global warming.

#### **Sea life mortality caused by power plants**

- Require all nuclear and coal power plants with a once-through cooling system to retrofit plants with a closed-cycle cooling system.

The public and elected officials should use this report as a blueprint for how to improve the state's ocean management and protection policies to meet the challenges of the 21st century.

## CHAPTER 1

# Introduction



DON RIEPE

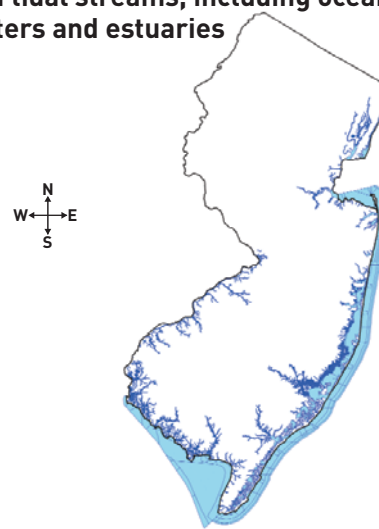
White sandy beaches and rolling waves of the Atlantic offer a spellbinding welcome to visitors of the famed Jersey shore. Each summer, millions of tourists head to New Jersey's beaches and coastal waters to feel the sand between their toes, cast a hook in the water, build sandcastles, or watch the sun rise above the horizon.

Although its nickname is the "Garden State," New Jersey has a decidedly seaworthy reputation. New Jersey boasts 454 square miles of open ocean waters, and more than 800 square miles of tidal estuarine rivers, shallow back bays and larger bays (including Delaware Bay).<sup>5</sup> Its coastline is 127 miles long, while the Raritan and Delaware Bays have 87 miles of coast. (See Figures 1 and 2.) New Jersey's waterways and wetlands are home to 1.5 million shorebirds and more than 50 different species of finfish and shellfish.<sup>6</sup>

The state's coastal resources are critical to its economy, and remain a vital part of its heritage. Recreational and com-

mercial fishing revenues generate about \$2 billion per year.<sup>7</sup> Tourism derived from the Jersey shore adds approximately \$16 billion annually to the state's

FIGURE 1  
**New Jersey's coastal waters and tidal streams, including ocean waters and estuaries**



Source: New Jersey Department of Environmental Protection. Water Monitoring and Standards Element.

economy.<sup>8</sup> The enjoyment and value of all these activities depend on clean, healthy marine ecosystems. These places today are jeopardized by misplaced beach and ocean management policies, and by pollution from towns, businesses and agriculture. High population density and development in coastal areas also place pressure on the oceans.

Consider the following:

- 40 percent of the highly-prized fish species pursued by commercial and recreation fishermen experience excessive fishing pressure.<sup>9</sup>
- The U.S. Environmental Protection Agency (EPA) rates 35 percent of the coastal and ocean sites tested in New Jersey for water quality “poor,” based on an index of various indicators. It rated 50 percent “fair” and only 15 percent “good.”<sup>10</sup>

- 28 percent of the state’s growth in urban land between 1995 and 2001 occurred in coastal counties—Monmouth, Ocean, Atlantic and Cape May.<sup>11</sup>
- 168 beach closings (ocean and bay) occurred in 2004, due to unsafe swimming conditions (caused by high bacterial counts or floatables) or taken for precautionary reasons.<sup>12</sup>
- 97 percent of New Jersey’s tidal rivers and 24 percent of its bays are restricted for shellfish harvesting because of bacterial pollution.<sup>13</sup>
- Nearly five million pounds of trash was picked up off New Jersey beaches in 2004.<sup>14</sup>
- Due to dangerous levels of contaminants, including mercury, polychlorinated biphenyls (PCBs), and dioxins, several fish species (including striped bass, bluefish, eel and lobster) caught in New Jersey waters are considered unsafe for consumption by children and women of childbearing age. Limits have been recommended for several other fish species as well.<sup>15</sup>

FIGURE 2  
New Jersey geography



Source: New Jersey Department of Environmental Protection. New Jersey 2004 Integrated Water Quality Monitoring and Assessment Report [www.state.nj.us/dep/wmm/sgwqt/wat/integratedlist/integratedlist2004.html](http://www.state.nj.us/dep/wmm/sgwqt/wat/integratedlist/integratedlist2004.html).

New Jersey’s citizens and policy makers face the challenge of protecting, restoring and rebuilding our fisheries, beaches, coastal habitats and marine waters to ensure healthy, abundant oceans for ourselves and future generations.

### A sea change in ocean management

Over the past two years, two prominent blue-ribbon panels—the Pew Oceans Commission (POC) and the U.S. Commission on Ocean Policy (USCOP)—conducted a national review of the state of our oceans, the first such review in over 30 years. Though working independently, the commissions’ reports both found that the oceans are

in trouble. Both made similar, sweeping recommendations at the national, state and local levels. Their recommendations represent an opportunity for New Jersey to seize a leadership role among states in protecting ocean resources, by rebuilding its fish populations and cleaning its coastal waters.

These landmark studies recommended dramatic changes in the way we:

- govern the nation's oceans,
- sustain marine fisheries,
- clean coastal waters,
- control coastal sprawl; and
- protect marine ecosystems.

Many of the recommendations were directed toward the U.S. Congress and federal agencies. However, many require action at the state level. In fact, both commissions stressed the importance of state policies and actions in abating threats and restoring fish populations, habitats and waters. They also urged states to take legislative and regulatory steps to protect marine resources within their three-mile jurisdiction.

### **Charting a new course**

*New Jersey's Coast 2005* (or the Plan), first announced by New Jersey Governor Richard Codey in April 2005, offers measures aimed at improving ocean conservation. The Plan recognizes that New Jersey's coast is a natural treasure. It found the "natural capital" of the ocean and coast to be critical to the region's economy, and that these assets are under significant threat.

Among the Plan's components are pledges to:

- more strongly protect coastal waters from ocean discharges, to improve water quality and safeguard habitat;
- activate the New Jersey Clean Marina Program;

- provide money for water quality projects;
- strengthen coastal zone restrictions regarding offshore oil and gas development, as well as pursue stronger controls for on-shore development;
- preserve the shore's landscape and character; and
- restore Wreck Pond, among other sites.

*New Jersey Coast 2005* is a good and welcome first step for the state, and we commend the governor for his initiative. However, the Plan fails to advance many of the necessary actions to protect New Jersey's valuable ocean resources.

We call on the governor, state agencies and the legislature to take bolder actions to further protect New Jersey's valuable coastal and ocean resources by implementing many of the recommendations of the U.S. Commission on Ocean Policy and the Pew Oceans Commission. Such actions are vital to reverse the decline in the state's valuable ocean resources and make them vibrant once again.

### **A blueprint for state-level action**

The report *Ocean Protection in New Jersey*, created by an alliance of 11 scientific and public policy organizations details the threats facing New Jersey's ocean environment; identifies the gaps between the Plan and the reports of the two national oceans commissions; and provides recommendations on what actions to take to benefit New Jersey's ocean resources.

Residents and visitors want clean beaches and bays, healthy seafood, abundant fisheries, effective management of the coastal zone, and effective ocean management, including adequate governance and funding. This report offers recommendations on how New Jersey could better meet those expectations.

## About the authors

---

**Amy Schick Kenney** is an independent consultant for ocean and fishery policy, working with Environmental Defense on an ecosystem-based approach to fishery management, the Coastal Ocean Coalition on progressive ocean policy in New Jersey, and the Marine Aquaculture Task Force on national standards for aquaculture. Kenney recently served as the director for marine conservation policy at the Pew Oceans Commission and a fishery management coordinator at the Atlantic States Marine Fisheries Commission. Kenney received a B.S. in Biology and Environmental Science & Policy from Duke University and continued her studies at Duke for a Master's in coastal environmental management.

**Sarah Clark Stuart** is an ocean conservation policy expert with over 15 years experience on marine fisheries, marine protected areas and water quality issues. Most recently, she worked for the Coastal Ocean Coalition, a national coalition dedicated to promoting proactive state-level policies that protect ocean resources. She spent three years working with the Conservation Law Foundation on a project to identify and map important areas of the Gulf of Maine for consideration as marine protected areas. Prior to that Stuart spent seven years each with the Pew Charitable Trusts' Environment Program and Environmental Defense working on ocean and coastal issues. Stuart is a graduate of both Yale University's School of Forestry and Environmental Studies and Pomona College.

# About the Coastal Ocean Coalition

---

## **Coastal Ocean Coalition**

The Coastal Ocean Coalition is a network of environmental organizations working to conserve, protect and restore some of the nation's most vital marine environments: state waters. COC provides policy makers and community groups with the tools they need to help coastal states take the bold steps necessary to protect their ocean resources. COC is a project of the Conservation Law Foundation, Environmental Defense, the Marine Conservation Biology Institute and the Natural Resources Defense Council. P.O. Box 73, Atlantic Highlands, NJ 07716. 732-291-2163. [www.coastaloceancoalition.org](http://www.coastaloceancoalition.org).

## **Conservation Law Foundation**

The oldest regional environmental advocacy organization in the nation, with offices throughout New England, the Conservation Law Foundation advocates innovative strategies to conserve natural resources, protect public health and promote vital communities throughout the region. 62 Summer Street, Boston, MA 02110. 617-350-0990. [www.clf.org](http://www.clf.org).

## **Environmental Defense**

Environmental Defense is a leading national nonprofit organization using science, economics and the law to evaluate environmental problems and to create and advocate solutions that win lasting political, economic and social support because they are nonpartisan, cost-efficient and fair. Website: [www.environmentaldefense.org](http://www.environmentaldefense.org)

## **Marine Conservation Biology Institute**

MCBI is a nonprofit, tax-exempt scientific and conservation advocacy organization. From headquarters in Redmond WA and offices in Washington DC and Glen Ellen CA, MCBI works to protect and restore marine life on the West Coast, around the United States and beyond, by: encouraging research and training in marine conservation biology; bringing scientists together to examine crucial marine conservation issues; doing policy research to frame the marine conservation agenda; lecturing, producing books and other publications to educate scientists, the public and decision makers on key issues; building partnerships to solve problems affecting marine life and people. MCBI works to provide a strong scientific foundation in theory, data and insightful analysis that is necessary for effective marine stewardship. 600 Pennsylvania Avenue, SE, Suite 210, Washington DC 20003. 202-546-5346. [www.mcbi.org](http://www.mcbi.org).

## **Natural Resources Defense Council**

The Natural Resources Defense Council is a national, non-profit organization of scientists, lawyers and environmental specialists dedicated to protecting public health and the environment. Founded in 1970, NRDC has more than 1 million members and e-activists nationwide, served from offices in New York, Washington, Southern California and San Francisco. 40 West 20th Street, New York, NY 10011. 212-727-2700. [www.nrdc.org](http://www.nrdc.org).

## About the partner organizations

---

### **Bayshore Regional Watershed Association**

Since 2000, the Bayshore Regional Watershed Council (BRWC) has been working to improve the physical environment in the Raritan Bay-Sandy Hook Bay region of Middlesex and Monmouth counties through activism, education, and public water quality improvement projects. The BRWC is made up of volunteers, including citizens, scientists, environmental commissioners, and municipal officials. Its goal has been and continues to be the restoration, conservation, and sustainable use of Raritan and Sandy Hook bays, and their tributaries. P.O. Box 541, Navesink, NJ 07752. 732-872-2834.

### **New Jersey Audubon Society**

The New Jersey Audubon Society (NJAS) is a privately supported, not-for-profit, statewide membership organization. Founded in 1897, and one of the oldest independent Audubon societies, NJAS has no connection with the National Audubon Society. The New Jersey Audubon Society fosters environmental awareness and a conservation ethic among New Jersey's citizens; protects New Jersey's birds, mammals, other animals, and plants, especially endangered and threatened species; and promotes preservation of New Jersey's valuable natural habitats. 9 Hardscrabble Road, P.O. Box 126, Bernardsville, NJ 07924. 908-204-8998. [www.njaudubon.org](http://www.njaudubon.org).

### **New Jersey Chapter, Sierra Club**

The Sierra Club is the nation's oldest, largest and most influential member-supported environmental organization, which seeks to influence public policy in both Washington and the state capitals through public education and grass-roots political action. There are 23,000 members in New Jersey. 139 West Hanover Street, Trenton, NJ 08618. 609-656-7612. [www.newjersey.sierraclub.org](http://www.newjersey.sierraclub.org).

### **New Jersey Environmental Lobby**

The New Jersey Environmental Lobby has for three decades, been a voice in Trenton on statewide environmental issues. It is statewide and focused primarily on New Jersey issues. Its membership includes organizations of varying size and close to a thousand individuals. Member dues and contributions are our major source of income. 204 West State Street, Trenton, NJ 08608. 609-396-3774. [www.njenvironment.org](http://www.njenvironment.org).

### **New Jersey Public Interest Research Group**

When consumers are cheated, or our natural environment is threatened, or the voices of ordinary citizens are drowned out by special interest lobbyists, NJPIRG speaks up and takes action. NJPIRG uncovers threats to public health and well-being and fights to end them, using the time-tested tools of investigative research, media exposés, grassroots organizing, advocacy and litigation. NJPIRG's mission is to deliver persistent, result-oriented public interest activism that protects our environment, encourages a fair, sustainable economy, and fosters responsive, democratic government. NJPIRG has 26,000 members in New Jersey. 11 North Willow Street, Trenton, NJ 08608. 609-394-8155. [www.njpirg.org](http://www.njpirg.org).

### **The Ocean Conservancy**

The Ocean Conservancy, as the oldest and largest organization exclusively dedicated to marine conservation, strives to be the world's foremost advocate for the oceans through the use of science-based research, public education and advocacy. The Ocean Conservancy informs, inspires, and empowers people to speak and act on behalf of the oceans. TOC envisions a world of wild, healthy oceans, where diverse ecosystems of abundant marine wildlife, habitats and clean ocean waters are restored and conserved for generations to come. 2029 K Street, NW, Washington, DC 20006. 202-429-5609. [www.oceanconservancy.org](http://www.oceanconservancy.org).

### **Public Employees for Environmental Responsibility**

PEER is a national non-profit alliance of local, state and federal scientists, law enforcement officers, land managers and other professionals dedicated to upholding environmental laws and values. P.O. Box 1, Ringoes, NJ 08551. 609-397-8213. [www.peer.org](http://www.peer.org)

### **Surfrider Foundation**

The Surfrider Foundation is a non-profit grassroots organization dedicated to the protection and preservation of our world's oceans, waves and beaches. Founded in 1984 by a handful of visionary surfers, the Surfrider Foundation now maintains over 40,000 members and 60 chapters across the United States and Puerto Rico, with international affiliates in Australia, Europe, Japan and Brazil. P.O. Box 6010, San Clemente, CA 92674. 949-492-8170. [www.surfrider.org](http://www.surfrider.org).

## Notes

---

- <sup>1</sup> Pew Oceans Commission, *America's Living Oceans: Charting A Course for Sea Change*, A Report to the Nation. Arlington, Va., May 2003. [www.pewtrusts.org/pdf/env\\_pew\\_oceans\\_final\\_report.pdf](http://www.pewtrusts.org/pdf/env_pew_oceans_final_report.pdf).
- <sup>2</sup> U.S. Commission on Ocean Policy, *An Ocean Blueprint for the 21st Century: Final Report*. Washington, D.C., 2004. [www.oceancommission.gov](http://www.oceancommission.gov)
- <sup>3</sup> *New Jersey's Coast 2005: A Plan to Strengthen Protection of Our Valuable Coastal Resources*. [www.nj.gov/dep/cmp/njcoast\\_2005.pdf](http://www.nj.gov/dep/cmp/njcoast_2005.pdf)
- <sup>4</sup> Ibid.
- <sup>5</sup> New Jersey's 2004 Integrated Water Quality Monitoring and Assessment Report, Section 3.3b, p.III-177. [www.state.nj.us/dep/wmm/sgwqt/wat/integratedlist/integratedlist2004.html](http://www.state.nj.us/dep/wmm/sgwqt/wat/integratedlist/integratedlist2004.html)
- <sup>6</sup> New Jersey Department of Environmental Protection, Bureau of Engineering. [www.state.nj.us/dep/shoreprotection/](http://www.state.nj.us/dep/shoreprotection/)
- <sup>7</sup> New Jersey Department of Environmental Protection, Division of Fish & Wildlife, Bureau of Marine Fisheries. [www.nj.gov/dep/fgw/marhome.htm](http://www.nj.gov/dep/fgw/marhome.htm)
- <sup>8</sup> New Jersey Department of Environmental Protection, Office of Coastal Planning. The New Jersey Coastal Management Program: Ocean Resource Management in New Jersey. March 2002. [www.nj.gov/dep/cmp/fact3.pdf](http://www.nj.gov/dep/cmp/fact3.pdf)
- <sup>9</sup> National Marine Fisheries Service. 2004. Annual Report to Congress on the Status of U.S. Fisheries—2003. Silver Spring, MD, and the 2004 FMP reviews for each species from the Atlantic States Marine Fisheries Commission.
- <sup>10</sup> "Poor" is defined as two or more indicators registering in poor condition. "Fair" is defined as one indicator rates poor or two or more indicators rate fair. "Good" is defined as four indicators being good, only one indicator is fair and no indicators are poor. See EPA's 2004 *National Coastal Condition Report (NCRR II)*. EPA, 2005. [www.epa.gov/owow/oceans/nccr/2005/](http://www.epa.gov/owow/oceans/nccr/2005/).
- <sup>11</sup> Lathrop, Richard G., *Measuring Land Use Change in New Jersey: Land Use Update to Year 2000. A Report on Recent Development Patterns 1995 to 2000*. New Brunswick, NJ: Walton Center for Remote Sensing and Spatial Analysis, Cook College, Rutgers University, 2004.
- <sup>12</sup> NJDEP Division of Watershed Management, Southern Planning Bureau, Cooperative Coastal Monitoring Program: Summary Report for 2002, 2003 and 2004. [www.njbeaches.org/docs/CCMPupdate.pdf](http://www.njbeaches.org/docs/CCMPupdate.pdf)
- <sup>13</sup> New Jersey Department of Environmental Protection. New Jersey's 2004 Integrated Water Quality Monitoring and Assessment Report, p. III-184.
- <sup>14</sup> NJDEP Division of Watershed Management, Southern Planning Bureau, Cooperative Coastal Monitoring Program: Summary Report for 2002, 2003 and 2004. [www.njbeaches.org/docs/CCMPupdate.pdf](http://www.njbeaches.org/docs/CCMPupdate.pdf)
- <sup>15</sup> New Jersey Department of Environmental Protection and New Jersey Department of Health and Senior Services, *A Guide to Health Advisories for Eating Fish and Crabs Caught in New Jersey Waters*. 2001. [www.state.nj.us/dep/dsr/fishadvisory05.pdf](http://www.state.nj.us/dep/dsr/fishadvisory05.pdf)



e  
ENVIRONMENTAL DEFENSE  
finding the ways that work



NJPIRG Law & Policy Center

