

No. 13-4079

IN THE UNITED STATES COURT OF APPEALS
FOR THE THIRD CIRCUIT

AMERICAN FARM BUREAU FEDERATION, et al.,
Plaintiff-Appellants,

v.

ENVIRONMENTAL PROTECTION AGENCY,
Defendant-Appellee.

On Appeal from the United States District Court
For the Middle District of Pennsylvania (No. 11-cv-67-SHR)

**BRIEF OF AMICI CURIAE NATIONAL PARKS CONSERVATION
ASSOCIATION, ALLIANCE FOR THE GREAT LAKES,
ENVIRONMENTAL LAW & POLICY CENTER, GULF RESTORATION
NETWORK, ONE WORLD ADVENTURE CO., COOK INLETKEEPER,
OZARK SOCIETY, APALACHICOLA RIVERKEEPER, MATANZAS
RIVERKEEPER, OCEAN REEF CONSERVATION ASSOCIATION,
CHATTAHOOCHEE RIVERKEEPER, HOOSIER ENVIRONMENTAL
COUNCIL, SAVE THE DUNES, KANSAS RIVERKEEPER FOR FRIENDS
OF THE KAW, KENTUCKY WATERWAYS ALLIANCE, KENTUCKY
RESOURCES COUNCIL, LOWER MISSISSIPPI RIVERKEEPER, GRAND
TRAVERSE BAYKEEPER, MISSOURI COALITION FOR THE
ENVIRONMENT, UPPER MISSOURI WATERKEEPER, NEBRASKA
WILDLIFE FEDERATION, CONSERVATION COALITION OF
OKLAHOMA, GRAND RIVERKEEPER, CHARLESTON
WATERKEEPER, AUDUBON TEXAS, UTAH RIVERS COUNCIL, WEST
VIRGINIA RIVERS COALITION, AND WYOMING OUTDOOR
COUNCIL IN SUPPORT OF DEFENDANT-APPELLEE**

Justin M. Gundlach
Hope M. Babcock
Brian Wolfman (*Counsel of Record*)
Institute for Public Representation
Georgetown University Law Center
600 New Jersey Ave. NW, Suite 312
Washington, D.C. 20001
(202) 662-9535

Dated: April 24, 2014

Counsel for Amici Curiae

RULE 26.1 CORPORATE DISCLOSURE STATEMENT

The undersigned attorney for *amici* certifies that no corporation among *amici* has ever issued stock, and that none has a parent company whose ownership interest is 10% or greater.

RULE 29(a) STATEMENT

All parties have consented to *amici*'s filing of this brief. Plaintiff-Appellants American Farm Bureau Federation *et al.* do not oppose the filing of this brief on condition that *amici* note Appellants might seek leave for an expanded word limit in their reply brief to respond to the briefs filed by intervenors and *amici* in support of Appellee.

RULE 29(c)(5) STATEMENT

No party's counsel authored this brief in whole or in part, nor did any party or party's counsel contribute money to fund this brief's preparation or submission.

TABLE OF CONTENTS

RULE 26.1 CORPORATE DISCLOSURE STATEMENT.....	i
RULE 29(a) & (c)(5) STATEMENTS	i
TABLE OF AUTHORITIES	iii
IDENTITY AND INTEREST OF <i>AMICI CURIAE</i>	1
ARGUMENT	3
I. Introduction	3
II. Efforts to control nonpoint source pollution across the country are struggling and coming up short.	7
A. State-led efforts to implement nonpoint source pollution controls often fail to coordinate stakeholders and to establish enforceable commitments. ...	9
B. When states disagree about how to improve interstate water quality, water quality tends not to improve.	14
C. Solutions to the problems of nonpoint source pollution control will flow from coordination and enforceable commitments.....	19
III. The Chesapeake Bay TMDL addresses persistent nonpoint source pollution and embodies cooperative federalism called for by the Clean Water Act.	21
A. Increasing nonpoint source pollution in the Chesapeake watershed has offset reductions in pollution from point sources.....	22
B. The Chesapeake TMDL coordinates pollution reduction efforts among the Bay States and codifies the particular commitments of each, making each accountable to the others and to EPA.	24
IV. The States’ Brief asks the Court to ignore Clean Water Act provisions that govern nonpoint source pollution and give EPA oversight over state performance.	25
A. The Clean Water Act requires states and EPA to limit pollution from both nonpoint and point sources.....	26
B. The Clean Water Act provides for a form of cooperative federalism that entails EPA oversight of state decisions.....	28
V. Conclusion.....	29
CERTIFICATE OF COMPLIANCE.....	31
CERTIFICATE OF SERVICE	32

TABLE OF AUTHORITIES

CASES

Arkansas v. Oklahoma,
 503 U.S. 91 (1992)..... 17, 29

Florida Wildlife Federation v. Jackson,
 853 F. Supp. 2d. 1138 (N.D. Fla. 2012) 13, 30

Fowler v. EPA,
 Civil Action No. 09–005, 2009 WL 8634683 (D.D.C. May 5, 2010)..... 22, 25

In re MDL-1824 Tri-State Water Rights Litigation,
 644 F.3d 1160 (11th Cir. 2011)18

Kentucky Waterways Alliance v. Johnson,
 540 F.3d 466 (6th Cir. 2008) 13, 14

Kingman Park Civic Ass’n v. EPA,
 84 F. Supp. 2d 1 (D.D.C. 1999)28

Nw. Env’tl. Advocates v. E.P.A.,
 855 F. Supp. 2d 1199 (D. Or. 2012)28

Pronsolino v. Nastri,
 291 F.3d 1123 (9th Cir. 2002)28

Scott v. City of Hammond,
 741 F.2d 992 (7th Cir. 1984)29

Sierra Club v. E.P.A.,
 162 F. Supp. 2d 406 (D. Md. 2001).....28

Thomas v. Jackson,
 581 F.3d 658 (8th Cir. 2009)28

West Virginia Highlands Conservancy, Inc. v. Huffman,
 588 F. Supp. 2d 678 (N.D.W.V. 2009).....13

STATUTES

33 U.S.C. § 125126

33 U.S.C. § 13137, 27

33 U.S.C. § 1329 7, 26, 29

LEGISLATIVE HISTORY

H.R. Rep. No. 92-911 (1972).....3

S. Rep. No. 50, 99th Cong., 1st Sess. (1985).....4

ADMINISTRATIVE MATERIALS

79 Fed. Reg. 18,494 (Apr. 2, 2014)12
 Chesapeake Bay TMDL,
<http://www.epa.gov/reg3wapd/tmdl/ChesapeakeBay/tmdlexec.html> 23, 24, 25

OTHER AUTHORITIES

A.R. Collins et al., *The Economic Value of Stream Restoration*, 41 Water Resources Res. 1 (2005)5
 Alyse Schrecongost & Evan Hansen, *Local Economic Benefits of Restoring Deckers Creek: A Preliminary Analysis, in Environmental Economics for Watershed Restoration* 141 (H.W. Thurston et al. eds. 2009)6
 Arkansas and Oklahoma Environmental Agencies, *Second Statement of Joint Principles and Actions* (2013),
<http://www.ok.gov/conservation/documents/IRSecond%20StmtofJoint%20Principles%20and%20Actions.pdf> 17
 Arun Khatri-Chhetri & A.R. Collins, *Estimation of a Surface Water Quality Valuation Index for the Appalachian Region*, Agricultural & Applied Economics Association’s 2011 AAEA & NAREA Joint Annual Meeting, Pittsburgh, Pennsylvania, July 24-26, 20115
 Chesapeake Bay Program (CBP), *Chesapeake Bay Submerged Aquatic Vegetation Water Quality and Habitat-Based Requirements and Restoration Targets: A Second Technical Synthesis* (2000),
<http://archive.chesapeakebay.net/pubs/sav/savreport.pdf>.....23
 CBP, *Chesapeake Bay Watershed Population*,
http://www.chesapeakebay.net/indicators/indicator/chesapeake_bay_watershed_population22
 CBP, *Data File – Reducing Nitrogen Pollution*,
http://www.chesapeakebay.net/indicators/indicator/reducing_nitrogen_pollution22
 CBP, *The 1983 Chesapeake Bay Agreement* (1983),
http://www.chesapeakebay.net/content/publications/cbp_12512.pdf24
 Chesapeake Bay Office, NOAA, *Oysters*,
<http://chesapeakebay.noaa.gov/fish-facts/oysters>.....23
 D.E. Smoot, *Arkansas Poultry Litter Application Declines*, Muskogee Phoenix, Aug. 2, 2013,

<http://www.muskogeephoenix.com/local/x1938689183/Arkansas-poultry-litter-application-declines>17

David Dearmont et al., *Costs of water treatment due to diminished water quality: A case study in Texas*, 34 *Water Resources Res.* 849 (1998)6

Delmarva Poultry Industry, Inc., *Delmarva Meat Chicken, Soybeans & Corn Production and Use* (2012),
http://www.dpichicken.org/faq_facts/docs/Delmarva%20meat%20chicken%20production%20and%20corn%20and%20soybean%20use.pdf22

Elk River Watershed Improvement Association, *Elk River Basin Nonpoint Source Watershed Management Plans* (2012),
http://www.erwia.org/Elk_River_sub-WMPs-FINAL.pdf.....15

U.S. Environmental Protection Agency (EPA) Science Advisory Board., *Reactive Nitrogen in the United States: An Analysis of Inputs, Flows, Consequences, and Management Options* 41 (2011)4

EPA, *2010 Waterbody Report for Laguna Madre*,
http://iaspub.epa.gov/tmdl_waters10/attains_waterbody.control?p_list_id=TX-2491_01&p_cycle=2010&p_state=TX&p_report_type=T11

EPA, *A National Evaluation of the Clean Water Act Section 319 Program* (2011), <http://www.epa.gov/owow/NPS/pdf/319evaluation.pdf>.....3, 8, 9

EPA, *Assessment Summary for Reporting Year 2010 Oklahoma, Lake O' The Cherokees Watershed*,
http://iaspub.epa.gov/waters10/attains_watershed.control?p_state=OK&p_huc=11070206&p_cycle=2010&p_report_type=.....15

EPA, *Development Growth Outpacing Progress in Watershed Efforts to Restore the Chesapeake Bay* (2007),
<http://www.epa.gov/oig/reports/2007/20070910-2007-P-00031.pdf>23

EPA, *National Coastal Condition Report IV* (2012),
http://water.epa.gov/type/oceb/assessmonitor/nccr/upload/0_NCCR_4_Report_508_bookmarks.pdf4, 5

EPA, *Nonpoint Source Pollution: The Nation's Largest Water Quality Problem*, <http://water.epa.gov/polwaste/nps/outreach/point1.cfm>.....3

EPA, *Nonpoint Source: Discharge Prohibitions*,
<http://water.epa.gov/polwaste/nps/nonpoin2.cfm>.....13

EPA, *Report to Congress: Nonpoint Source Pollution in the U.S.* (1984).....8

Florida Dep’t Env’tl. Protection, *Learn About Your Watershed: Apalachicola and Chipola River Watersheds*,
<http://www.protectingourwater.org/watersheds/map/apalachicola/>17

Government Accountability Office (GAO), 02-186, *Water Quality: Inconsistent State Approaches Complicate Nation’s Efforts to Identify Its Most Polluted Waters* (2002).....19

GAO, 03-515, *Great Lakes: An Overall Strategy and Indicators for Measuring Progress Are Needed to Better Achieve Restoration Goals* (2003).....19

GAO, 11-802, *Chesapeake Bay: Restoration Effort Needs Common Federal and State Goals and Assessment Approach* (2011).....19

Grand Lake O’ the Cherokees Natural Resource Damages: Restoration and Compensation Determination Plan: Draft (2013).....15

Grand Lake O’ the Cherokees Watershed Alliance Foundation, Inc., *Grand Lake Watershed Plan* (2008),
http://www.ok.gov/conservation/documents/Grand_Lake_%20WBP_DRAFT.pdf.....14

Grand River Dam Authority Board of Directors, Emergency Meeting Minutes, Tulsa, Okla. (July 1, 2011)5, 15

International Joint Commission, *A Balanced Diet for Lake Erie: Reducing Phosphorus Loadings and Harmful Algal Blooms* (2014),
<http://www.ijc.org/files/publications/2014%20IJC%20LEEP%20REPORT.pdf>18, 19

International Joint Commission, *Assessment of Progress Made Towards Restoring and Maintaining Great Lakes Water Quality Since 1987 - 16th Biennial Report on Great Lakes Water Quality* (2013),
<http://www.ijc.org/files/publications/16th%20BR%20long%2020130514.pdf>18

J.C. Austin et al., Brookings Inst., *Healthy Waters, Strong Economy: The Benefits of Restoring the Great Lakes Ecosystem* (2007)5

J.C. Klapproth & J.E. Johnson, *Understanding the Science Behind Riparian Forest Buffers: Effects on Water Quality* (2009).....23

J.T. Holleman, *In Arkansas Which Comes First, the Chicken or the Environment?*, 6 Tul. Env’tl. L.J. 21 (1992-1993)21

James S. Shortle et al., *Reforming Agricultural Nonpoint Pollution Policy in an Increasingly Budget-Constrained Environment*, 46 *Envtl. Sci. & Tech.* 1316 (2012).....8

James Triplett, *An Interstate Watershed Perspective*, presentation to Spring River Water Summit, Joplin Missouri, May 30, 2013, http://www.dnr.mo.gov/omwi/documents/7-AnInterstateWatershedPerspective_JimTriplett.pdf.....16

Jessica Dexter et al., Environmental Law & Policy Center, *Cultivating Clean Water: State-Based Regulation of Agricultural Runoff Pollution* (2010)13

Kansas Issues 2014 Fish Consumption Advisories, Joplin Globe (Jan. 4, 2014) <http://www.joplinglobe.com/local/x1186909180/Kansas-issues-2014-fish-consumption-advisories>14

LeRoy Hansen & Daniel Hellerstein, *The Value of the Reservoir Services Gained with Soil Conservation*, 83 *Land Econ.* 285 (2011).....5

Linda Russell, *Toxic Algae Cripples Oklahoma Lake*, KY3 News, July 14, 2011, http://articles.ky3.com/2011-07-14/toxic-algae_2977137214

M.A. Hamm, *The Massachusetts Experience with Nonpoint Sources: Regulators Beware!*, 10 *Natural Resources & Env't* 47 (1995-1996)21

Mammoth Cave National Park: Water Quality, National Park Service, <http://www.nps.gov/mac/naturescience/waterquality.htm>.....13

Marc O. Ribaudo & Jessica Gottlieb, *Point-Nonpoint Trading - Can It Work?*, 47 *J. Am. Water Resources Ass'n* 5 (2011).....9

Marc O. Ribaudo et al., Econ. Res. Serv., USDA, *Economics of Water Quality Protection From Nonpoint Sources: Theory and Practice* 1 (1999).....4

Marc Ribaudo & Margriet F. Caswell, USDA Econ. Res. Serv., *Environmental Regulation in Agriculture and Adoption of Environmental Technology, in Flexible Incentives for the Adoption of Environmental Technologies in Agriculture* (Frank Casey et al. eds. 1999)19

Memorandum from Kieser & Assocs., LLC to City of Kalamazoo (Feb. 28, 2011), http://kalamazooriver.net/wp-content/uploads/2013/05/KA-TMDL-Memo-for-2010-season_final.pdf.....10

Missouri Dep't of Conservation, *Water Quality*, <http://mdc.mo.gov/node/10996>.....16

National Park Service, *Water Resources: Parks with Clean Water Act 303(d)-Listed Impairments*, <http://www.nature.nps.gov/water/HIS/index.cfm>.....3

National Research Council, Clean Coastal Waters: Understanding and Reducing the Effects of Nutrient Pollution (2000)19

National Resources Conservation Service, USDA, *Assessment of the Effects of Conservation Practices on Cultivated Cropland in the Great Lakes Region* (2011).....20

Note, Brandon Cooper, *Total Maximum Daily Loads v. Nonpoint Source Pollution & the South Carolina Administrative Procedures Act*, 15 S.E. Envtl. L.J. 483 (2007)10

Okla. Dep’t Envtl. Quality, *Draft 2014 Bacterial and Turbidity Total Maximum Daily Loads for Okla. Streams in the Lower Neosho Watershed Area* (2014),
<http://www.deq.state.ok.us/wqdnew/tmdl/Lower%20Neosho%20River%20Area%20TMDL-Draft%20.pdf>16

Okla. Dep’t Envtl. Quality, *Notice of Availability of Draft Bacterial and Turbidity TMDLs for the Lower Neosho River Watershed* (2014),
http://www.deq.state.ok.us/wqdnew/tmdl/LowerNeosho2014BactTurb_TMDL_PublicNotice.pdf16

Oklahoma Secretary of the Environment, *Comprehensive Study of the Grand Lake Watershed: Final Report* (2005).....15

Oliver A. Houck, *The Clean Water Act TMDL Program: Law, Policy, and Implementation* (2002).....8

P. Hoagland & S. Scatasta, *The economic effects of harmful algal blooms, in Ecology of Harmful Algae* (E. Graneli & J.T. Turner eds. 2006).....4

Robert V. Percival et al., *Environmental Regulation: Law, Science, and Policy* (2006).....20

Robert W. Adler et al., *The Clean Water Act Twenty Years Later* (1993).....8

Roberto Mendoza, et al., *Aquatic Invasive Species in the Rio Bravo/Laguna Madre Ecological Region* (2011),
<http://www3.cec.org/islandora/en/item/10259-aquatic-invasive-species-in-rio-bravolaguna-madre-ecological-region-en.pdf>.....10

S.S. Rabotyagov et al., *The Economics of Dead Zones: Causes, Impacts, Policy Challenges, and a Model of the Gulf of Mexico Hypoxic Zone*, 8 Rev. Envtl. Econ. & Pol’y 58 (2014).....4

Seong-Hoon Cho et al., *Negative externalities on property values resulting from water impairment: The case of the Pigeon River Watershed*, 70 Ecol. Econ. 2390 (2011).....6

State-EPA Nutrient Innovations Task Group, *An Urgent Call to Action: Report of the State-EPA Nutrient Innovations Task Group 1* (2009).....8

Suzanne Bricker et al., NOAA, *Effects of Nutrient Enrichment in the Nation’s Estuaries: A Decade of Change* (2007)4

Texas Comm’n Env’tl. Quality, *2012 Texas Integrated Report: Assessment Results for Basin 24—Bays and Estuaries* (2012),
http://www.tceq.texas.gov/assets/public/waterquality/swqm/assess/12twqi/2012_basin24.pdf.....9

The Conservation Funds & U.S. Forest Service *The State of Chesapeake Forests*, ES-1 (2006),
http://www.chesapeakebay.net/content/publications/cbp_19673.pdf23

The Laguna Madres of Texas and Tamaulipas (F.W. Judd & J.W. Tunnel eds. 2001)10

U.S. Census of Agriculture, *Dairy Cattle and Milk Production* (2007),
http://www.agcensus.usda.gov/Publications/2007/Online_Highlights/Fact_Sheets/Production/cattle_and_milk_production.pdf.....22

U.S. Geological Survey, *Monitoring Nutrients in the Major Rivers Draining to Chesapeake Bay* (1999),
http://va.water.usgs.gov/online_pubs/WRIR/99-4238/wrir_99_4238_text.pdf22

U.S. Poultry and Egg Association, *Economic Data*,
http://uspoultry.org/economic_data/22

University of Maryland Center for Environmental Science, *Trends Graph: Chesapeake Bay Health, Water Quality Index 2012*,
http://ian.umces.edu/ecocheck/report-cards/chesapeake-bay/2009/indicators/water_quality_index/#_Trends_Graph (last visited Apr. 4, 2014)23

IDENTITY AND INTEREST OF *AMICI CURIAE*

Amici curiae are a diverse group of nonprofit organizations that rely on and seek to protect the health of watersheds, and, therefore, support efforts to control water pollution—particularly the phosphorus, nitrogen,¹ sediment, and chemical pollution that flows from agricultural fields, paved areas, and other nonpoint sources—and oppose policies that ignore preventable pollution. *Amici* include several national and regional nonprofit membership organizations: National Parks Conservation Association works to protect the National Park System; Alliance for the Great Lakes seeks to conserve and restore the world’s largest freshwater resource; Environmental Law & Policy Center leads various environmental advocacy and eco-business innovation efforts in the Midwest; Gulf Restoration Network coordinates the efforts of its 45 member organizations to restore and protect the natural resources of the Gulf of Mexico region. Other *amici* hail from individual states whose attorneys general oppose the Chesapeake Bay TMDL. They include eight nonprofit “Waterkeepers,” whose work combines firsthand

¹ Phosphorus and nitrogen are nutrients that promote algae growth, which in turn tends to reduce levels of light and dissolved oxygen to the detriment of aquatic ecosystems.

² National Park Service, *Water Resources: Parks with Clean Water Act 303(d)-Listed Impairments*, <http://www.nature.nps.gov/water/HIS/index.cfm> (scroll to

knowledge of local waters with water quality advocacy. **Alabama:** One World Adventure Co.; **Alaska:** Cook Inletkeeper; **Arkansas:** Ozark Society; **Florida:** Apalachicola Riverkeeper; Matanzas Riverkeeper; Ocean Reef Conservation Association; **Georgia:** Chattahoochee Riverkeeper; **Indiana:** Hoosier Environmental Council; Save the Dunes; **Kansas:** Kansas Riverkeeper for Friends of the Kaw; **Kentucky:** Kentucky Waterways Alliance; Kentucky Resources Council; **Louisiana:** Lower Mississippi Riverkeeper; **Michigan:** Grand Traverse Baykeeper; **Missouri:** Missouri Coalition for the Environment; **Montana:** Upper Missouri Waterkeeper; **Nebraska:** Nebraska Wildlife Federation; **Oklahoma:** Conservation Coalition of Oklahoma; Grand Riverkeeper; **South Carolina:** Charleston Waterkeeper; **Utah:** Utah Rivers Council; **Texas:** Audubon Texas; **West Virginia:** West Virginia Rivers Coalition; **Wyoming:** Wyoming Outdoor Council.

ARGUMENT

I. Introduction

Healthy streams, rivers, lakes, and bays are neither a luxury nor optional—nor, once degraded, are they easily restored to health. Water is essential for life: for productive and diverse fish and wildlife populations, for healthy people, for vibrant and growing communities, for outdoor enjoyment, and for economic development. Nonetheless, the nation’s waters are degraded by pollution, in particular from nonpoint sources like agricultural operations, residential and commercial developments, and construction sites. That pollution harms ecosystems and communities, and even affects America’s national parks, more than half of which contain waters that are “impaired” under the federal Clean Water Act.²

Nonpoint source pollution is the nation’s largest contributor to water quality degradation.³ Its adverse impacts are well documented. *See* H.R. Rep. No. 92-911, at 105 (1972) (“The Committee clearly recognizes that non-point sources of pollution are a major contributor to water quality problems.”); S. Rep. No. 50, 99th

² National Park Service, *Water Resources: Parks with Clean Water Act 303(d)-Listed Impairments*, <http://www.nature.nps.gov/water/HIS/index.cfm> (scroll to “View Park Related Reports,” select “Parks with 303(d) Impairments” from dropdown menu, click “submit”) (last visited Apr. 4, 2014).

³ EPA, *A National Evaluation of the Clean Water Act Section 319 Program*, 1, 4 (2011); *see also* EPA, *Nonpoint Source Pollution: The Nation’s Largest Water Quality Problem* (last visited Apr. 4, 2014).

Cong., 1st Sess. 7-8 (1985) (“nonpoint pollution looms as a larger and larger problem. The evidence of nonpoint pollution continues to grow.”). Nonpoint source pollution continues to reduce water quality,⁴ and also to prove costly to individuals and businesses.⁵ Commercial and recreational shellfishing suffers when sediment smothers beds and when toxic algae kill shellfish colonies.⁶ Fish kills, caused by hypoxia (*i.e.*, limited dissolved oxygen, often resulting from algae blooms), deprive fishermen and natural predators of a catch.⁷ Beach closings, prompted by elevated bacteria levels caused by contaminated runoff, often

⁴ See EPA, National Coastal Condition Report IV 51–52 (2012), (tabulating water quality trends and reporting downward trends in several regions and measures since Report III); Marc O. Ribaud et al., Econ. Res. Serv., USDA, *Economics of Water Quality Protection From Nonpoint Sources: Theory and Practice* 1 (1999) (“Pollution from nonpoint sources is the single largest remaining source of water quality impairments in the United States.”); see also EPA Science Advisory Board, *Reactive Nitrogen in the United States: An Analysis of Inputs, Flows, Consequences, and Management Options* 41 (2011) (discussing nonpoint source pollution’s adverse impacts).

⁵ See, e.g., P. Hoagland & S. Scatista, *The economic effects of harmful algal blooms*, in *Ecology of Harmful Algae* 391 (E. Graneli & J.T. Turner eds. 2006) (estimating U.S. blooms alone cost \$82 million annually, owing to impacts on fisheries, public health, tourism, and coastal management).

⁶ Suzanne Bricker et al., NOAA, *Effects of Nutrient Enrichment in the Nation’s Estuaries: A Decade of Change* 89–91, 118–19 (2007) (describing loss of oysters in Casco Bay, Maine and collapse of scallops in Waquoit Bay, Massachusetts).

⁷ S.S. Rabotyagov et al., *The Economics of Dead Zones: Causes, Impacts, Policy Challenges, and a Model of the Gulf of Mexico Hypoxic Zone*, 8 *Rev. Envtl. Econ. & Pol’y* 58 (2014) (summarizing studies of hypoxia’s impact on commercial fisheries); see also Bricker et al., *supra* note 6, at 92–93 (describing fish kill due hypoxia and chemical effect of algae in Corsica River, Maryland).

represent last-ditch efforts to protect beach-goers and surrounding communities from potentially severe harms⁸—including water so poisonous it can kill pets and livestock that drink it.⁹ Wherever the chance to fish or swim can draw visitors, pollution can drive those visitors away.¹⁰ The resulting ebbs in tourism affect hotels, restaurants, and other tourist-dependent businesses.¹¹ Property owners and infrastructure managers also bear the costs of nonpoint source pollution. Dredging reservoirs to remove sediment is costly;¹² filtering out pollutants increases the cost of purifying drinking water;¹³ and property values fall when a nearby stream or lake smells of algae or is no longer home to fish or other aquatic life.¹⁴

⁸ EPA, National Coastal Condition Report IV, at 67–68 (2012) (describing beach closures).

⁹ Grand River Dam Authority Board of Directors, Emergency Meeting Minutes, Tulsa, Okla. (July 1, 2011) (discussing week-long toxic algae blooms in Grand Lake that were deadly to animals that drank the water, and harmful in aerosol form to people and animals ashore).

¹⁰ See, e.g., Arun Khatri-Chhetri & A.R. Collins, *Estimation of a Surface Water Quality Valuation Index for the Appalachian Region*, Agricultural & Applied Economics Association's 2011 AAEA & NAREA Joint Annual Meeting, Pittsburgh, Pennsylvania, July 24-26, 2011 (describing diverse reasons for valuing water quality, including angling and recreation); A.R. Collins et al., *The Economic Value of Stream Restoration*, 41 *Water Resources Res.* 1 (2005).

¹¹ See Yue Cui et al., Nat'l Park Serv., *Economic Benefits to Local Communities from National Park Visitation*, 2011 (2013).

¹² LeRoy Hansen & Daniel Hellerstein, *The Value of the Reservoir Services Gained with Soil Conservation*, 83 *Land Econ.* 285 (2011).

¹³ See J.C. Austin et al., Brookings Inst., *Healthy Waters, Strong Economy: The Benefits of Restoring the Great Lakes Ecosystem* 8 (2007) (estimating \$50–125

The Chesapeake Bay watershed is threatened by harmful pollution originating both from point sources (*e.g.*, industrial dischargers and wastewater treatment plants) and, increasingly, from nonpoint sources. *See* Section III.A, *infra*. These threats spurred the District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia,¹⁵ and later Delaware and New York (collectively, the “Bay States”) to work to restore and protect the Chesapeake watershed. In 2007, all agreed that previous attempts had been inadequate, particularly regarding nonpoint source pollution control, and began working with the U.S. Environmental Protection Agency (EPA) on coordinated plans to restore the watershed and the Bay itself. The Chesapeake “Clean Water Blueprint,” developed under the Total Maximum Daily Load (TMDL) provisions of the Clean Water Act, was the result of this

million cost savings to water treatment operations from point- and nonpoint source pollution reductions); David Dearmont et al., *Costs of water treatment due to diminished water quality: A case study in Texas*, 34 *Water Resources Res.* 849 (1998).

¹⁴ Alyse Schrecongost & Evan Hansen, *Local Economic Benefits of Restoring Deckers Creek: A Preliminary Analysis*, in *Environmental Economics for Watershed Restoration* 141, 151–52, tbl.9.4 (H.W. Thurston et al. eds. 2009) (listing studies showing property values change with changes in nearby surface water quality); Seong-Hoon Cho et al., *Negative externalities on property values resulting from water impairment: The case of the Pigeon River Watershed*, 70 *Ecol. Econ.* 2390 (2011).

¹⁵ Several West Virginia state authorities have participated in development and implementation of the Chesapeake Bay TMDL. The Attorney General, who is elected independently of the Governor, nonetheless signed on to the 21 States’ Amicus Brief, purportedly on behalf of the State of West Virginia.

effort and provides a framework for incremental reductions of nutrient and sediment pollution from nonpoint sources in particular.¹⁶

State governments beyond the Chesapeake watershed also continue to struggle to control nonpoint source pollution as the Clean Water Act requires, sometimes because of difficulties coordinating efforts across watersheds and jurisdictions and sometimes because of opposition to changing polluting practices. *See* Section II, *infra*. Congress anticipated the possibility of state inaction and granted EPA authority to monitor state agency approaches to water quality protection and, when necessary, to intervene. *See* 33 U.S.C. §§ 1313, 1329; Section IV, *infra*. Plaintiff-Appellants wrongly ask this Court to read that authority out of the Clean Water Act—a step that would invite states to ignore the consequences of nonpoint source pollution for the ecosystems, individuals, and businesses that rely on our nation’s waters.

II. Efforts to control nonpoint source pollution across the country are struggling and coming up short.

In 2011, EPA reaffirmed its conclusion that “the vast majority of our nation’s impaired waters have no possibility of being restored unless the nonpoint

¹⁶ Meeting Summary for the Chesapeake Bay Program (CBP) Principals’ Staff Committee, Oct. 1, 2007 (“The Bay watershed TMDLs will be developed jointly between the six Bay watershed states, the District and EPA and then established by EPA.”).

sources affecting those waters are effectively remediated.”¹⁷ Nonetheless, effective nonpoint source pollution control has remained elusive. In 2009, the State-EPA Nutrient Innovations Task Group reported that “[c]urrent efforts to control nutrients have been hard-fought but collectively inadequate at both a statewide and national scale.”¹⁸ This report echoed earlier observations that “[i]mplementation of [Clean Water Act section] 319[, nonpoint source pollution management programs,] has failed to stem the flow of polluted runoff; the majority of state programs are ineffective and unfocused.”¹⁹ Subsequent examinations of nonpoint source pollution controls have not revised those observations.²⁰ Indeed, after surveying a statistically significant sample of the 44,500 TMDLs issued for waters listed as “impaired,” EPA noted that from 2005 to 2011 only 1% had been cleaned up

¹⁷ EPA, *A National Evaluation of the Clean Water Act Section 319 Program*, 1, 4 (2011); see also EPA, *Report to Congress: Nonpoint Source Pollution in the U.S.* 1-1 – 1-11 (1984).

¹⁸ State-EPA Nutrient Innovations Task Group, *An Urgent Call to Action: Report of the State-EPA Nutrient Innovations Task Group* 1 (2009).

¹⁹ Robert W. Adler et al., *The Clean Water Act Twenty Years Later* 173, 241 (1993); see also Oliver A. Houck, *The Clean Water Act TMDL Program: Law, Policy, and Implementation* 142–43 (2002) (noting general absence of TMDLs for decades despite legal requirement to create them).

²⁰ See, e.g., James S. Shortle et al., *Reforming Agricultural Nonpoint Pollution Policy in an Increasingly Budget-Constrained Environment*, 46 *Envtl. Sci. & Tech.* 1316, 1316 (2012) (“It has been well established that agricultural [nonpoint source pollution] policies are not having the desired outcomes.”).

enough to warrant their de-listing—at that pace, it would take over 500 years to clean up the rest.²¹

A. State-led efforts to implement nonpoint source pollution controls often fail to coordinate stakeholders and to establish enforceable commitments.

The question of how states should deal with nonpoint source pollution has inspired a small army of economists to explore options for coordinating the practices of diverse polluters in a way that efficiently reduces aggregate pollution levels.²² The classic coordination problem arises when state regulatory regimes demand little (or nothing) from nonpoint source polluters, even as point source polluters are required to reduce their contributions to water quality degradation.²³ This pattern appears in Galveston Bay, Texas, where nonpoint sources have supplanted point sources as the primary source of pollution.²⁴ The same pattern

²¹ EPA, *A National Evaluation of the Clean Water Act Section 319 Program 4* (2011).

²² See, e.g., Marc O. Ribaud & Jessica Gottlieb, *Point-Nonpoint Trading - Can It Work?*, 47 J. Am. Water Resources Ass'n 1, 5 (2011) (“Water quality trading is currently of much interest as a market-based approach for improving the efficiency of water pollution control allocations”).

²³ *Id.* at 1–2.

²⁴ Texas Comm'n Env'tl. Quality, *2012 Texas Integrated Report: Assessment Results for Basin 24—Bays and Estuaries* 6–11 (2012); Galveston Bay National Estuary Program, *The Galveston Bay Plan 203* (1994) (“municipal and industrial point source discharges are no longer the primary source of most pollutants to Galveston Bay”).

appears across South Carolina,²⁵ and in Michigan’s Kalamazoo River, where nonpoint sources continue to generate algae-promoting phosphorus, even as controls have reduced its inflow from point sources.²⁶

Upper Laguna Madre, a hypersaline lagoon between mainland Texas and the protected Padre Island National Seashore, provides dramatic and instructive examples of this pattern. In recent decades, even as point source controls have taken effect, the lagoon—which is renowned for its aquatic wildlife²⁷—has received a growing volume of nutrients from ranches along its length and from the pavement and septic systems clustered at its ends.²⁸ Because the lagoon’s chemistry and hydrology make it especially sensitive to nutrients, the nutrients delivered by those nonpoint sources have had remarkably damaging consequences:

²⁵ Note, Brandon Cooper, *Total Maximum Daily Loads v. Nonpoint Source Pollution & the South Carolina Administrative Procedures Act*, 15 S.E. Env’tl. L.J. 483, 488 (2007) (“Point source dischargers have been subject to permitting requirements for decades ... , resulting in significant reductions in pollution from these sources. Nonpoint source pollution ... has escaped such regulation, and is the cause of impairment for most South Carolina [water quality limited segments].”).

²⁶ Memorandum from Kieser & Assocs., LLC to City of Kalamazoo 4 (Feb. 28, 2011).

²⁷ National Park Service, *The Laguna Madre*, <http://www.nps.gov/pais/-naturescience/laguna.htm> (updated July 19, 2001) (noting Padre Island National Seashore provides habitat for 380 bird species and nesting grounds for Kemp’s ridley sea turtles); *see also* *The Laguna Madres of Texas and Tamaulipas* (F.W. Judd & J.W. Tunnel eds. 2001).

²⁸ Roberto Mendoza, et al., *Aquatic Invasive Species in the Rio Bravo/Laguna Madre Ecological Region* 13, 36–37 (2011).

persistent algae blooms, beginning with the notorious seven-year “Texas brown tide” of 1990–1997, have recurred, darkening the lagoon, depriving it of dissolved oxygen, and killing 12 km² of the aquatic vegetation that is the literal and figurative base of its ecosystem.²⁹ In 2002, the Texas Commission on Environmental Quality finally listed Laguna Madre as not meeting water quality standards and subsequently launched a TMDL development process for a portion of the lagoon.³⁰ However, that process still has not yielded a TMDL—the logical starting point for coordinating efforts to limit the nutrients injected slowly but surely into the lagoon by ranchers, homeowners, and developers.³¹

Many states not only avoid allocating the costs of pollution control among point and nonpoint source polluters, but also avoid requiring effective controls on nonpoint source polluters generally. As the following examples from West Virginia, Florida, and Kentucky illustrate, many state water pollution control programs adopt weak monitoring and enforcement measures, making it difficult to identify and harder still to reduce pollution from nonpoint sources. In 2009, West Virginia’s Department of Environmental Protection tried (and failed) to defend its categorization of acid mine drainage as originating from nonpoint sources, rather

²⁹ Bricker et al., *supra* note 6, at 99.

³⁰ See B.A. Nicolau, *Oso Bay and Laguna Madre Total Maximum Daily Load Project – Phase III and IV Data Report* (2005).

³¹ See EPA, *2010 Waterbody Report for Laguna Madre*.

than point sources, for which a permit is required and controls must be imposed. *West Virginia Highlands Conservancy, Inc. v. Huffman*, 588 F. Supp. 2d 678, 691–92 (N.D.W.V. 2009) (rejecting WVDEP’s argument that acid mine drainage originated from nonpoint source). In Florida, for the past several years, the Department of Environmental Protection has actively resisted converting narrative water quality standards for nutrients into numeric ones, despite overwhelming evidence that the narrative standards made it impossible to accurately determine harmful levels of nutrient loading. *See Florida Wildlife Federation v. Jackson*, 853 F. Supp. 2d. 1138, 1145 (N.D. Fla. 2012) (rejecting arguments presented by State of Florida, alongside Florida utilities, Florida Cattlemen’s Association, and Fertilizer Institute, against requiring numeric criteria); *see also* 79 Fed. Reg. 18,494 (Apr. 2, 2014) (“[EPA] is proposing to withdraw federal water quality standards applicable to waters of the state of Florida now that Florida has adopted and EPA has approved relevant state standards.”).

Kentucky offers two similar examples. In 2008, the Sixth Circuit rejected Kentucky’s approach to the water quality impacts of coal-mine discharge, which allowed exceptions to prohibitions on water quality degradation—polluters need only indicate that their pollution of sensitive waters resulted from “economic or social necessity.” *Kentucky Waterways Alliance v. Johnson*, 540 F.3d 466 (6th Cir. 2008). Kentucky’s approach relied impermissibly on Kentucky’s “promises” to

EPA that the loophole would remain small and unexploited. *Id.* at 493 (Cook, J. concurring) (“The Plaintiffs insist that the EPA may not rely on such promises, and we agree.”). In 2009, Kentucky codified an Agriculture Water Quality Plan that might have reduced nonpoint solution from farmland *if* it had contained different enforcement provisions.³² However, the Plan’s “model of violation detection depends on a robust and reliable statewide water quality monitoring program, which Kentucky does not currently maintain.”³³ Consequently, the Plan gives farmers little reason to adopt pollution management practices, and water quality remains degraded, even in the vicinity of national attractions such as Mammoth Cave National Park, which had more than 480,000 visitors who spent over \$33.5 million in local communities in 2011.³⁴

³² Jessica Dexter et al., Environmental Law & Policy Center, *Cultivating Clean Water: State-Based Regulation of Agricultural Runoff Pollution* 21 (2010).

³³ *Id.* at 21–22; *see also* EPA, Nonpoint Source: Discharge Prohibitions, <http://water.epa.gov/polwaste/nps/nonpoin2.cfm> (“the law further provides that if a violation is traceable to an agricultural operation, it shall be handled under the state’s enforceable agricultural water quality act rather than under the stricter water pollution control act”).

³⁴ Cui et al., *supra* note 11, at 20; *Mammoth Cave National Park: Water Quality*, National Park Service, <http://www.nps.gov/macac/naturescience/waterquality.htm> (last visited Apr. 2, 2014).

B. When states disagree about how to improve interstate water quality, water quality tends not to improve.

Given that states often struggle to control nonpoint source pollution that affects waters entirely within their borders, it is no surprise that states fare even worse when faced with pollution in waters that span state borders. As the examples below reflect, upstream states frequently ignore the problems created within their borders but felt downstream and outside those borders. Consequently, when states have competing uses for interstate waters, water quality—and with it public and environmental health—tends to suffer.

The Grand Lake O' the Cherokees watershed, which spans Arkansas, Kansas, Missouri, Oklahoma, and multiple Tribal areas, is in disastrous shape.³⁵ Its story demonstrates the consequences of upstream states' indifference to downstream water quality impacts felt chiefly in other states. The Grand Lake region hosts six coal-fired power plants, multiple abandoned mine sites, urban wastewater treatment facilities, residential septic systems, row crops, land used to graze livestock, and poultry production and processing facilities, all of which

³⁵ See Grand Lake O' the Cherokees Watershed Alliance Foundation, Inc. (GLWAF), *Grand Lake Watershed Plan* 4–5 (2008) (reporting high levels of nutrients, sediment, bacteria, and heavy metals, as well as toxic algae blooms that spurred beach closures and compromised drinking water reservoirs); see also *Kansas Issues 2014 Fish Consumption Advisories*, Joplin Globe (Jan. 4, 2014) (reporting multiple states' warnings against consuming Grand Lake watershed fish); Linda Russell, *Toxic Algae Cripples Oklahoma Lake*, KY3 News, July 14, 2011.

deposit either heavy metals, nutrients, or both into the Neosho, Spring, and Elk rivers that feed Grand Lake.³⁶ That battery of point and nonpoint sources has driven regional water quality—and northeast Oklahoma’s water quality in particular³⁷—far below the standards developed by the states and approved by EPA.³⁸ The only responses, however, have been a handful of *intrastate* TMDLs and subwatershed plans,³⁹ and no *interstate* effort by Kansas, Missouri, and

³⁶ GLWAF, *supra* note 35, at 16–23; Oklahoma Secretary of the Environment, *Comprehensive Study of the Grand Lake Watershed: Final Report* (2005); *see also* *Grand Lake O’ the Cherokees Natural Resource Damages: Restoration and Compensation Determination Plan: Draft 1–6* (2013) (summarizing water quality impacts of Tri-State Mining area).

³⁷ *See, e.g.*, Grand River Dam Authority Board of Directors, Emergency Meeting Minutes, Tulsa, Okla. (July 1, 2011) (discussing week-long toxic algae blooms that were deadly to animals that drank the water, and harmful in aerosol form to people and animals standing on the shore).

³⁸ EPA, *Assessment Summary for Reporting Year 2010 Oklahoma, Lake O’ The Cherokees Watershed* (listing 57 waters, of which 1 is not impaired, 20 are impaired, and 36 have not been assessed).

³⁹ *See* GLWAF, *supra* note 35, at 40–41; *see also* Elk River Watershed Improvement Association, *Elk River Basin Nonpoint Source Watershed Management Plans* (2012).

Arkansas.⁴⁰ These segmented approaches have, predictably, made little headway in improving the watershed's health.⁴¹

It may be that Kansas, Missouri, and Arkansas have concluded that they can ignore the damage done by domestic polluters to water quality in Oklahoma after watching Oklahoma's unsuccessful litigation against Arkansas over the Illinois River watershed, which Arkansas uses for disposing of human and animal waste—and Oklahoma uses for drinking water. *See Arkansas v. Oklahoma*, 503 U.S. 91 (1992) (allowing Fayetteville, Arkansas to dump treated sewage into the Illinois River despite Oklahoma's opposition); *see also* Complaint, *Oklahoma ex rel. Edmondson v. Tyson Foods, Inc.*, 2005 WL 1842228 (N.D. Okla. 2005)

⁴⁰ The GLWAF, whose board includes several Oklahoma state officials but none from other states, called for “a watershed-wide collective and coordinated effort” in its draft 2008 report. *Id.* at 2. That call has not been answered. *See* James Triplett, *An Interstate Watershed Perspective*, presentation to Spring River Water Summit, Joplin Missouri, May 30, 2013, at 32.

⁴¹ *See* Okla. Dep't Env'tl. Quality, *Notice of Availability of Draft Bacterial and Turbidity TMDLs for the Lower Neosho River Watershed* 4, 10 (2014) (noting that cattle ranch runoff is the largest contributor to bacteria that impair over 11,000 miles of Oklahoma streams); Okla. Dep't Env'tl. Quality, *Draft 2014 Bacterial and Turbidity Total Maximum Daily Loads for Okla. Streams in the Lower Neosho Watershed Area 5-27* (2014) (calling for reductions of up to 83% in pollutants from point and nonpoint sources, but recognizing that “achieving such high reductions may not be realistic, especially since unregulated nonpoint sources are a major cause of [water quality impairment].”); Missouri Dep't of Conservation, *Water Quality*, <http://mdc.mo.gov/node/10996> (last visited Apr. 3, 2014) (“In Arkansas the disposal of dry litter is not regulated so the amount applied is unknown. Phosphorus contamination of streams in the [Elk River] watershed is inevitable if wastes are over-applied.”).

(challenging Arkansas poultry producers' polluting practices under nuisance and federal toxic waste statute). Those lawsuits have won nothing for Oklahoma. Meanwhile Arkansas' poultry industry continues to dump thousands of tons of chicken waste onto fields in the Illinois River watershed,⁴² and as a result fisheries and recreation in Oklahoma's downstream portion of the watershed continue to suffer from persistently low levels of dissolved oxygen.⁴³ The closest Arkansas and Oklahoma have come to addressing this nonpoint source pollution is a 2013 agreement to study phosphorus impairment in the watershed.⁴⁴

Litigation—24 years of it—has also done nothing for Florida and Alabama in their dispute with Georgia over acceptable uses of the waters in the Apalachicola-Chattahoochee-Flint interstate river basin. *See In re MDL-1824 Tri-State Water Rights Litigation*, 644 F.3d 1160, 1165 (11th Cir. 2011). Here again, water quality suffers, particularly in Florida's Apalachicola Bay,⁴⁵ where Georgia's

⁴² D.E. Smoot, *Arkansas Poultry Litter Application Declines*, Muskogee Phoenix, Aug. 2, 2013 (noting dispersal of over 27,000 tons of poultry waste).

⁴³ Oklahoma Conservation Commission, *Watershed Based Plan for the Illinois River Watershed*, 60, 78, 124 (2010).

⁴⁴ Arkansas and Oklahoma Environmental Agencies, *Second Statement of Joint Principles and Actions* (2013).

⁴⁵ Florida Dep't Env'tl. Protection, *Learn About Your Watershed: Apalachicola and Chipola River Watersheds*, <http://www.protectingourwater.org/watersheds/-map/apalachicola/> (last visited Apr. 4, 2014) ("Any alteration of the river's flows disrupts the input of [essential nutrients] and undermines the foundation for the bay's unique ecosystem.").

upstream water uses have unbalanced downstream nutrient levels, damaging the bay's fisheries and shellfish beds. *See* Complaint at 6, *Florida v. Georgia*, No. 220142 (U.S. filed Oct. 1, 2013), *available at* <http://www.flgov.com/wp-content/uploads/2013/10/FLORIDA-v.-GEORGIA-Original-Action-Complaint.pdf> (noting threat to bay species from altered “quantity, quality, and pattern of flows entering Florida”).

Even in the case of Lake Erie, where Indiana, Michigan, Ohio, and Ontario have looked to negotiated agreements rather than litigation to decide how to control pollution, nutrients continue to flow—from nonpoint sources in particular.⁴⁶ Those nutrients generate algae blooms, some of which deplete dissolved oxygen from sections of the Lake, some of which poison the water for fish and people.⁴⁷ In the final version of its 2014 report on the health and future of Lake Erie, the International Joint Commission, which is responsible for implementing the U.S. and Canada's 1909 Boundary Waters Treaty, recommended

⁴⁶ International Joint Commission, *Assessment of Progress Made Towards Restoring and Maintaining Great Lakes Water Quality Since 1987 - 16th Biennial Report on Great Lakes Water Quality* (2013) (discussing agreements, pollution control efforts, and outcomes).

⁴⁷ International Joint Commission, *A Balanced Diet for Lake Erie: Reducing Phosphorus Loadings and Harmful Algal Blooms 5* (2014).

that Michigan, Ohio, and Indiana respond by developing “a tri-state phosphorus [TMDL]” and implement it “with [EPA] oversight.”⁴⁸

C. Solutions to the problems of nonpoint source pollution control will flow from coordination and enforceable commitments.

The problem of nonpoint source pollution control has diverse root causes. Data collection poses technical challenges,⁴⁹ and different organizations—state agencies, EPA, USDA, and others—use diverse collection methodologies.⁵⁰ Where impaired waters are polluted by nonpoint sources scattered across a watershed, any effort to understand and control those sources requires coordination across many natural and jurisdictional boundaries.⁵¹ Without effective coordination, overlapping efforts to respond to nonpoint source pollution can stymie each other.⁵²

⁴⁸ *Id.* at 8.

⁴⁹ Marc Ribaud & Margriet F. Caswell, USDA Econ. Res. Serv., *Environmental Regulation in Agriculture and Adoption of Environmental Technology, in Flexible Incentives for the Adoption of Environmental Technologies in Agriculture* 7, 9 (Frank Casey et al. eds. 1999) (describing measurement difficulties).

⁵⁰ *See, e.g.*, GAO, 02-186, *Water Quality: Inconsistent State Approaches Complicate Nation’s Efforts to Identify Its Most Polluted Waters* (2002).

⁵¹ National Research Council, *Clean Coastal Waters: Understanding and Reducing the Effects of Nutrient Pollution* 39 (2000).

⁵² *E.g.*, GAO, 03-515, *Great Lakes: An Overall Strategy and Indicators for Measuring Progress Are Needed to Better Achieve Restoration Goals* 35 (2003) (noting that numerosity of uncoordinated groups working to restore water quality perversely makes successful restoration more difficult); *see also* GAO, 11-802, *Chesapeake Bay: Restoration Effort Needs Common Federal and State Goals and Assessment Approach* (2011).

Meanwhile, damaging polluting practices persist,⁵³ and approaches to control and abatement often prove ineffective.⁵⁴

Two basic features underlie these component parts of the nationwide problem of poor nonpoint source pollution control: a lack of coordination and a lack of clear and enforceable commitments.⁵⁵ Without coordination, stakeholders can encounter (or create) myriad difficulties in trying to specify the nature and causes of poor water quality, even before they try to devise mutually agreeable solutions. Without enforceable commitments, whether in the form of numeric targets, firm deadlines, or budgetary consequences, decisionmakers at the state and

⁵³ National Resources Conservation Service, USDA, *Assessment of the Effects of Conservation Practices on Cultivated Cropland in the Great Lakes Region* 158–159 (2011) (reporting how conservation practices can reduce flow of nutrients and sediment from farmland into Great Lakes); K. Segerson & D. Walker, *Nutrient pollution: an economic perspective*, 25 *Estuaries* 797, 798 (2002) (“Because farmers make decisions about fertilizer use based primarily on the net gains that they realize from that use, which are increased by low fertilizer prices and high output prices, they tend to over-use fertilizers.”).

⁵⁴ Robert V. Percival et al., *Environmental Regulation: Law, Science, and Policy* 703 (2006) (describing that nonpoint sources “have largely escaped federal regulation because of political, administrative, and technical difficulties”); Ribaudo & Caswell, *supra* note 45, at 7, 9–12 (reporting that non-regulatory approaches, like education and modest subsidies, generally do not change farmers’ practices).

⁵⁵ See GAO-11-802, *supra* note 52, at 1 (identifying shared goals and collaboration as critical for successful Bay restoration); GAO-03-515, *supra* note 52, at 57 (recommending EPA develop indicators and monitoring system to evaluate projects and prioritize funding); National Research Council, *supra* note 51, at 51 (recommending that National Nutrient Management Strategy “include mechanisms to coordinate efforts at local, regional, and national levels.”).

local levels are left with few, if any, means of overcoming the inertia that *always* attends nonpoint source pollution control efforts.⁵⁶

III. The Chesapeake Bay TMDL addresses persistent nonpoint source pollution and embodies cooperative federalism called for by the Clean Water Act.

The Clean Water Act calls on states and EPA to work together to address pollution from both point and nonpoint sources. *See* Section IV, *infra*. Throughout the Chesapeake watershed, decades of pollution reduction strategies have not yet succeeded. *See* Settlement at 2, *Fowler v. EPA*, Civil Action No. 09–005, 2009 WL 8634683 (D.D.C. May 5, 2010). The Bay States (including the District of Columbia) have responded to this frustrating pattern by deciding to work more closely with each other and with EPA to craft the Chesapeake TMDL. *Id.* Their decision is the best hope for the Chesapeake watershed’s health and the health of its more than 50 national parks, and is fully consistent with the Clean Water Act.

⁵⁶ *See, e.g.*, M.A. Hamm, *The Massachusetts Experience with Nonpoint Sources: Regulators Beware!*, 10 *Natural Resources & Env’t* 47, 51 (1995-1996) (“Regulators are finding that, while people support the general concept of a better environment, when it comes to modifying their own activities, their support tends to fall off significantly.”); J.T. Holleman, *In Arkansas Which Comes First, the Chicken or the Environment?*, 6 *Tul. Env’tl. L.J.* 21 (1992-1993); EPA, *supra* note 17, at 1-17 (noting “some streams appear to have been dominated by nonpoint sources for virtually as long as there are records available”).

A. Increasing nonpoint source pollution in the Chesapeake watershed has offset reductions in pollution from point sources.

Point source pollution control strategies, such as prohibiting the sale of detergents containing phosphorous and upgrading controls on wastewater treatment discharges, have effectively reduced nutrient loads from those sources.⁵⁷ Meanwhile, however, the region has been home to a robust agricultural sector⁵⁸ and has seen its population grow from 12.8 million in 1980 to 17.4 million in 2010.⁵⁹ Commercial and residential development has kept pace.⁶⁰ Since 1980, approximately 750,000 acres (roughly 20 Washington D.C.s) have been developed, fragmenting or obliterating forests, a natural buffer and filter for sediment and

⁵⁷ U.S. Geological Survey, *Monitoring Nutrients in the Major Rivers Draining to Chesapeake Bay* 3 (1999) (noting Bay States' detergent bans); see also CBP, *Data File – Reducing Nitrogen Pollution*, http://www.chesapeakebay.net/indicators/indicator/reducing_nitrogen_pollution (showing 50% reduction in nitrogen discharged from wastewater and combined sewer overflow from 1985–2013) (last visited Apr. 8, 2014).

⁵⁸ See, e.g., U.S. Poultry and Egg Association, *Economic Data*, http://uspoultry.org/economic_data (last visited Apr. 8, 2014); see also Delmarva Poultry Industry, Inc., *Delmarva Meat Chicken, Soybeans & Corn Production and Use* (2012); U.S. Census of Agriculture, *Dairy Cattle and Milk Production* (2007) (noting Pennsylvania's dairy production ranks 4th nationally).

⁵⁹ CBP, *Chesapeake Bay Watershed Population*, http://www.chesapeakebay.net/indicators/indicator/chesapeake_bay_watershed_population (last visited Apr. 8, 2014).

nutrients.⁶¹ As a result, in 2009, nonpoint sources were responsible for at least 45% of nitrogen, 44% of phosphorous, and 65% of sediment pollution entering the Bay, whereas point sources were responsible for 22%, 25%, and 1%, respectively.

TMDL at 4-29.

Because of development and agricultural operations, substantial regional point source controls have not counteracted the 25-year downward trend of the Bay's water quality, as measured by a composite index of chlorophyll *a*, water clarity, and nutrients and dissolved oxygen levels.⁶² Biological barometers of the Bay's health tell the same story: oyster and crab populations and underwater vegetation all persist, but at a small fraction of their historic levels.⁶³ In short, the

⁶⁰ EPA, *Development Growth Outpacing Progress in Watershed Efforts to Restore the Chesapeake Bay* (2007).

⁶¹ Conservation Funds & U.S. Forest Service, *The State of Chesapeake Forests*, ES-1 (2006); see also J.C. Klapproth & J.E. Johnson, *Understanding the Science Behind Riparian Forest Buffers: Effects on Water Quality* (2009).

⁶² University of Maryland Center for Environmental Science, *Trends Graph: Chesapeake Bay Health, Water Quality Index 2012*, http://ian.umces.edu/ecocheck/report-cards/chesapeake-bay/2009/indicators/water_quality_index/#_Trends_Graph (last visited Apr. 4, 2014).

⁶³ CBP, *Chesapeake Bay Submerged Aquatic Vegetation Water Quality and Habitat-Based Requirements and Restoration Targets: A Second Technical Synthesis*, at iii (2000) ("loss of [submerged aquatic vegetation] beds are of particular concern because these plants create rich animal habitats"); Chesapeake Bay Office, NOAA, *Oysters*, <http://chesapeakebay.noaa.gov/fish-facts/oysters>, (last visited Mar. 21, 2014).

Chesapeake will not recover without effective controls on regional nonpoint sources.

B. The Chesapeake TMDL coordinates pollution reduction efforts among the Bay States and codifies the particular commitments of each, making each accountable to the others and to EPA.

The collective effort to improve and protect the Chesapeake's water quality began with the Chesapeake Bay Agreement of 1983.⁶⁴ Subsequent agreements set increasingly specific pollution limits and deadlines, showing the parties' commitment and also their ambition in tackling recovery in a watershed that spans 64,000 square miles and includes 50 major tributaries and thousands of small streams. TMDL at 2-1. Unfortunately, each round of agreements ended with missed targets. Settlement at 2, *Fowler v. EPA*, No. 09-005, 2009 WL 8634683 (May 10, 2010). Citizens, impatient with still-polluted waters and their consequences, sued in 2009, alleging EPA's dereliction under the Clean Water Act and that the Bay States and EPA had failed to abide by the Chesapeake Bay Agreements, which are enforceable interstate compacts. Complaint, *Fowler v. EPA*, No. 09-005, 2009 WL 8634683, at *30, *36, *38 (D.D.C. Sept. 29, 2009).

The settlement resolving the *Fowler* case recognized that the Chesapeake 2000 Agreement's water quality goals would not be met by the 2010 target date and established a detailed framework for developing the Chesapeake TMDL, first

⁶⁴ CBP, *The 1983 Chesapeake Bay Agreement* (1983).

proposed in 2007. *Fowler Settlement* at 2–3. Like the earlier agreements, the TMDL sets goals for reducing nutrients and sediment, TMDL at ES-1, but unlike former agreements, it requires the Bay States to develop nonpoint source pollution control strategies *and* to provide reasonable assurances that those strategies would achieve their stated goals. *Id.* at ES-8–9 (describing watershed implementation plans as the “cornerstone of the [TMDL’s] accountability framework”). Making Bay States’ commitments enforceable is critical for achieving water quality goals.

IV. The States’ Brief asks the Court to ignore Clean Water Act provisions that govern nonpoint source pollution and give EPA oversight over state performance.

The American Farm Bureau Federation and 21 *amici* states paint a picture of the Clean Water Act that is at odds with the Act’s text and structure. *See* EPA Br. at 35–49. The States’ Brief in particular offers a series of misreadings of the Act and of its application to the Chesapeake TMDL. *See, e.g.,* States Br. at 6, 10, 11, 16, 27. Those misreadings set up a strawman—an EPA that has usurped the states’ prerogatives to regulate nonpoint source pollution. They also reflect the conviction that states may ignore the damage done by nonpoint source pollution, if they so choose. In other words, the States’ Brief implies that Congress intended the Clean Water Act to authorize states to propose ineffectual nonpoint source pollution control measures with impunity, forever.

An interpretation of the Clean Water Act that invites “state subterfuge and recalcitrance” to prevail over progress toward clean water is “absurd” and inconsistent with congressional intent because it would reduce the Act’s cooperative federalism to “empty formalism.” *Amer. Canoe Ass’n v. EPA*, 54 F. Supp. 2d 621, 628–29 (E.D. Va. 1999) (rejecting argument that consent decree is illegal because it “wrests the initiative for establishing TMDLs” from the state). That is the 21 states’ position and this Court should reject it.

A. The Clean Water Act requires states and EPA to limit pollution from both nonpoint and point sources.

With its 1987 amendments to the Act, Congress confirmed that federal law demands *effective* nonpoint source pollution controls. In particular, Congress added section 101(a)(7) to the “Congressional Declaration of Goals and Policy,” providing that “it is the national policy that programs for the control of nonpoint sources of pollution be developed and implemented in an expeditious manner so as to enable the goals of this [Act] to be met through the control of both point and nonpoint sources of pollution.” 33 U.S.C. § 1251(a)(7). Congress also added section 319, “Nonpoint Source Management Programs,” which implements an overall cooperative federalism approach, in which EPA plays a major role. Specifically, section 319 invites states to accept conditional grants for nonpoint source control programs approved by EPA. *Id.* §§ 1329(b)(1) (requiring

Administrator approval of proposed programs), (h)(1) (making program funding “subject to such terms and conditions as the Administrator considers appropriate”).

Courts have enforced Congress’s directive by holding that the Act’s distinction between point and nonpoint source pollution does not exempt nonpoint source pollution from regulation. *See, e.g., Thomas v. Jackson*, 581 F.3d 658, 667 (8th Cir. 2009) (“Clearly, the amount of nonpoint source pollutant would directly affect the amount of point source pollutant a water could satisfactorily sustain.”). In particular, courts have rejected time and again the suggestion that states or EPA may neglect their duty to address nonpoint source pollution through the process laid out by section 303 of the Act, which governs the designation and maintenance of water quality standards. *See Kingman Park Civic Ass’n v. EPA*, 84 F. Supp. 2d 1, 5 (D.D.C. 1999) (collecting cases). As section 303 makes clear, states must develop and update water quality standards and submit those standards to EPA for approval. 33 U.S.C. §§ 1313(a) & (c); *see also Nw. Env’tl. Advocates v. E.P.A.*, 855 F. Supp. 2d 1199, 1212–13 (D. Or. 2012). Then, states must develop TMDLs for waters that fail to meet approved standards and submit those TMDLs to EPA for approval. 33 U.S.C. § 1313(d); *see also Pronsolino v. Nastri*, 291 F.3d 1123, 1137 (9th Cir. 2002). And states must also develop and seek EPA approval of a continuing planning process to address compliance with various water pollution limitations, including TMDLs. 33 U.S.C. § 1313(e); *see also Sierra Club v. E.P.A.*,

162 F. Supp. 2d 406, 421 (D. Md. 2001). As more than one court has explained, this process makes TMDLs “central to the Clean Water Act’s water-quality scheme because . . . they tie together point source and nonpoint source pollution issues in a manner that addresses the whole health of the water.” *Anacostia Riverkeeper, Inc. v. Jackson*, 798 F. Supp. 2d 210, 216 (D.D.C. 2011) (quoting *Sierra Club v. Meiburg*, 296 F.3d 1021, 1025 (11th Cir. 2002)).

These courts’ interpretations of sections 303 and 319 of the Act demonstrate that the 21 states exaggerate when they assert that states “retain exclusive authority to regulate nonpoint sources.” States Br. at 9. The foregoing decisions also show that states’ “authority to regulate” does not include authority to ignore.

B. The Clean Water Act provides for a form of cooperative federalism that entails EPA oversight of state decisions.

The Act relies on states *and* EPA to achieve the objective of clean water. *See Arkansas v. Oklahoma*, 503 U.S. 91, 101 (1992) (“The Clean Water Act anticipates a partnership between the States and the Federal Government, animated by a shared objective: ‘to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.’ 33 U.S.C. § 1251(a).”). States get first crack at developing water quality standards, TMDLs, and continuing planning processes, but the Act does not permit states to neglect those responsibilities indefinitely or to carry them out ineffectively. *See, e.g., Scott v. City of Hammond*, 741 F.2d 992, 996 (7th Cir. 1984) (devising “constructive submission” doctrine whereby EPA

must interpret state's failure to timely submit TMDL as submission of inadequate TMDL); *Florida Wildlife Federation, Inc. v. Jackson*, 853 F. Supp. 2d 1138, 1142 (N.D. Fla. 2012), *appeal dismissed*, 737 F.3d 689 (11th Cir. 2013) (rejecting challenges to EPA's authority to impose numeric water quality criteria after noting that "[t]he Clean Water Act requires a state—or if it fails to act, EPA—to adopt water-quality 'criteria' to protect a state's designated 'uses' of its waters."). Indeed, when states seek federal grants to help pay for a nonpoint source pollution management program, the particulars of the program are subject to EPA approval, and payments to states under the grant subject to conditions set by EPA's Administrator. 33 U.S.C. §§ 1329(b), (g), (h).

V. Conclusion.

The Chesapeake TMDL embodies the cooperative federalism prescribed by the Clean Water Act. The TMDL serves the Act's basic goal of restoring and maintaining water quality by controlling pollution from point *and* nonpoint sources. This Court's rejection of the Chesapeake TMDL would undercut efforts to achieve more effective control of nonpoint sources for the benefit of waterways and the economies they support not just in the Chesapeake region, but across the country. *Amici* urge the Court to affirm the decision below upholding the Chesapeake TMDL.

DATED: April 24, 2014

/s/ Brian Wolfman

Brian Wolfman (D.C. Bar 427491)

Counsel of Record

Justin M. Gundlach (D.C. Bar 1005306)

Hope M. Babcock (D.C. Bar 14639)

Institute for Public Representation

Georgetown University Law Center

600 New Jersey Ave. NW, Suite 312

Washington, D.C. 20001

Tel: (202) 662-9535

Counsel for Amici Curiae

*Law students Stephen Ruotsi and
Aislinn Shaul-Jensen contributed
to this brief's research and
drafting.*

CERTIFICATE OF COMPLIANCE

I, the undersigned, certify the following:

1. As required by 3d Cir. L.A.R. 28.3(d) and 46.1, I, the undersigned, am a member in good standing of the bar of the United States Court of Appeals for the Third Circuit.
2. In compliance with the word limits prescribed by Fed. R. App. Proc. 29(d) and 32(a)(7)(B)(i), this brief contains 6,988 words, excluding words exempted by Fed. R. App. Proc. 32(a)(7)(B)(iii). That number was calculated by the word-counting function of Microsoft Word 2010.
3. In compliance with the typeface requirements of Fed. R. App. Proc. 32(a)(5) and the style requirements of 32(a)(6), this brief is double-spaced and printed in proportionally-spaced, 14-point Times New Roman font.
4. This brief has been scanned using Symantech Endpoint Protection version 11.0.6100.645 and is free of viruses.
5. The seven (7) hardcopies of this brief submitted to the Court by overnight mail are exact copies of the version submitted electronically.

DATED: April 24, 2014

/s/ Brian Wolfman

CERTIFICATE OF SERVICE

In compliance with Fed. R. App. Proc. 25(d), I, the undersigned, filed the foregoing Brief of *Amici Curiae* NPCA *et al.* in Support of Defendant-Appellee electronically with the Clerk of Court for the United States Court of Appeals for the Third Circuit using the CM/ECF system; to my knowledge, counsel for all parties are registered to receive electronic service.

DATED: April 24, 2014

/s/ Brian Wolfman
Brian Wolfman
Institute for Public Representation
Georgetown University Law Center
600 New Jersey Ave. NW, Suite 312
Washington, D.C. 20001
(202) 662-9535