

Sustainable Development Law & Policy

Volume 10

Issue 3 Spring 2010: Sustainable Pathways Toward
Biodiversity Preservation

Article 8

Using The Clean Water Act To Protect Our Ocean's Biodiversity

Kate Halloran

Follow this and additional works at: <http://digitalcommons.wcl.american.edu/sdlp>

 Part of the [Environmental Law Commons](#), and the [Health Law and Policy Commons](#)

Recommended Citation

Halloran, Kate. "Using The Clean Water Act To Protect Our Ocean's Biodiversity." *Sustainable Development Law & Policy*, Spring 2010, 23, 49.

This Feature is brought to you for free and open access by the Washington College of Law Journals & Law Reviews at Digital Commons @ American University Washington College of Law. It has been accepted for inclusion in *Sustainable Development Law & Policy* by an authorized administrator of Digital Commons @ American University Washington College of Law. For more information, please contact fbrown@wcl.american.edu.

USING THE CLEAN WATER ACT TO PROTECT OUR OCEANS' BIODIVERSITY

by Kate Halloran*

National legislation addressing the effects of climate change on our ecosystem has failed to materialize,¹ but environmental advocates have sought other avenues to jumpstart the process. The Center for Biological Diversity, for example, has advanced the Clean Water Act as a vehicle to address the deleterious impact of ocean acidification on marine organisms. Ocean acidification, which some scientists argue has been caused by anthropogenic climate change, alters the chemistry of ocean water and threatens marine biodiversity.² As oceans absorb carbon dioxide, pH levels decrease.³ The decreased pH levels inhibit the ability of many marine organisms, such as coral and plankton, to form protective shells integral to their survival.⁴ Loss of these organisms would echo throughout the marine ecosystem.⁵ The integrity of the ocean ecosystem is significant not only from an environmental standpoint, but also from an economic perspective.⁶ If marine biodiversity suffers irreversible damage from ocean acidification, the effects would ripple throughout the commercial realm, impacting the fishing and tourism industries.⁷

In 2007, the Center for Biological Diversity filed a petition with the United States Environmental Protection Agency ("EPA") requesting an update to existing water quality criteria under section 304(a) of the Clean Water Act ("CWA").⁸ The Center for Biological Diversity argued that the pH water quality criteria required revision in light of new scientific data on the impacts of ocean acidification.⁹ EPA agreed to evaluate these concerns and published a notice in the Federal Register requesting scientific data on the issue.¹⁰ Despite this agreement, EPA approved a list of impaired waters in Washington that ignored ocean acidification's impacts on the state's coastal waters.¹¹ The Center for Biological Diversity responded with a lawsuit against EPA.¹² Now, as part of a legal settlement, EPA has issued a notice in the Federal Register soliciting comments on how to address ocean acidification through listing of impaired waters under section 303(d) of the CWA.¹³

The efforts of the Center for Biological Diversity are an important step forward, but the question remains how effective the CWA would be in protecting marine biodiversity from ocean acidification. Section 403(a)(2)(B) of the CWA requires that water quality criteria address "the factors necessary for the protection and propagation of shellfish, fish, and wildlife..."¹⁴ Once section 304(a) water quality criteria are determined, those criteria must be enforced. Section 303(d) is primarily a mechanism for implementing water quality criteria: first, a state compiles a list of waters within its jurisdiction that fail to meet the criteria; and second, the state establishes limits for discharges of pollutants affecting each impaired water body through Total


Maximum Daily Loads ("TMDLs").¹⁵ TMDLs generally are effective for managing point sources, where discharge of a particular pollutant is easily traceable and quantifiable. TMDLs for non-point sources present an obstacle for ensuring compliance and enforcement,¹⁶ an especially important consideration when limiting carbon dioxide emissions in ocean waters.

One challenge is determining if and how much non-point sources of carbon dioxide emissions are impacting a coastal area. If that impact can be quantified, there is still the difficulty of attributing those emissions in a way that would promote successful compliance with TMDLs. Currently, TMDLs for non-point sources "are implemented through a wide variety of State, local, and Federal programs, which are primarily voluntary or incentive-based."¹⁷

Moreover, the geography of the ocean calls for an integrated system of managing ocean acidification. Coastal waters are shared among different states that may have varying water quality criteria, impaired waters lists, and TMDLs. A state only has jurisdiction over its territorial waters, but the reality of managing a vast ecosystem requires cooperation among coastal states to prompt meaningful change.

Another potential issue is regulating carbon dioxide emissions from point sources. Discharges from point sources would require a permit through the National Pollution Discharge Elimination System ("NPDES").¹⁸ Regulating carbon dioxide discharges into oceans may necessitate developing new NPDES permits that incorporate adjusted water quality criteria for ocean acidification to set effluent limitations for discharges,¹⁹ which could be a lengthy and complex process.

A final obstacle is the CWA's capacity to regulate airborne carbon dioxide emissions. Airborne carbon dioxide emissions contribute to the problem, but are not a conventional source of water pollution.²⁰ While it may be possible to regulate airborne emissions under the CWA, the efficacy of doing so is questionable.²¹

There is no doubt that ocean acidification is a time-sensitive issue endangering the health of our oceans and marine life.²² The prospect of using the CWA to counteract ocean acidification has focused attention on this often overlooked problem, but is not without its drawbacks. The challenges of implementing these changes serve as a reminder that ocean acidification must be attacked from more than one angle in order to maximize the chance of success in protecting marine biodiversity. 

Endnotes: Using the Clean Water Act to Protect Our Oceans' Biodiversity *continued on page 49*

* Kate Halloran is a J.D. candidate, May 2011, at American University Washington College of Law.

¹ See Michael B. Gerrard, *Introductory Comments: The Current State of Climate Change Law*, SUSTAINABLE DEV. L. POL'Y, Winter 2010, at 2.

² See Petition, Center for Biological Diversity, Petition for Revised pH Water Quality Criteria under Section 304 of the Clean Water Act, 33 U.S.C. § 1314, to Address Ocean Acidification (Dec. 18, 2007), 1, available at <http://www.biologicaldiversity.org/programs/oceans/pdfs/section-304-petition-12-18-07.pdf> [hereinafter Petition].

³ See Clean Water Act Section 303(d); Notice of Call for Public Comment on 303(d) Program and Ocean Acidification, 75 Fed. Reg. 13538 (Mar. 22, 2010), [hereinafter Call for Public Comment].

⁴ See Petition, *supra* note 2 at 6.

⁵ See *id.*

⁶ See Sarah R. Cooley & Scott C. Doney, *Anticipating ocean acidification's economic consequences for commercial fisheries*, Environmental Research Letters (2009), 2-3, available at <http://iopscience.iop.org/1748-9326/4/2/024007/>.

⁷ See *id.* at 2-5 (explaining that the loss of revenue from depleted fish stocks would jeopardize the jobs of fishermen, those who buy their catch to sell, and the travel and recreation industries that rely on marine biodiversity to attract tourists).

⁸ See Petition, *supra* note 2 at 1.

⁹ See *id.* at 2.

¹⁰ See Press Release, Center for Biological Diversity, EPA Agrees to Review Ocean Acidification Impacts Under Clean Water Act: Agency Will Analyze Effects of CO₂ Emissions on Water Quality (Jan. 27, 2009), available at http://www.biologicaldiversity.org/news/press_releases/2009/ocean-acidification-01-27-2009.html; Ocean Acidification and Marine pH Water Quality Criteria, 74 Fed. Reg. 17484 (Apr. 15, 2009).

¹¹ See Press Release, Center for Biological Diversity, Lawsuit Filed Against Environmental Protection Agency for Failure to Combat Ocean Acidification (May 14, 2009), available at http://www.biologicaldiversity.org/news/press_releases/2009/ocean-acidification-05-14-2009.html.

¹² See *Ctr. for Biological Diversity v. E.P.A.*, No: 2:09cv00670 (W.D. Wash. filed May 14, 2009); see generally Andy Hosaido, *Environmental Litigation Standing After Massachusetts v. EPA*: Center for Biological Diversity v. EPA, SUSTAINABLE DEV. L. POL'Y, Fall 2009, at 30 (discussing the potential impact of Clean Water Act based litigation to combat the effects of climate change).

¹³ See Press Release, Center for Biological Diversity, EPA Solicits Input on Ocean Acidification and Carbon Dioxide Limits Under Water Pollution Law (Mar. 22, 2010), available at http://www.biologicaldiversity.org/news/press_releases/2010/ocean-acidification-03-22-2010.html; Call for Public Comment, *supra* note 2.

¹⁴ 33 U.S.C. § 1314(a)(2)(B) (2009).

¹⁵ See Call for Public Comment, *supra* note 3.

¹⁶ See U.S. Commission on Ocean Policy, *An Ocean Blueprint for the 21st Century* (2004).

¹⁷ See *id.*

¹⁸ See Call for Public Comment, *supra* note 3.

¹⁹ See Robin Kundis Craig, *The Clean Water Act on the Cutting Edge: Climate Change and Water Quality Regulation*, 24 NATURAL RES. & ENV'T, 14, 17 (2009) (explaining that most NPDES permits rely on technology-based effluent limitations, which may not be sufficient for water quality damaged by ocean acidification).

²⁰ See *id.* at 18.

²¹ See *id.* (discussing the ability of the CWA to regulate airborne emissions as it has for airborne mercury deposits, but recognizing it would be financially and logistically difficult and that the Clean Air Act would be a more effective tool for airborne carbon dioxide emissions).

²² See Petition, *supra* note 2 at 6 (noting that fifty percent of anthropogenic carbon dioxide emissions since the industrial revolution have already been absorbed by the oceans).