

TEXAS ENVIRONMENTAL LAW JOURNAL

Volume 48

Spring 2018

Number 1

ARTICLES

IF WE MUST EVER CROSS THE ALPS AGAIN: REFLECTIONS ON THE
LEGAL FRAMEWORK OF OIL SPILL RESPONSE FROM THE FIRST SPILL
OF NATIONAL SIGNIFICANCE
Nathan Block, Jake Rodriguez, and Ali Abazari 1

ENVIRONMENTAL CONSULTANT RISK A DECADE AFTER “ALL APPROPRIATE
INQUIRY”
Andrea Shepard Shaw 29

ZEN AND THE ART OF PRACTICE: ETHICAL CONSIDERATIONS WHEN AN
ATTORNEY AND CONSULTANT REPRESENT THE SAME CLIENT
R. Walton Shelton 63

NOTES

TO INFINITY AND BEYOND: THE FUTURE LEGAL REGIME GOVERNING
NEAR-EARTH ASTEROID MINING
Erin C. Bennett 81

WIND IN THE WILD WEST TO WIND IN THE MIDWEST: HOW IOWA AND
NEBRASKA COULD IMPLEMENT TEXAS STRATEGIES TO INCREASE
INSTALLED WIND CAPACITY
Lisa N. Garrett 101

RESOURCES FOR RELOCATION: IN SEARCH OF A COHERENT FEDERAL
POLICY ON RESETTLING CLIMATE-VULNERABLE COMMUNITIES
Eli Keene 119

DEVELOPMENTS

FEDERAL CASENOTE – David J. Klein, Jori Reilly-Diakun 155

NATURAL RESOURCES – Patrick Leahy, Zimei Fan 162

PUBLICATIONS – Joshua D. Katz, Phillip Chang 166

SOLID WASTE – Ali Abazari, Garrett Peery 171

STATE CASENOTE – Howard S. Slobodin, Katelyn Hammes 176

WASHINGTON UPDATE – Jacob Arechiga, Greer Gregory 178

WATER RIGHTS – Shana Horton, Nicholas Miller 184

WATER UTILITIES – Emily Rogers, Susan Stradley 188

STATE BAR SECTION NEWS

*Prepared through The University of Texas School of Law Publications Office
ISSN 0163-545X*

*Copyright © 2018 Environmental and Natural Resources Section of the State Bar of Texas and
The University of Texas School of Law Texas Environmental Law Journal*

Please cite as: TEX. ENVTL. L. J.

TEXAS ENVIRONMENTAL LAW JOURNAL

Volume 48

April 2018

Number 1

STATE BAR OF TEXAS

ENVIRONMENTAL AND NATURAL RESOURCES LAW SECTION

P.O. Box 220, Mailstop H-429
Austin, Texas 78767-0220
www.textenrls.org

EDITORIAL BOARD

Editor-In-Chief

Lyn Clancy
P.O. Box 220, Mailstop H-429
Austin, Texas 78767-0220
lynclancytx@gmail.com
(512) 578-3378

Assistant Editor for Production

Tabetha Jaske
P.O. Box 220, Mailstop H-429
Austin, Texas 78767-0220
tabethajaske@gmail.com
(512) 578-2359

DEVELOPMENTS ATTORNEY CONTRIBUTORS

Air Quality

John B. Turney
Richards Rodriguez & Skeith
816 Congress Ave., Ste. 1200
Austin, Texas 78701-2672
jturney@rrsfirm.com
(512) 476-0005

Natural Resources

Patrick Leahy
Baker Botts, L.L.P.
98 San Jacinto Blvd., Ste. 1500
Austin, Texas 78701-4078
patrick.leahy@bakerbotts.com
(512) 322-2660

Solid Waste

Ali Abazari
100 Congress Ave., Suite 1100
Austin, Texas 78701-4042
aabazari@jw.com
(512) 236-2239

Water Quality & Utilities

Emily Rogers
Bickerstaff Heath Delgado Acosta,
L.L.P.
3711 S. Mopac, Bldg. 1, Suite 300
Austin, Texas 78746
erogers@bickerstaff.com
(512) 472-8021

Water Quantity

Shana Horton
Enoch Kever PLLC
5918 W. Courtyard Dr., Ste. 500
Austin, Texas 78730
shorton@enochkever.com
(512) 615-1227

Casenotes—Federal

David J. Klein
Lloyd Gosselink Rochelle &
Townsend, P.C.
816 Congress Ave., Ste. 1900
Austin, Texas 78701
dklein@lglawfirm.com
(512) 322-5818

Casenotes—State

Howard S. Slobodin
Trinity River Authority of Texas
P.O. Box 60
Arlington, Texas 76004-0060
slobodinh@trintyra.org
(817) 467-4343

Publications

Joshua D. Katz
Bickerstaff Heath Delgado Acosta,
L.L.P.
3711 S. Mopac, Bldg. 1, Suite 300
Austin, Texas 78746
jkatz@bickerstaff.com
(512) 472-8021

Washington Update

Jacob Arechiga
Jackson Walker, L.L.P.
100 Congress Ave., Ste. 1100
Austin, Texas 78701-4042
jarechiga@jw.com
(512) 236-2049

TEXAS ENVIRONMENTAL LAW JOURNAL

Volume 48

Spring 2018

Number 1

UNIVERSITY OF TEXAS SCHOOL OF LAW

TEXAS ENVIRONMENTAL LAW JOURNAL

727 East Dean Keeton St.
Austin, Texas 78705-3224
(512) 471-0299 / telj@law.utexas.edu

STUDENT EDITORIAL BOARD 2017-2018

Editors-in-Chief

Jori S. Reilly-Diakun
Audry Elise Doane

Developments Editor

Holly Heinrich

Lead Articles & Notes Editor

Katelyn A. Hammes

Articles & Notes Editors

J. Tyler Davis
Thales M. Smith

STAFF 2017-2018

Senior Staff Editors

Victoria L. Chang
Martin J. Kamp
Kimberly Saindon

Kiah DeBolt
Anna Kochut

Greer Gregory
Evan Martin

Staff Editors

Phillip K. Chang
Rachel A. Enav
Kelly M. Hogue
Rachel C. Lau
Mark McMonigle
Garrett Peery
Cameron K. Rivers
Zachary S. Tavlin

Paige L. Cheung
Zimei Fan
Joshua Kelly
Anne Marie Lindsley
Nicholas R. Miller
Reid A. Powers
Samantha R. Sandfort

Zander B. Chonka
Christopher G. Forester
Michael K. Lambert
Meredith Luneack
Lori K. Patrick
Matthew R. Richardson
Susan K. Stradley

TEXAS ENVIRONMENTAL LAW JOURNAL

Volume 48

April 2018

Number 1

STATE BAR OF TEXAS ENVIRONMENTAL AND NATURAL RESOURCES LAW SECTION

SECTION OFFICERS (2017-2018)

Chair

Rebecca K. Skiba
5555 San Felipe St, #4100
Houston, Texas 77056-2701
rkskiba@marathonoil.com
(713) 296-2584

Chair-Elect

Stephen McMillen
(Finance Committee Co-Chair)
P.O. Box 655474, MS 3999
Dallas, Texas 75265
smcmillen@ti.com
(214) 479-1228

Vice Chair

Susan M. Maxwell
3711 S. Mopac, Bldg 1, Ste 300
Austin, Texas 78746-8015
smaxwell@bickerstaff.com
(512) 472-8021

Secretary

Nathan M. Block
501 Westlake Park Blvd
W11 - Lr - 3.668B
Houston, TX 77079
nathan.block@bp.com
(832) 619-4789

Treasurer

David J. Klein
816 Congress Ave., Ste. 1900
Austin, Texas 78701-2478
dklein@lglawfirm.com
(512) 322-5818

Immediate Past Chair

Arnoldo Medina, Jr.
One Valero Way
San Antonio, Texas 78249
Arnoldo.Medina@Valero.com
(210) 345-1915

EXECUTIVE COMMITTEE MEMBERS (2018-2020)

Terms Expire 2018

Jonathan M. Bull
jbull@gardere.com
(214) 999-4050

Angela K. Moorman
amoorman@birchbecker.com
(512) 349-9300

Peter K. Wahl
pwahl@jw.com
(214) 953-6101

Terms Expire 2019

Caroline Sweeney
caroline.sweeney@tceq.texas.gov
(512) 239-0665

Carrie K. Thomas
Thomas.Carrie@epa.gov
(214) 665-7121

Paulina Williams
paulina.williams@bakerbotts.com
(512) 322-2543

Terms Expire 2020

Mike Dillinger
Mike.Dillinger@NuStarEnergy.com
(210) 918-2091

Erin Chancellor
chancellor.erin@epa.gov
(202) 564-2463

Kellie Billings-Ray
kellie.billings-ray@texasattorneygeneral.gov
(512) 475-4014

COMMITTEE CHAIRS (2018)

Education

Lisa Dyar
Deborah Trejo

Publications

Lyn Clancy

Law School

Walt Shelton
Kristen Fancher

Pro Bono

Mary Koks

Website & Technology

Constance "Connie" Westfall
Cindy Smiley

Sponsorship

Cindy Bishop

TEXAS ENVIRONMENTAL LAW JOURNAL

STATEMENT OF PURPOSE

The purpose of the *Texas Environmental Law Journal* is to provide members of the Environmental and Natural Resources Law Section of the State Bar of Texas and the public with legal articles and recent development columns on relevant environmental and natural resources law issues. The *Journal* also provides news of Section activities and other events pertaining to this area of law. The *Journal* is the leading source for articles on Texas environmental and natural resources law.

JOINT PUBLICATION

The *Texas Environmental Law Journal* is an official publication of the Environmental and Natural Resources Law Section of the State Bar of Texas and is published jointly with the University of Texas School of Law's *Texas Environmental Law Journal*. In 1990, the Environmental and Natural Resources Law Section reached an agreement with this student organization at the University of Texas School of Law to co-produce the *Journal* as the *Texas Environmental Law Journal*. The students' involvement began with the summer issue in 1990.

OTHER INFORMATION

The opinions expressed in the *Journal* are solely the opinions of the respective authors and are not the opinions of the School of Law, or the University of Texas School of Law's *Texas Environmental Law Journal*.

To contact the *Journal*, please use the contact information in the preceding pages.

SOLICITATION OF ARTICLES & EDITORIAL POLICIES

The *Journal* solicits articles from authors on environmental and natural resources subjects that will assist Texas environmental and natural resource law practitioners and develop the advancement of environmental and natural resource law.

If you are interested in submitting an article, please contact:

Editor-in-Chief (lynclancytx@gmail.com)

The *Journal* will consider for publication any articles from practitioners, judges, academics, policymakers, and others that are relevant and useful to practitioners in the environmental and natural resources law arena. Manuscripts should be submitted via email to the Solicitations Attorney Editor, Student Lead Articles Editor, or Editor-in-Chief at the addresses shown above.

If the *Journal* accepts a manuscript for publication, the author must provide a copy in electronic format (Microsoft Word) with no pre-defined embedded coding or styles. If a manuscript includes graphics, please provide as separate files, preferably JPEG, PDF, or TIFF files. Graphics should be grayscale and at a resolution of at least 300dpi. The manuscript should be typed and double-spaced, with footnotes. Citations should conform to the most recent editions of *The Bluebook: A Uniform System of Citation* and the *Texas Rules of Form*.

If you desire the *Journal* to return any printed manuscript, please provide a postage prepaid, self-addressed envelope with the manuscript.

COPYRIGHT & PERMISSION TO USE

Unless otherwise provided, the *Journal* grants permission for use of articles, student notes, and recent developments in classrooms, provided that the user: (1) affixes a proper copyright notice to each copy, (2) identifies the author and the source issue of the *Journal*, (3) charges not more than at or below the actual cost of the copies, and (4) notifies the *Journal* of the use.

TEXAS ENVIRONMENTAL LAW JOURNAL

REPRINTS

The *Journal* has a contract with William S. Hein & Co., Inc. for Hein to provide back issues. Hein has single issues, single volumes, and complete sets available from Vol. 1 (1971) to current at its current fees. These issues are also available electronically through HeinOnline. William S. Hein & Co., Inc.; 2350 N. Forest Rd., Getzville, NY 14068; (716) 882-2600, (800) 828-7571, Fax: (716) 883-8100; mail@wshein.com; www.wshein.com.

SUBSCRIPTIONS & SECTION MEMBERSHIPS

SUBSCRIPTIONS

Subscriptions to the *Journal* are available through:

The University of Texas School of Law Publications
727 East Dean Keeton Street
Austin, Texas 78705-3224
(512) 232-1149
Publications@law.utexas.edu
Order and pay online at: www.texaslawpublications.com

The annual subscription price is \$40.00 domestic / \$50.00 foreign; single issues are \$15.00. Austin residents add 8.25% sales tax, and other Texas residents add 7.25% sales tax.

SECTION MEMBERSHIPS

For attorneys licensed by the State Bar of Texas, membership in the Environmental and Natural Resources Law Section includes an electronic subscription to the *Journal*. To receive hardcopy issues of the *Journal*, please mail Publications@law.utexas.edu or write the Publications Office at the above address stating your Section membership number and your mailing address. Hardcopy requestors will receive only those issues published after your Section membership begins. All subscriptions expire on May 31 unless your annual Section membership is renewed, regardless of the date of initial membership.

To become a member of the Section or to renew your annual membership by May 31 of each year if not renewed when paying your annual State Bar of Texas dues, mail a completed copy of the form on the following page and a check for \$30.00 made payable to "Environmental and Natural Resources Law Section – State Bar of Texas" to:

The State Bar of Texas
Membership Services
P.O. Box 12487
Austin, Texas 78711-2487

And, mail a copy to ENRLS, P.O. Box 220, Mailstop H429, Austin, Texas 78767-0220.

Please call Membership Services ((800) 204-2222 or (512) 427-1463), the Publications Office (512) 232-1149, the Treasurer, or the Editor-in-Chief, if you have any questions.

TEXAS ENVIRONMENTAL LAW JOURNAL

Name	
Firm, Business, or Agency	
E-mail Address (required to receive Greenwire Newservice and e-Newsletters)	
Mailing Address	
Hard Copy Desired	
Telephone/Fax Numbers	
State Bar Number	

A version of this form is also available on the Section's website at: www.texenrls.org/howtojoin.html.

IF WE MUST EVER CROSS THE ALPS AGAIN: REFLECTIONS ON THE LEGAL FRAMEWORK OF OIL SPILL RESPONSE FROM THE FIRST SPILL OF NATIONAL SIGNIFICANCE

BY NATHAN BLOCK, JAKE RODRIGUEZ, AND ALI ABAZARI

I.	Introduction	1
II.	Need for Better Definition Between NCP-Defined Phases of Response	4
III.	Need for Better Definition Between Removal (Response) and Restoration (Natural Resource Damage Assessment (NRDA)).....	7
	A. Legal Distinctions Between Removal and Restoration	7
	B. Deepwater Horizon Context – The Operational Science Advisory Team Reports (OSAT) Reports	12
	C. The Shoreline Clean-up Completion Plan (SCCP)	13
	D. The Florida Panhandle Experience	15
	E. The Long Discomfiture	16
IV.	Need for Better Definition of OSC Emergency Authority – SONS Oil Spill Doesn’t Fit the ‘Short-Lived’ Emergency Authority Model	20
	A. Access to Property	20
	B. Permitting	20
V.	Documenting a Response in the Era of Big Data.....	22
VI.	Conclusion	26

I. INTRODUCTION

Change is the law of life. And those who look only to the past or present are certain to miss the future. – John F. Kennedy, June 25, 1963

In October 2010, Admiral Thad Allen, the National Incident Commander for the Deepwater Horizon incident, issued his *National Incident Commanders’ Report: MC252 Deepwater Horizon*¹ with his views on the functioning of the MC252 Deepwater Horizon (DWH) oil spill response.² Admiral Allen anticipated calls for “sweeping changes” of oil

1 THAD W. ALLEN, U.S. COAST GUARD, NATIONAL INCIDENT COMMANDER’S REPORT: MC252 DEEPWATER HORIZON (2010).

2 MC252 is an abbreviation denoting the location of the Macondo well in the Mississippi Canyon area, Block 252. The Deepwater Horizon was the name of the mobile offshore drilling unit (MODU) owned by Transocean and contracted to drill the Macondo well for BP Exploration & Production Inc. (BPXP). See NAT’L OCEANIC & ATMOSPHERIC ADMIN.,

spill response doctrine.³ A Spill of National Significance (SONS) or a smaller scale event that necessitates a long-lived removal action can create challenges distinct from more typical events; challenges that are not adequately addressed in the current regulatory framework. Our view, that of attorneys who worked the entirety of the DWH oil spill response, is that current authorities are adequate for the majority of situations, but need to be updated and modernized to address the challenges of large scale or long-lived removal actions.

In the early days of the DWH response, the National Contingency Plan (NCP)⁴ and the Incident Command System (ICS),⁵ designed to be flexible and adaptable, worked very well. It should be no surprise, however, that the first SONS would test response doctrine, and highlight the need for changes to organization and process. To that end, much of what can be observed has been addressed in the reports of National Incident Commander (NIC), Admiral Thad Allen⁶, the On-Scene Coordinator Report: Deepwater Horizon Oil Spill,⁷ the U.S. Coast Guard's (USCG) Incident Specific Preparedness Review (ISPR) for the BP Deepwater Horizon Oil Spill,⁸ the National Response Teams NRT Assessment Report: Feedback from the Deepwater Horizon Oil Spill⁹, and the U.S. Department of Homeland Security's Office of Inspector General's report on the USCG's Oversight of Recommendations from Deepwater Horizon After Action Reports.¹⁰ Most of these assessments were completed by 2012. What too few people realize, however, is that the USCG directed removal action (a.k.a. the "response") was not officially concluded until February 28, 2015.¹¹ Much of the long tail of the removal action occurred after the media interest faded and outside the attention of most observers—even most

DEEPWATER HORIZON OIL SPILL: FINAL PROGRAMMATIC DAMAGE ASSESSMENT AND RESTORATION PLAN AND FINAL PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT 2–3 (2016).

3 ALLEN, *supra* note 1, at 2.

4 40 C.F.R. §§ 300.1–300.1105 (2017).

5 Glossary, FED. EMERGENCY MGMT. AGENCY, <https://emilms.fema.gov/is700anew/glossary.htm> (last visited Sept. 8, 2017) (defining "incident command system" as a "standardized on-scene emergency management construct specifically designed to provide an integrated organizational structure that reflects the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries").

6 See ALLEN, *supra* note 1.

7 U.S. NAT'L RESPONSE TEAM, ON SCENE COORDINATOR REPORT DEEPWATER HORIZON OIL SPILL (2011) [hereinafter ON SCENE COORDINATOR REPORT].

8 U.S. COAST GUARD, BP DEEPWATER HORIZON OIL SPILL INCIDENT SPECIFIC PREPAREDNESS REVIEW (2011) [hereinafter INCIDENT SPECIFIC PREPAREDNESS REVIEW].

9 U.S. NAT'L RESPONSE TEAM, NRT ASSESSMENT REPORT: FEEDBACK FROM THE DEEPWATER HORIZON OIL SPILL (2012).

10 OFFICE OF INSPECTOR GEN., U.S. DEP'T OF HOMELAND SEC., THE USCG'S OVERSIGHT OF RECOMMENDATIONS FROM DEEPWATER HORIZON AFTER ACTION REPORTS (2014).

11 See U.S. Coast Guard, *USCG Statement for the Record for a House Committee on Natural Resources Hearing Titled "Innovations in Safety Since the 2010 Macondo Incident,"* DEP'T OF HOMELAND SECURITY (Apr. 22, 2015), <https://www.dhs.gov/news/2015/04/22/uscg-statement-record-house-committee-natural-resources-hearing-titled-innovations/>.

people living along the Gulf Coast.¹² This paper is primarily concerned with observations on that long tail.¹³

While everyone hopes the world never experiences another spill comparable to DWH, a spill requiring oil removal actions to last a few months or more is not inconceivable. To ensure that the systems can perform efficiently and effectively when a response action governed by the Oil Pollution Act (OPA)¹⁴ requires prolonged and sustained activity, there are important but modest issues that should be addressed. The need for keeping the systems up to date is particularly evident when one considers the rate of change in the world today; changes in the world of offshore oil and gas production, evolving threats from terrorism, the ever-present danger of spills occurring in conjunction with large-scale severe weather events, and the exponential growth of our ability to generate documents and data.

As a preliminary matter, it is our position that, regardless of who is performing a removal action, the processes and essential elemental progression of an oil spill response and removal action¹⁵ should be the same. The standards governing a removal action should be capable of being applied predictably and consistently and without regard to whether a responsible party (RP) is performing or the USCG, without regard to the size or resources of any RP, and without regard to fault or culpability. The scale and timeline of the DWH response brought to light previously unexperienced issues from which we can now see that the current framework does not provide adequate predictability or consistency. Because no one can ever foreclose the potential for another SONS or long-lived oil spill response action, updating the regulations will improve planning and predictability for all. We write this then so that others involved in oil spill response can be aware of the concerns and armed with the ability to address and hopefully avoid these issues.

Some of those issues observed result from the function of the passage of time since OPA was written. Others relate to a poor fit between the regulations and the realities of a long-lived removal action. Although a myriad of issues were encountered during the five years of the response, most of them fit into one of four themes, discussed below.

1. DISTINGUISHING BETWEEN THE PHASES OF RESPONSE

While the NCP defines different phases for an oil spill response,¹⁶ there is a lack of clarity as to the distinctions between the phases. The expectations of the parties, the

12 *See id.*

13 We have not attempted to summarize the organization, structure, and function of a marine spill response led by the Federal On-Scene Coordinator (FOSC). For additional background, there are excellent resources and training modules available from various federal agencies involved in oil spill response. *See generally* U.S. COAST GUARD, INTRODUCTION TO MARINE SAFETY AND ENVIRONMENTAL PROTECTION (2013); *Office of Response and Restoration*, NAT'L OCEANIC & ATMOSPHERIC ADMIN., <https://response.restoration.noaa.gov/oil-and-chemical-spills/oil-spills/resources> (last visited Sept. 10, 2017) (compiling resources about oil and chemical spills).

14 33 U.S.C. §§ 2701–2761 (2012).

15 “Response” is used colloquially to refer to a “removal action” conducted pursuant to and under the legal authority of OPA and the NCP. The terms may be used interchangeably. *But see* 40 C.F.R. § 300.305(d) (2017).

16 40 C.F.R. §§ 300.300–315 (2016).

authority of the Federal On-Scene Coordinator (FOSC), and access to Oil Spill Liability Trust Fund (OSLTF)¹⁷ change as the response progresses through the defined phases. It is our observation that, in the long-lived response of DWH, the ground-level activity did not neatly track the regulations and resulted in a lack of clarity about FOSC's authority and access to OSLTF funding.¹⁸ The result of the issues was to have the FOSC feel the need to develop ad hoc, DWH response-specific processes to progress the response to conclusion.

2. *DISTINGUISHING RESPONSE FROM RESTORATION*

The laws and regulations for marine spill response describe and govern the removal action distinctly from any ensuing natural resource damage assessment (NRDA).¹⁹ We observed insufficient clarity in the distinctions between the response and the NRDA. This distinction is meaningful and very important. When compared to an oil spill response, there are significant differences in the processes used and the stakeholders involved in making restoration decisions.

3. *PREEMPTION AND FOSC AUTHORITY*

We observed a lack of clarity in the scope and inconsistency in the application of preemption and direct control of emergency removal actions. This problem is seldom, if ever, encountered in a more typical short-lived response. In a long-lived response, unpredictability in this regard can generate otherwise avoidable delay.

4. *MANAGING BIG DATA*

The pace of change in the modern world, particularly with regard to our accelerating ability to generate massive amounts of information, must be addressed. The regulations need to be modernized to avoid inefficiency, waste, and confusion over the requirements for preservation and documentation of a response.

II. NEED FOR BETTER DEFINITION BETWEEN NCP-DEFINED PHASES OF RESPONSE

When considering the need for better definition of response phases, we focus on two aspects of the issue. First, we observe that the NCP regulations need to better define the actual activities that comprise an oil spill response and provide greater flexibility for an FOSC to progress activities through the phases. Second, we suggest the need for regulations to provide more flexible funding structures to synthesize the regulations with the

17 The OSLTF is administered by the USCG's National Pollution Fund Center (NPFC) pursuant to Title I of OPA. See *The Oil Spill Liability Trust Fund*, U.S. COAST GUARD, http://www.uscg.mil/npfc/About_NPFC/osltf (last visited Nov. 17, 2017) [hereinafter OSLTF] (providing general information about the OSLTF).

18 See generally INCIDENT SPECIFIC PREPAREDNESS REVIEW, *supra* note 8, at 92.

19 See 15 C.F.R. § 990.10 (2017) (“[T]his part provides a natural resource damage assessment process for developing a plan for restoration of the injured natural resources and services and pursuing implementation or funding of the plan by responsible parties.”).

reality of long-lived response actions. Combined, these changes should eliminate the need for incident-specific, ad hoc processes.

Oil spill response actions progress through defined phases described in 40 C.F.R. Part 300, Subpart D. Phases I and II cover discovery of a spill and organization of a response.²⁰ Phase III encompasses the cleanup both on the water and at the shoreline.²¹ These Phase III activities dominated the DWH timeline.²² Phase IV is intended to address documentation of the response and cost recovery.²³ With a long-lived response, it's very likely that the activities of these phases will, of some practical necessity, overlap. The DWH removal action quickly built to an operation of more than 47,000 people.²⁴ This was a massive operation with complex functions conducted across a huge area. Keeping all of that activity and effort neatly within the phases defined by NCP regulations was inevitably going to be a challenge. However, what was observed in the prolonged timeline of the DWH response was the erosion of meaningful distinctions between the phases.

For most short-lived responses, aside from being inconsistent with a strict reading of the NCP, minor blurring of activities across defined phases is of little consequence. However, in a long-lived response, it has the potential for real consequence to the efficient progression of the response. A prime example of such an issue is maintenance of the USCG's ability to fund Federal, state, and local government activity in support of the response. Those activities, including among others the National Oceanographic and Atmospheric Administration (NOAA) designated Scientific Support Coordinator (SSC),²⁵ can be funded through the USCG-managed OSLTF²⁶ using the Pollution Removal Fund Authorization (PRFA) process. The PRFA process applicable to State governments is found at 33 C.F.R. Part 133. Section 133.13 provides that:

To be eligible for funding under this part, each removal action:

- (a) Must be for an incident, occurring after August 18, 1990, which resulted in a discharge, or the substantial threat of a discharge, of oil into or upon the navigable waters or adjoining shorelines.
- (b) Must comply with the National Contingency Plan.
- (c) Must be an *immediate* removal action.²⁷

Under these regulations, “[r]emoval action means an incident-specific activity taken under this part to contain or remove a discharge, or to mitigate or prevent a substantial threat of a discharge, of oil.”²⁸ For a long-lived response, this definition is too limiting.

To facilitate compliance with Section 7 of the Endangered Species Act, the USCG consults with the U.S. Fish and Wildlife Service and NOAA Fisheries and prepares a

20 40 C.F.R. §§ 300.300, 300.305 (2017).

21 *Id.* § 300.310.

22 See ON SCENE COORDINATOR REPORT, *supra* note 7, at 203-22.

23 40 C.F.R. § 300.315.

24 ON SCENE COORDINATOR REPORT, *supra* note 7, at ix.

25 U.S. COAST GUARD, AN FOSC'S GUIDE TO ENVIRONMENTAL RESPONSE (2008) [hereinafter FOSC'S GUIDE].

26 OSLTF, *supra* note 17 (providing information on the function of the OSLTF).

27 33 C.F.R. § 133.13.

28 *Id.* § 133.3(b).

“biological assessment” (BA) of the removal actions.²⁹ The BA is intended to describe any impact from the removal action itself as distinguished from damage caused by the spill.³⁰ Since the BA is to evaluate the response that occurred in Phases I thru III, it is typically a Phase IV activity. Because there was such a long time between the end of significant removal activity and the formal end of Phase III, the USCG proceeded to develop the BA during Phase III. There was a strong desire by the state on-scene coordinators (SOSC) of the affected states to participate in and comment on the development of the BA. Leaving aside whether that input is necessary or appropriate, once all of the segments in a state reached RADC status, the FOSC became increasingly constrained in the ability to fund a State’s participation.

Rather than any discernible transition between phases, what was observed in the DWH response was a prolonged smearing of the activities between phases. In our view, this smearing resulted, at least in part, because the USCG lacked any other clearly defined mechanism under the regulations to fund the participation of various agencies, particularly the States in various summary and reporting activities once Phase III closed and the PRFA mechanism terminated. A mechanism for that purpose appears to be appropriate and worthy of consideration.

Relatedly, there was a strong desire for long-term monitoring of the shoreline and for the States to continue to have access to OSLTF to fund their participation in that monitoring. It is our firmly held opinion that Phase III of the response was held open for far longer than necessary or appropriate, primarily to address this tension and maintain access to PRFA funding for state activity. Regardless of whether that view is ultimately correct, the regulations are imprecise enough that there is a genuine risk of abuse of responsible parties. When these issues are considered in the timeline of DWH, the requirement that state PRFA funding be for “immediate” removal actions is clearly inconsistent with the needs of a long-lived response.

The regulatory fix is relatively easy. First, the NCP should recognize that the documentation, biological assessment and other activities may start during Phase III (which happened in DWH). Second, the FOSC should be expressly empowered to approve OSLTF / PRFA funding for that limited suite of activities to continue even after Phase III closes. Finally, the regulations should be clear in prescribing that once any segment of shoreline obtains the status of removal actions deemed complete (RADC), OSLTF funding for activity thereon terminates. Together, these minor adjustments should significantly improve the predictability in progression of a long-lived response.

29 See U.S. COAST GUARD ET AL., INTER-AGENCY MEMORANDUM OF AGREEMENT REGARDING OIL SPILL PLANNING AND RESPONSE ACTIVITIES UNDER THE FEDERAL WATER POLLUTION CONTROL ACT’S NATIONAL OIL AND HAZARDOUS SUBSTANCES POLLUTION CONTINGENCY PLAN AND THE ENDANGERED SPECIES ACT (2002) [hereinafter OIL SPILL PLANNING MOA].

30 *Id.* at 16.

III. NEED FOR BETTER DEFINITION BETWEEN REMOVAL (RESPONSE) AND RESTORATION (NATURAL RESOURCE DAMAGE ASSESSMENT (NRDA))

Spill responses progress through the NCP-defined phases of response and then transition from response to resource restoration.³¹ That transition is relatively clear and simple in a small or short-lived response. This becomes increasingly complicated with the increasing scale of the event. How oil spills interact with a coastline frame a good example of why this is a difficult issue to manage. Oil spills that impact dynamic shorelines are likely to result in oil becoming entrained in sand or other sediment.³² That material will then settle in the near-shore environment and time may be required to find and recover the materials.³³ A significant spill may result in submerged oil in the intertidal zone and “tar balls” on the beach.³⁴ The occurrence of residual oil material is a reality for many spills. However, the degree to which this phenomenon occurs or the size of the area over which it occurs will vary with the volume and duration of the spill. By the fall of 2010, scientific evidence showed that there was little toxicological risk to human health or the environment associated with the residual oil from the Macondo well.³⁵ Nevertheless, FOSC-directed removal actions continued for several more years.³⁶ The appropriate line between removal and restoration, manifest in OPA and its implementing regulations, became substantially blurred.

A. LEGAL DISTINCTIONS BETWEEN REMOVAL AND RESTORATION

OPA defines “removal” as

containment and removal of oil or a hazardous substance from water and shorelines or the taking of other actions as may be necessary to minimize or mitigate damage to the public health or welfare, including, but not limited to, fish, shellfish, wildlife, and public and private property, shorelines, and beaches.³⁷

In practice, however, that sweeping definition leaves much to interpret to allow for meaningful, consistent and predictable implementation. Most notably, OPA provides

31 See 40 C.F.R. § 300.320 (2017); *see also Oil Spills*, NAT’L OCEANIC & ATMOSPHERIC ADMIN., <https://response.restoration.noaa.gov/oil-and-chemical-spills/oil-spills> (last updated Dec. 1, 2017).

32 See OPERATIONAL SCI. ADVISORY TEAM (OSAT-2), SUMMARY REPORT FOR FATE AND EFFECTS OF REMNANT OIL IN THE BEACH ENVIRONMENT 8 (2011) [hereinafter OSAT-2 REPORT]; *see generally* NAT’L RESEARCH COUNCIL, OIL IN THE SEA III: INPUTS, FATES, AND EFFECTS (2003).

33 OPERATIONAL SCI. ADVISORY TEAM (OSAT-3), INVESTIGATION OF RECURRING RESIDUAL OIL IN DISCRETE SHORELINE AREAS IN THE EASTERN AREA OF RESPONSIBILITY 7 (2013).

34 The colloquial term “tar ball” is imprecise. By definition, “tar” is product of oil distillation or a post combustion product. The more precise term, “residual oil material” or “surface residual ball” (SRB) was applied in most DWH GCIMT documents. *See, e.g., id.* at 8.

35 OSAT-2 REPORT at 2-3, 21.

36 *See, e.g.,* Memorandum from Captain Thomas Sparks, Fed. On-Scene Coordinator, to Gulf Coast Incident Mgmt. Team (Apr. 15, 2014) (on file with author).

37 33 U.S.C. § 2701(30) (2012).

little guidance on the standard for determining when “removal” is complete. Section 1011 of OPA states that:

For the purposes of the National Contingency Plan, removal with respect to any discharge shall be considered completed when so determined by the President in consultation with the Governor or Governors of the affected States. However, this determination shall not preclude additional removal actions under applicable State law.³⁸

For oil spills occurring in the coastal zone, the President’s authority to determine when removal is complete has been delegated to the U.S. Coast Guard, which acts as the FOSC.³⁹ The NCP regulations implementing OPA are similar, but reflect the delegation of authority, stating that:

Removal shall be considered complete when so determined by the OSC in consultation with the Governor or Governors of the affected states. When the OSC considers removal complete, [Oil Spill Liability Trust Fund (OSLTF)] removal funding shall end. This determination shall not preclude additional removal actions under applicable state law.⁴⁰

While OPA and the NCP prescribe that it is the FOSC who determines when a removal action is complete, there is not an objective, quantifiable standard set forth in either OPA or the NCP on which the FOSC must base its decision. However, the “in consultation with” standard was selected, in part, as the result of a battle over “how clean is clean?”⁴¹ Congressional negotiators were concerned that giving greater authority

38 *Id.* § 2711.

39 See Exec. Order No. 12,777, 56 Fed. Reg. 54,757, 54,763 (Oct. 22, 1991).

40 40 C.F.R. § 300.320(b) (2017).

41 David H. Sump, *The Oil Pollution Act of 1990: A Glance in the Rearview Mirror*, 85 TUL. L. REV. 1101, 1115 (2011). David H. Sump “served in the Legislation Division of the Office of the Chief Counsel, U.S. Coast Guard, from 1989-91 where he was responsible for communicating and negotiating U.S. Coast Guard positions regarding OPA within the Executive Branch and on Capitol Hill.” *Id.* at 1101, n.a1. The full discussion of this issue is as follows:

“Consultation on removal actions,” 33 U.S.C. § 2711, was the result of the battle over “How clean is clean?” . . . The words “in consultation with the Governor” became the standard after several negotiating sessions discussing the merits of: (a) “with the approval of the Governor”; (b) “with the concurrence of the Governor”; or (c) “without the objection of the Governor.” The issue evolved into what might be considered an issue of “reverse preemption.” Should the governors of the affected States be given the authority to block the decision of the Federal On-Scene Coordinator to end the cleanup operations? What were the implications of granting this authority in the legislation? Ultimately, congressional negotiators feared the “veto” provisions would have the effect of granting governors a “blank check” to continue cleanup operations as they saw fit, using the responsible party/OSLTF as the payment source. State objections to ending cleanup operations not only placed additional financial burdens on the responsible party or the OSLTF but also on the federal agencies managing the spill. Granting such authority to governors was at a minimum financially unwise and possibly politically unwise as well. There was significant concern by the negotiators that, in certain spill situations, it would be politically impossible for a Governor to refrain from vetoing a federal decision to end the cleanup operations. Hence, the language was amended to permit “consultation” but not “approval” or “concurrence.”

Id. at 1115.

to the governors of the affected states would have the effect of granting a “blank check” to continue cleanup operations using the responsible party/OSLTF as the payment source.⁴² As a result, OPA merely required consultation with the governors of the affected states, with the OSC retaining final authority to make the determination.

Recognizing that spills can vary in many aspects, including the type of oil spilled, the volume released, the characteristics and accessibility of the shoreline impacted, etc., it’s reasonable to require some flexibility in interpretation. A rational and consistent system, however, should not leave itself open to wildly variable outcomes or absurd results. While OPA and the NCP do not provide an objective standard for determining when removal is complete, there is no support in the legal framework for spill response that would support the position that a “removal” requires or must functionally restore the environment to baseline (or better-than-baseline) conditions. Indeed, the definition of “removal” makes it clear that minimization and mitigation of damages is the goal of the removal phase. For a relatively minor spill or short-lived response, complete removal is certainly aspirational and sometimes actually feasible. Other times, complete removal is not feasible or in the best interests of the environment. The OPA then provides a separate process designed to assess and remedy any damage remaining after removal activities progress as far as is prudent and are completed. Specifically, Section 1006(c)(1) of OPA requires certain natural resources “trustees” to assess natural resource damage and develop and implement a plan for the restoration, rehabilitation, replacement or acquisition of the equivalent of the injured natural resources or their services.⁴³ Thus, under OPA, there is a clear distinction between the “removal” phase, which is conducted by the OSC, and the “restoration” phase, which is conducted by the natural resources trustees.⁴⁴ This distinction is also inherent in the two categories of liability a responsible party is subject to under OPA, which are removal costs and certain damages, including natural resources damages.⁴⁵

For the restoration phase, Congress directed NOAA to promulgate regulations for the assessment of natural resources damages resulting from oil spills.⁴⁶ NOAA originally adopted regulations for natural resource damage assessments (NRDA) in 1996, but portions of the regulations were vacated and remanded by the D.C. Circuit Court because NOAA failed to explain the interrelationship between the primary removal authority of the OSC and the restoration authority of the trustees.⁴⁷

An extensive discussion of the removal standard was included in a subsequent NRDA rulemaking by NOAA. The rulemaking describes the difference between “removal” and the NRDA process as follows:

While “removal” involves taking whatever actions are needed to prevent or reduce damage caused by a threat of or actual spill, natural resource damage assessment and restoration involve an investigation and planning process that is aimed at returning the

42 *Id.*

43 33 U.S.C. § 2706(c)(1) (2012).

44 *Id.* § 1321.

45 *Id.* § 2702(a).

46 *Id.* § 2706(e)(1).

47 *See Gen. Elec. Co. v. U.S. Dep’t of Commerce*, 128 F.3d 767, 775 (D.C. Cir. 1997) (vacating 15 C.F.R. § 990.53(b)(3)(i) because NOAA failed to address these central issues and to explain the difference between the proposed and final rules).

environment to baseline conditions, i.e., the state it would have been in had the incident not occurred, by implementing restoration approaches as provided under OPA.⁴⁸

The rulemaking further clarifies that, based on OPA's definition of "removal," the objective of the OSC,

is to remove as much oil as is needed to prevent, minimize or mitigate harm. In contrast, the trustee's authority to eliminate or reduce exposure to residual oil is derived exclusively from restoration authority under OPA. As such, the trustee's authority is limited to those instances where residual oil would prevent or limit the effectiveness of restoration.⁴⁹

NOAA noted that:

The [OSC] may make a determination, based upon available information, that removal is not necessary to prevent further impact to human health, welfare, or the environment. Subsequently the trustees, based upon information and analysis developed during the damage assessment process, may select a restoration alternative that involves elimination or reduction of residual oil. These determinations are not in conflict, and both are proper.⁵⁰

Accordingly, as outlined in the FOSC's Guide to Environmental Response, the OSC's removal authority is limited to only those actions necessary to minimize or mitigate damage to the public health or welfare, consistent with OPA's definition of "removal."⁵¹ Although in some spill scenarios, restoration to baseline conditions may occur, this standard is not intended to require this. Actions to restore the environment to baseline conditions are more appropriately part of the NRDA restoration process, rather than the OSC's removal process.

While no objective cleanup standards are provided in OPA, the NCP, or their associated rulemakings, some additional guidance is developed for specific areas in various Area Contingency Plans (ACP). The applicable ACP for the Gulf of Mexico, referred to as the "One Gulf Plan," generally describes the U.S. Coast Guard's oil spill response plan.⁵² The One Gulf Plan describes the following "cleanup assessment protocol":

When spilled oil contaminates shoreline habitats, responders must survey the affected areas to determine the appropriate response. Although general approvals or decision tools for using shoreline cleanup methods can be developed during planning stages, responders' specific cleanup recommendations must utilize field data on shoreline habitats, type and degree of shoreline contamination, and spill-specific physical processes. Cleanup endpoints must be established early so that appropriate cleanup methods can be selected to meet the cleanup objectives. Shoreline surveys must be conducted systematically because they are crucial components of effective decisions. Also, repeated surveys are needed to monitor the effectiveness and effects of ongoing treatment methods

48 Natural Resource Damage Assessments, 67 Fed. Reg. 61,483, 61,484 (Oct. 1, 2002) (to be codified at 15 C.F.R. pt. 990).

49 *Id.*

50 *Id.*

51 *See id.*; *see generally* FOSC'S GUIDE, *supra* note 25.

52 *See* U.S. COAST GUARD, ONE GULF PLAN (2009).

(changes in shoreline oiling conditions, as well as natural recovery), so that the need for changes in methodology, additional treatment, or constraints can be evaluated.⁵³

The One Gulf Plan notes that the NOAA Shoreline Assessment Manual outlines methods for conducting shoreline assessments after an oil spill and that the assessments can be incorporated into the decision-making process for shoreline cleanup.⁵⁴ The Shoreline Assessment Manual describes the process for selecting cleanup endpoints. According to the manual, “endpoints are selected based on cleanup objectives to[:] 1) minimize exposure to hazards for human health; 2) speed recovery of impacted areas; and 3) reduce the threat of additional or prolonged natural resource impacts.”⁵⁵ The manual states that:

Ideally, cleanup efforts will return the resource to its baseline condition without suffering further impact or affecting resources not initially impacted by the spill. Aggressive and inappropriate cleanup techniques can make matters worse. Less intrusive methods or natural recovery are often preferable. The best cleanup strategy is often not the one that removes *the most* oil. Rather, it is the strategy that removes oil that poses a greater risk of injury than [sic] would result from cleanup, and allows remaining oil to be removed by natural processes.⁵⁶

The manual provides an extensive list of examples of cleanup endpoints based on the characteristics of different shoreline types.⁵⁷ As a supplement to the manual, the Shoreline Assessment Job Aid, provides visual examples of many of the conditions described in the manual.⁵⁸ Some examples are as follows:

Sand Beaches:

Cleanup can be terminated when no visible oil remains on the surface, except for scattered tar balls or swash lines of minute tar balls which may occur as the sand is reworked by the waves. All tar balls or tar patties that can be removed by reasonable cleanup techniques, or that can be remobilized, should be removed. Remaining tar balls and tar patties should be at or below normal background frequency. Increases in tar ball frequency above background will require further cleanup. Cleanup can be terminated when no oil layers are found in trenches dug into the beach. Buried tar balls should be at or below background frequency.⁵⁹

Mixed Sand and Gravel Beaches:

Cleanup can be terminated when all liquid oil in the sediments has been removed. No more than a stain may remain on the gravel-sized sediments. There should be no oil layers in pits dug by the inspection team. Occurrences of buried tar balls should be at or below background frequency.⁶⁰

53 *Id.* at 1-18.

54 *Id.*

55 NAT'L OCEANIC AND ATMOSPHERIC ADMIN., SHORELINE ASSESSMENT MANUAL 23 (2000) [hereinafter SHORELINE ASSESSMENT].

56 *Id.*

57 *Id.* at 25-30.

58 See NAT'L OCEANIC & ATMOSPHERIC ADMIN., SHORELINE ASSESSMENT JOB AID (2007).

59 SHORELINE ASSESSMENT, *supra* note 55, at 26-27.

60 *Id.* at 28.

These guidance documents provide some objective standards for determining cleanup endpoints. More importantly, they recognize that having an FOSC-led removal action seeking to return the shoreline to its pre-spill baseline condition may not be possible or even a sensible strategy to pursue.⁶¹ Such decisions require consideration of scientific evidence and input from appropriate experts on the relative merits of various strategies. A significant amount of such information and analysis was available as early as the fall of 2010.⁶²

B. DEEPWATER HORIZON CONTEXT – THE OPERATIONAL SCIENCE ADVISORY TEAM REPORTS (OSAT) REPORTS

The legal divisions between response and restoration place an emphasis on the mitigation of risk. In the conduct of an oil spill response, an OSC is charged with ensuring “. . . a timely, effective response that minimizes adverse impact to the environment.”⁶³ From this choice of words, it is clear that it was not the intention of the drafters that an OSC-directed removal action would attempt to remove every bit of oil or to attempt to restore resources. To align with the language and intent of the regulations, the emphasis for removal action decisions then must rely on what can be known about the risks of the material in the environment. Based on what was known at the time, we believe the data available to the DWH FOSC supported transitioning from response to restoration much earlier than was actually done. Starting in the late summer of 2010, the USCG organized a multi-disciplinary team of scientists from various federal and state agencies and representatives of the responsible party.⁶⁴ This Operational Science Advisory Team (OSAT) was charged with evaluating the recoverability and risk associated with any oil that might remain in the environment and advising the FOSC on future removal actions.⁶⁵ The OSAT Summary Report for Sub-Sea and Sub-Surface Oil and Dispersant Detection (OSAT Summary Report) was released Dec. 17, 2010.⁶⁶ Based on this team’s work, the FOSC concluded that there was “no actionable oil or sediments in the deep-water or offshore zones.”⁶⁷ Other key findings of the OSAT Summary Report report included:

1. There were no deposits of liquid-phase, Macondo oil identified in sediments beyond the shoreline.
2. No analyzed water samples exceeded the Environmental Protection Agency’s (EPA) benchmarks for protection of human health.
3. After August 3, 2010, no water samples exceeded EPA aquatic life benchmarks for dispersants or polycyclic aromatic hydrocarbons (PAHs) that were consistent with Macondo oil.

61 *Id.* at 23.

62 ON SCENE COORDINATOR REPORT, *supra* note 7.

63 40 C.F.R. § 300.317(c) (2017).

64 See OPERATIONAL SCI. ADVISORY TEAM (OSAT), SUMMARY REPORT FOR SUB-SEA AND SUB-SURFACE OIL AND DISPERSANT DETECTION: SAMPLING AND MONITORING 7 (2010) [hereinafter OSAT SUMMARY REPORT].

65 *Id.* at 1.

66 *See id.*

67 Memorandum from Rear Admiral Paul F. Zukunft, Unified Area Command, New Orleans, to Vice Admiral Robert C. Parker 3 (Dec. 17, 2010), https://www.restorethegulf.gov/sites/default/files/documents/pdf/OSAT_Report_FINAL_17DEC.pdf.

4. Only about one percent of sediment samples taken after Aug. 3, 2010, exceeded EPA aquatic life benchmarks for PAHs, and only those within 3 kilometers of the wellhead were consistent with Macondo oil.⁶⁸

To satisfy the FOSC's mandate to evaluate risk, the OSAT-2 Report was released on February 10, 2011.⁶⁹ The intention at the time was that the report would assist the FOSC in making decisions about ongoing cleanup operations, focusing on natural habitat beaches.⁷⁰ The report examined data collected from beaches in Alabama, Florida, Louisiana, and Mississippi. Key findings of the OSAT-2 report included:

1. Weathered oil samples collected for the study showed 86-98 percent depletion of total PAHs.
2. Calculated potential human health effects from short- and long-term exposure to oil residue were below EPA acceptable risk levels.
3. Based on a detailed net environmental benefit analysis, any additional cleanup of oil residue may disturb sensitive habitats and wildlife, posing a greater environmental risk than leaving the residue in place.
4. There is minimal risk of oil leaching into groundwater from buried oil due to the combined effects of weathering, biodegradation and the location of buried oil.⁷¹

The OSAT Summary and OSAT-2 reports provide a contextual understanding of the scientific understanding of the limited risk posed by residual oil. Additionally, the OSAT-2 report concluded that additional recovery efforts could cause more damage to the environment than allowing natural attenuation.⁷² This is the point at which the statutory and regulatory distinctions between removal and restoration begin to come into real conflict.

C. THE SHORELINE CLEAN-UP COMPLETION PLAN (SCCP)

Through the summer of 2011, the Gulf Coast Incident Management Team (GCIMT) worked to ensure that data from across the broad area of the response was collected, organized, and used consistently. These efforts helped drive the recognition of the potential for inconsistency and a lack of clarity about how clean was clean enough and how best to demonstrate that any given shoreline segment⁷³ had, in fact, met and maintained an appropriate cleanup end point. A long iterative process, involving repre-

68 OSAT SUMMARY REPORT, *supra* note 64, at 2–3. The Macondo Well is approximately 41 miles (80.4 kilometers) from the closest shoreline. *BP Confirms That Transocean Ltd. Issued the Following Statement Today*, BRITISH PETROLEUM (Apr. 21, 2010), <https://web.archive.org/web/20100425040406/http://www.bp.com/genericarticle.do?categoryId=2012968&contentId=7061443>; *see also* OSAT SUMMARY REPORT, *supra* note 64, at 50–61.

69 *See* OSAT-2 REPORT, *supra* note 32.

70 *See id.* at 7.

71 *Id.* at 2.

72 *Id.*

73 For administrative and data management purposes, the shoreline was divided in segments. Although roughly approximate in length, the existence of natural divisions, changes in shoreline type, topography or other factors were factored in the actual segment divisions. *See* SHORELINE CLEAN-UP PLAN CORE GRP., U.S. COAST GUARD, DEEPWATER HORIZON SHORELINE CLEAN-UP COMPLETION PLAN 5–7 (2011) [hereinafter SCCP].

sentatives of all of the stakeholders, was used to develop an ad hoc, DWH-specific system to provide predictability and some certainty to those decisions. By November 2011, this process had resulted in the FOSC issuing the Shoreline Clean-up Completion Plan (SCCP).⁷⁴ Arguably, spill response doctrine was mature and defined enough that this ad hoc, event specific process should not have been necessary. The lessons learned from that process illustrate the need for clarity in the overall progression of a response through the NCP-defined phases and NRDA-managed restoration.

In the words of the SCCP, it was designed to “define a process to deem that removal actions are complete on each shoreline segment within this response in a manner consistent with and documented by the Shoreline Clean-up Assessment Technique (SCAT) process.”⁷⁵ The process developed for the DWH response ultimately contained five stages of review and inspection to demonstrate not only that each segment of shoreline met the defined endpoint, but also that it was sustaining that status, and that, for example, residual oil material was not being mobilized in the surf back up onto a beach.⁷⁶

Over the course of almost three years, applied to more than 750 miles of coastline, the problems with such a system were numerous.⁷⁷ But most were relatively minor and readily managed administratively within the GCIMT. The single most consistently vexing problem was the consideration and use of data about background oiling. The Gulf of Mexico experiences loading of hydrocarbon from numerous sources.⁷⁸ Naturally occurring seeps contribute a nearly constant source of oil. Although the amount contributed by seeps varies between basins, NOAA estimates that seeps account for approximately 46% of the oil that enters the oceans.⁷⁹ Other contributors include discharges from land-based sources, discharges from vessels, and oil and gas extraction.⁸⁰

The NOAA Shoreline Guidance that informs the SCAT process and oil spill response decisions suggests that the appropriate standard for a shoreline is “no visible oil,” taking into account the existence of background conditions.⁸¹ The SCCP articulated the standard as “no visible oil” or as “low as reasonably practicable considering the allowed treatment methods and net environmental benefit.”⁸² For certain shorelines such as marshes with sensitive marsh platforms, the potential for cleanup efforts to damage the marsh platform or plants made the “no visible oil” standard inappropriate from a very early stage.⁸³ However, for most sandy shorelines the applied narrative standard was “no

74 *See id.* at 5–6.

75 *Id.* at 5.

76 *Id.* at 7–9.

77 NAT’L RESPONSE CTR., U.S. COAST GUARD, SUMMARY REPORT ON MIDDLE R OF THE DEEPWATER HORIZON OIL SPILL RESPONSE 2 (2015) [hereinafter SUMMARY REPORT ON MIDDLE R].

78 *See generally* E.B. Overton et al., *Historical Polycyclic Aromatic and Petrogenic Hydrocarbon Loading in Northern Central Gulf of Mexico Shelf Sediments*, 49 MARINE POLLUTION BULLETIN 557 (2004).

79 *How Does Oil Get Into the Ocean*, NAT’L OCEANIC & ATMOSPHERIC ADMIN. (Nov. 2, 2015), <http://response.restoration.noaa.gov/about/media/how-does-oil-get-ocean.html>.

80 *Id.*

81 *Id.*

82 SCCP, *supra* note 73, at 12.

83 *Id.* at 13.

visible oil.”⁸⁴ Without adequate consideration of background oiling to guide decisions, any effort to strictly apply a “no visible oil” standard risks attempting to restore the shoreline not just to a pre-spill standard, but to an unachievable standard.

D. THE FLORIDA PANHANDLE EXPERIENCE

Despite the articulated intent to account for background,⁸⁵ for long periods during the response, consideration of background and application of the “as low as reasonable and practicable” (ALARP) standard were often nebulous and difficult to meaningfully implement. Through early 2013, scientific data regarding background levels of oiling (either from natural seeps or other anthropogenic causes) was effectively ignored in decision-making regarding cleanup endpoints. This issue is best illustrated by the history of segments in the Florida panhandle through the summer and fall of 2012. The most extreme example occurred on segments of Santa Rosa Island.

The SCCP prescribed that, before obtaining the status of “removal actions deemed complete” (RADCP) (the necessary condition for removing a segment from continued monitoring), the segment had to pass all five steps in the SCCP inspection sequence.⁸⁶ If a segment failed at any step, it was required to return to the first step and repeat the entire process.⁸⁷ The authors observed that multiple segments in this part of the Florida panhandle routinely reached the fourth or fifth step in the SCCP process and then returned to the beginning for a single tar ball.⁸⁸ These tiny bits of residual oil were often no more than the size of a raisin and found on an area of beach larger than five football fields.

As an example, the Operations Section determined that segment FLOK2-007 (Florida, Okaloosa County),⁸⁹ a sandy beach of approximately 451 meters (1480 feet), had met the cleanup standard and was ready to move to inspection to demonstrate compliance.⁹⁰ The inspection process started in early December 2011.⁹¹ In late April of 2012, it failed at the final, fifth inspection step.⁹² The process was restarted and the segment again failed during the fifth inspection the second time around.⁹³ During that time, a total of 0.1292 pounds (lbs.) of tar balls were recovered.⁹⁴ On average, by weight, less

84 *Id.* at 12–14.

85 *See* SCCP, *supra* note 73. The SCCP specifically recognized the existence of background oiling concentrations.

86 SCCP, *supra* note 73, 16–19.

87 *Id.* at 19 fig. 2.

88 *See, e.g.*, U.S. COAST GUARD, SEGMENT HISTORY: FLOK2-007 (2012) [hereinafter SEGMENT HISTORY: FLOK2-007] (on file with author).

89 *Id.*

90 U.S. COAST GUARD, SCAT OBSERVATIONS AS OF 15 MAR. 2012: SIR1 INSPECTION OF FLOK2-005 AND 007, OKALOOSA ISLAND-Ft. WALTON BEACH (2012) (on file with author).

91 U.S. COAST GUARD, DEEPWATER HORIZON RESPONSE SEGMENT INSPECTION REPORT: SCCP COVER PAGE (2012) (on file with author).

92 SEGMENT HISTORY: FLOK2-007, *supra* note 88.

93 *Id.*

94 U.S. COAST GUARD, FLORIDA SAP COLLECTION DATA FOR FLOK2-007 (2012) [hereinafter SAP COLLECTION DATA FOR FLOK2-007] (on file with author).

than 10% of the mass of a tar ball was comprised of hydrocarbons.⁹⁵ The remainder consisted of inert material, such as sand, that had become entrained in the oil.⁹⁶ Only approximately 0.1292 lbs. of the recovered tar ball was oil—the equivalent of about 120 Tic Tac breath mints.⁹⁷

After numerous memos and meetings attempting to address the extreme outcomes resulting from this interpretation of the SCCP, in February, 2013 the FOSC modified the SCCP by creating an additional ad hoc, event-specific process known as the Endpoint Evaluation/Validation Period (EPEVP).⁹⁸ The EPEVP established a formalized process for documenting the FOSC's decision that the oiling conditions had reached the standard of "as low as reasonable and practicable."⁹⁹ It was effectively an SCCP off-ramp for segments that, most often as a result of background oiling, could not and likely would not ever satisfy a strict application of the "no visible oil" standard.

In attempting to apply narrative standards such as "no visible oil," some degree of imprecision, interpretation, and judgment are inherent and unavoidable. However, something like the experience of the Florida Panhandle should not ever be the norm in an oil spill response. Numerous factors—including a lack of experience in managing a complex and long-lived removal action, the outsized influence of individual stakeholders, and local political demands resulting in nullification of the prescribed process—all likely contributed to the problems encountered in implementing the SCCP. As any significant oil spill will have its own unique character, attempting a post mortem assignment of cause is far less important than improving on the ready availability and systematic, meaningful use of background oiling data. That coupled with efforts at continuous improvement in capabilities for discrimination between sources of oil, including field screening and chemical fingerprinting, is needed.

E. THE LONG DISCOMFITURE

Considering the scope of the spill and duration of the removal action, it is not surprising that fear of re-oiling persisted. Fed in part by misinformation and misunderstanding of the OSAT science, and in part by political and litigation positioning, this fear was slow to fade. As large portions of the Area of Response (AOR) obtained RADC status and active removal completed, the USCG faced enormous pressure to continue response operations or establish a distinct long-term monitoring program.¹⁰⁰ The FOSC, responding to one entreaty from a parish official in Louisiana, wrote:

95 OSAT 2 Report, *supra* note 32, at 12 tbl. 2.1.

96 *Id.*

97 SAP COLLECTION DATA FOR FLOK2-007, *supra* note 94; *Nutrition Facts*, TIC TAC, <https://www.tictac.co.nz/en/flavours#peppermint> (stating that a single Tic Tac is 0.49 grams, or 0.0011 lbs.).

98 Memorandum from Captain Samuel Walker, Fed. On-Scene Coordinator, to Gulf Coast Incident Mgmt. Team (Feb. 19, 2013) (on file with author) (giving notice that segments with oil levels "[a]s low as reasonably practicable, considering the allowed treatment methods and net environmental benefit" will be moved to EPEVP by FOSC).

99 *Id.*

100 See Letter from Captain Samuel Walker, Fed. On-Scene Coordinator, to Jaques L. Molaison, Chief Admin. Assistant, Office of the President of Jefferson Par. (Aug. 8, 2012) [hereinafter Molaison Letter] (on file with author).

My authority is limited to the emergency removal of a discharge or a substantial threat of a discharge throughout Phase III (Recovery and Removal), as discussed in 40 C.F.R. 300.305. Under Phase III, my response personnel monitor active segments. However, once I determine that removal of oils is complete or that there is no longer a substantial threat of a discharge (end of Phase III), I no longer have authority to direct monitoring. If oil is discovered after I have determined that removal is complete, the NRC¹⁰¹ . . . should be notified. The Coast Guard manages the NRC and, as with any report of oil the Coast Guard has the authority to investigate, determine a responsible party, and hold them accountable for the cleanup; or direct a response funded through the Oil Spill Liability Trust Fund in the absence of a responsible party.¹⁰²

The most reasonable interpretation of that statement, consistent with the regulations, is that once a segment obtained RADC status, the authority of the FOSC to direct removal actions on that segment ends. In reality, there were some segments with fairly persistent re-oiling with material from MC252. This combined with fear of re-oiling, even in areas where MC252 re-oiling was never a problem, led the USCG to develop yet another event specific, ad hoc procedure. In May of 2013, the FOSC issued a memo establishing a “Middle R” process.¹⁰³ The ongoing Phase III for MC252 was referred to as “the response.” The NRC process described above became to be known as “legacy response” or “Little R.” In an effort to¹⁰⁴ address the demands for monitoring and ease the transition back to Little R, the Middle R process was constructed.

The Middle R process allowed for segments to essentially come and go, in and out of the control and oversight of the DWH FOSC. If any residual oil material was observed on an RADC segment, the GCIMT would address those through a modified SCCP process.¹⁰⁵ Typically, for a shoreline not then active in a particular response, a report of oiling would be made to the NRC.¹⁰⁶ The NRC would in turn pass the information to the local Marine Safety Unit (MSU) for handling.¹⁰⁷ In the Middle R process, BP was directed to maintain standby resources to be dispatched if the USCG determined, based on visual screening, that the material was likely MC252.¹⁰⁸ Despite the OSAT report conclusions about risk and the passage of considerable additional time, resources were to be dedicated to this purpose and callable on short notice.¹⁰⁹

Even if arguably not inappropriate based on the factual conditions on the ground, this ad hoc process was poorly aligned with the NCP, the operation of the OSLTF and the USCG’s operational doctrine. First, the NCP-defined phases of response do not

101 The National Response Center (NRC) is a communications center operated by the USCG to receive and manage reports of oil spills and other releases. See NAT’L RESPONSE CTR., <http://www.nrc.uscg.mil> (last visited September 16, 2017).

102 Molaison Letter, *supra* note 100.

103 Memorandum from Captain Samuel Walker, Fed. On-Scene Coordinator, to Gulf Coast Incident Mgmt. Team (May 15, 2013) (on file with author).

104 *Id.*

105 *Id.* at 2.

106 *Id.*

107 *Id.*

108 *Id.*

109 FOSC’S GUIDE, *supra* note 25, at 13.

expressly provide for the on-off/in-out switching process that resulted from this Middle R process. Second, the process resulted in the dispatch of standby resources to address material ultimately not associated with MC252.¹¹⁰ With the passage of time, the acuity of visual determinations of the source became less and less reliable. The convenience to the USCG provided by the Middle R process for RADC segments resulted in a shortcut to the USCG's normal process of reliably identifying an RP before assigning and having that RP incur costs.¹¹¹

USCG procedures require one or more defined lines of evidence to identify a responsible party.¹¹² Where the USCG does not have direct evidence of the source, it needs to rely on a mechanism such as chemical fingerprinting to develop evidence connecting the release to a source before designating a responsible party seeking to recover its costs of responding.¹¹³ The Middle R process facilitated an easier presumption that material was MC252, and directed BP to respond with the actual determination of an RP deferred.¹¹⁴ Costs associated with resources dispatched to recover visually-identified materials that later were found by chemical analysis to be non-MC252 material were documented and reported to the NPFC.¹¹⁵ These cost disputes were ultimately mooted by the settlement of all remaining government claims and never directly reconciled.¹¹⁶

Regardless of any view about the fairness or equity of the application of the Middle R process to the DWH removal action, the ad hoc nature of the process should be examined and the lack of a clear path, fully aligned with the NCP and OSLTF regulations should be rectified. RPs should be able to expect shorelines to progress out of the response in an orderly fashion. Once a segment reaches RADC, subsequent reports of oiling on that shoreline should be addressed through the NRC notification. Policy should favor the clear and consistent exercise of authority. In that frame, the course more consistent with existing regulation would have been for the USCG to address NCP calls related to RADC segments, and chemically fingerprint the material. Only then should the USCG seek to identify an RP, pursue cost recovery and, as appropriate, enforcement. If considerations of convenience and efficiency of the response or protection of the OSLTF prevail, the regulations should nevertheless be adjusted to create an efficient administrative, evidentiary process for contesting MSL fingerprinting determinations. If an expedited, but evidence-based process to challenge fingerprinting determinations existed, the regulations could then facilitate a rapid mechanism to reconcile costs incurred by an RP for material from other sources. Without additional clarity, ad hoc processes will again be necessary if a similarly long-lived response occurs. In our view, it seems unlikely that similar processes and a similar level of conservatism observed

110 SUMMARY REPORT ON MIDDLE R, *supra* note 77, at 8.

111 U.S. COAST GUARD, COMMANDANT INSTRUCTION MANUAL 16000.10A, MARINE SAFETY MANUAL VOLUME V: INVESTIGATIONS AND ENFORCEMENT, at B8-6 to -8 (Apr. 24, 2008) [hereinafter COMDTINST M16000.10A].

112 *Id.* at B8-6.

113 SUMMARY REPORT ON MIDDLE R, *supra* note 77, at 7–11.

114 *Id.*

115 FOOSC'S GUIDE, *supra* note 25, at 8.

116 See Press Release, British Petroleum, BP to Settle Federal, State and Local Deepwater Horizon Claims for Up to \$18.7 Billion (Jul. 8, 2015), <https://www.bp.com/en/global/corporate/media/press-releases/bp-to-settle-federal-state-local-deepwater-horizon-claims.html>.

in DWH would be applied if the response were without a performing RP and OSROs were implementing an OSLTF-funded removal.

The final evolution of the Middle R process occurred in April 2014, when the FOSC removed the final six segments remaining in ‘active response’ from the SCCP process.¹¹⁷ These segments were all in highly dynamic and remote shorelines in southeast Louisiana.¹¹⁸ The FOSC, however, did not determine that the segments had met their defined endpoints or that the removal had reached the ALARP standard.¹¹⁹ Rather, he concluded that the SCCP was no longer the best mechanism for guiding the final response actions.¹²⁰ Instead, any future action would be initiated by call to the NRC, but then managed under the Middle R process.¹²¹ Terminating FOSC-directed actions and returning an area to the NRC process should signal the termination of Phase III of the response. However, in DWH, that was not the case. Despite having all activity completed pursuant to 40 C.F.R. § 300, Phase III and its associated funding mechanisms remained opened nearly another year. Having established a precedent for a process so poorly aligned with the regulations, stakeholders can cite that precedent to argue for parochial interests and manipulate outcomes. Without regulatory changes, future FOSCs may be left without doctrinal foundation, based on consistent application of the regulations and guidance, to resist that pressure.

Where ad hoc processes are applied, there is risk of legal infirmity. Because ad hoc processes are not subjected to the rigor of processes, such as notice and comment rulemaking, they miss opportunities for clarification from stakeholder input. Although the *ad hoc* processes employed in DWH might be cognizable as administrative adjudications, rather than rulemakings under the APA, the best way to avoid any such future concern would be to address the gaps identified. With an ad hoc process, the potential for abuse exists. Because response leadership may feel less constrained in modifying such an ad hoc process, the avenues for arbitrary action are potentially numerous. Taking the example at hand, if a similar Middle R process were deemed appropriate for future long-lived responses or SONS, to avoid the potential for arbitrary and capricious actions, the regulations must provide clear metrics and guidance for how long a Middle R process can continue. The DWH Middle R process was entirely open-ended, and was amended and reinterpreted by successive FOSCs.

117 Memorandum from Captain Thomas Sparks, Fed. On-Scene Coordinator, to Gulf Coast Incident Mgmt. Team (Apr. 15, 2014) [hereinafter April 2014 Memorandum] (on file with author).

118 *Id.*

119 *Id.*

120 See *id.*; SUMMARY REPORT ON MIDDLE R, *supra* note 77, at 6–7.

121 April 2014 Memorandum, *supra* note 117.

IV. NEED FOR BETTER DEFINITION OF OSC EMERGENCY AUTHORITY –
SONS OIL SPILL DOESN'T FIT THE 'SHORT-LIVED' EMERGENCY
AUTHORITY MODEL

A. ACCESS TO PROPERTY

A problem observed during the response was a lack of a clear, consistent understanding on the part of the FOSC regarding authority to direct access to private property for removal actions. Although the USCG manuals and procedures are clear about the authority for the USCG to board and direct vessels, the USCG Marine Safety Manual appears to be devoid of any direction regarding access to private property for cleanup. Although relatively small, some landowners demanded payment for access agreements to allow removal actions to occur on their property. These are very distinguishable from leases and access agreements on or across property for staging equipment or other response activities. The USCG was generally unwilling to assert authority to direct access. As a result, the RP found it necessary to enter into a small number of access agreements with private landowners for the purpose of cleanup of that property. Not surprisingly, these agreements created an additional layer of complexity for the progression of the response and generated additional litigation.

In the context of an emergency removal action, the USCG's authority to direct access for cleanup should be very clear and unambiguous. In the instances where a landowner is adamant about refusal of access, the regulations should either have a clear avenue for an OSC to obtain an order or provide a clear transfer of liability and responsible party status to the person denying access. We can speculate that scientific data from work such as the OSAT reports may have relieved the FOSC of a sense of urgency about ordering access to private property. Consistency and predictability are key objectives. We find it doubtful that an access agreement would have been signed by an FOSC without a performing RP and using a contracted oil spill response organization (OSRO) to conduct an OSLTF funded removal.

B. PERMITTING

A similar and related issue arose in the context of preemption of permitting for removal actions by other Federal, state, or local authorities.¹²² The USCG has clear authority to preempt permitting from other agencies, particularly other Federal agencies, in the conduct of a removal action.¹²³ In late 2010, USCG JAG Captain Poulin issued an extensive legal opinion on the FOSC's authority in which he concluded:

Section 311(c) of the Clean Water Act vests the authority to remove oil and hazardous substances, and to direct all associated Federal, state and private actions, with the President. This removal authority has been delegated to the Coast Guard FOSC for oil

122 See, e.g., *BP America, Inc. v. Chustz*, 33 F.Supp.3d 676, 689 (M.D. La. 2014). The Deepwater Horizon matter resulted in litigation over the scope of federal preemption. This litigation was primarily focused on the scope of enforcement authority and on interpretation of OPA's savings clause. *Id.*

123 *Id.* at 690.

and hazardous substance removal in the coastal zone and obviates the need for additional permitting from any agency (including the ACOE).¹²⁴

The USCG was inconsistent in its application of that authority and frequently reluctant to assert its authority. As an example, offshore dredging was required in a few locations. However, the dredging was not to recover oil but to facilitate vessel access to land workers and equipment. Because there was no true “emergency” at this point in the response, the USCG declined to exercise its otherwise appropriate authority to obviate the need for a permit. Instead, the FOSC directed the RP to secure permits. However, under the controlling regulatory framework, we do not believe dredging to create access for removal can be meaningfully distinguished from dredging to recover oil. Actions undertaken at the direction of an FOSC to facilitate removal actions are themselves removal actions.

The same legal rationale and authority cited by the USCG in its memo on the authority of the Army Corp of Engineers should apply equally to any state or local permitting authority in the context of a removal action.¹²⁵ Nevertheless, in situations where in the view of the USCG determined that state or local permitting did not overly impede the progress of the removal, state and local governments were allowed to assert the authority and the RP was required to obtain those permits.¹²⁶ While allowing this permitting may have not been convenient, it is a poor precedent for future spill response. This is also another example where it seems very unlikely that the USCG would allow the assertion of state and local authority over removal actions if there had not been a performing RP and the activity was being funded by the OSLTF.

Our last example of this issue occurred in the USCG’s attempt to carry out its obligations for National Historic Preservation Act (NHPA) Section 106 compliance. Federal agencies are required to comply with the NHPA for any undertaking.¹²⁷ That includes the USCG’s conduct of an oil spill response. Because an emergency response is not typical of other federal undertakings (e.g building a highway or courthouse), the USCG’s obligations and processes for Section 106 compliance are defined in a programmatic agreement with other federal agencies (the 1997 Programmatic Agreement).¹²⁸ The 1997 Programmatic Agreement attempts to set out a structure by which an FOSC can consider cultural resources in making decisions about removal actions.¹²⁹ However, because of the emergency context, NHPA Section 106 compliance as prescribed by the 1997 Programmatic Agreement is intended to be more flexible and adaptable than would be the case for many other federal undertakings.

124 Memorandum from Captain Steve Poulin, CG-0941, to Fed. On-Scene Coordinator, Deepwater Horizon Oil Spill Response, at 15 (Dec. 20, 2010) [herein after December 2010 Memorandum] (on file with author).

125 *Cf. id.*

126 See British Petroleum, Permitting Summary (July 21, 2011) (unpublished permit compilation) (on file with author).

127 National Historical Preservation Act § 106, 54 U.S.C. § 306108 (Supp. 2015); 36 C.F.R. § 800.2 (2017).

128 See ADVISORY COUNCIL ON HISTORIC PRES. ET AL., PROGRAMMATIC AGREEMENT ON PROTECTION OF HISTORIC PROPERTIES DURING EMERGENCY RESPONSE UNDER THE NATIONAL OIL AND HAZARDOUS SUBSTANCES POLLUTION CONTINGENCY PLAN (2002).

129 *See id.* at 4.

Some oiling occurred on property belonging to the National Parks Service (NPS).¹³⁰ During the DWH response, the USCG allowed the NPS to require separate Archaeological Resource Protection Act (ARPA) permits for cultural resource surveys undertaken on NPS lands in conjunction with oil cleanup.¹³¹ Captain Poulin's memo established that permitting from any agency was unnecessary for FOSC-directed removal actions.¹³² The failure to preempt the ARPA permitting unnecessarily complicated the USCG's own compliance with the 1997 Programmatic Agreement. It also diminished the 'federal' nature of the response by creating inconsistent standards for conducting work and necessitated an entirely separate set of largely duplicative reports even though all of the work was conducted as part of the same FOSC-directed removal action. We can find no precedent for the USCG's course here and are skeptical that the USCG would have allowed the NPS to require ARPA permitting under other circumstances, with a different RP, or an OSLTF-funded removal.

V. DOCUMENTING A RESPONSE IN THE ERA OF BIG DATA

Each FOSC is required to comply with the documentation obligations of the NCP.¹³³ While the NCP generally requires that "documentation shall be sufficient to support full cost recovery for resources used and shall identify the source and circumstances of the incident, the responsible party or parties, and impacts and potential impacts to public health and welfare and the environment,"¹³⁴ the regulations do not effectively define or elaborate on what constitutes "sufficient" documentation.¹³⁵ At the outset, the documentation obligations under the NCP are distinguishable from any other legally imposed obligation to preserve documents, evidence or other tangible things. In the context of litigation or government enforcement, documents potentially relevant must be preserved and available for discovery. That must be contrasted with what the USCG must gather, organize, and ultimately transfer to the National Archives and Records Administration (NARA) as a result of its obligations under the NCP.

The regulations and USCG guidance attempt to create a sensible outline for what must be gathered and transmitted to NARA. However, the regulations and guidance are out of step with the modern reality. The volumes of data and metadata that can be

130 See U.S. NAT'L PARK SERV., OIL SPILL RESPONSE: PROTECTING OUR PAST (2010), <http://npshistory.com/publications/eq/oil-spill/cult-res.pdf>.

131 See, e.g., Memorandum from David W. Morgan, Dir., Se. Archeological Ctr., to Gordon Wissinger, Acting Reg'l Dir., Nat'l Park Serv. Se. Region (Mar. 27, 2013) (on file with author).

132 December 2010 Memorandum, *supra* note 124, at 2.

133 See, e.g., 40 C.F.R. § 300.315 (2017) ("OSCs shall ensure the necessary collection and safeguarding of information, samples, and reports.").

134 *Id.* § 300.315(a).

135 See *Santa Clara Valley Water Dist. v. Olin Corp.*, 655 F. Supp. 2d 1066, 1077–78 (N.D. Cal. 2009) (debating the meaning of "sufficient documentation" in 40 C.F.R. § 300.315 and comparing the language to substantially similar language from 40 C.F.R. § 300.160); *United States v. E.I. du Pont de Nemours & Co.*, 341 F. Supp. 2d 215, 243–44 (W.D.N.Y. 2004) (addressing the similar language found in 40 C.F.R. § 300.160).

generated are enormous and can quickly overshadow and overburden the ability of the USCG and NARA to ingest the data. Moreover, with massive amounts of information collected without a lens for its true relevance or materiality, the probability that it will have relevance to the USCG or any other party diminishes quickly.

Although the NCP regulations do not contain additional details on what constitutes “sufficient” documentation, they do identify that the documentation must be sufficient to “support full cost recovery for resources used.”¹³⁶ The documentation required to support a cost recovery action is addressed in separate federal regulations relating to the OSLTF.¹³⁷ The NCP regulations further provide that the FOSC make spill response documentation available to the affected natural resource trustees.¹³⁸ Such documentation is intended to assist the trustees in their assessment of damages to natural resources as well as limiting and evaluating impacts to natural resources caused by the response itself.¹³⁹ These obligations are consistent with the general requirement that the FOSC coordinate and consult with affected trustees regarding response and removal actions.¹⁴⁰

In the summer of 2010, the FOSC issued a memorandum to all Coast Guard responders that essentially tracked the court-issued litigation hold relating to the Deepwater Horizon response.¹⁴¹ While the substantive content of the FOSC memorandum is the same as the litigation hold, several aspects were emphasized by the FOSC. The FOSC memorandum highlighted that the document preservation obligation is strict and is personally applied to each individual, as well as to the Coast Guard as a whole, and extended to ESI stored on private computers, cell phones, and email accounts.¹⁴² It further emphasized that all documents related to steps taken to respond to the discharge were relevant and must be preserved.¹⁴³

The Coast Guard Marine Safety Manual (MSM) contains administrative guidance and presents the Coast Guard’s interpretation of the applicable regulations. The MSM significantly expounds upon the regulatory requirements regarding documentation of a federal oil spill response and provides much greater detail on the types and scope of documentation required.¹⁴⁴ The MSM first identifies the purposes for the documentation obligations, stating that documenting the pollution incident response serves to:

- (1) Inform response personnel at other organizational levels and agencies, through the mechanism of pollution report (POLREP) messages;

136 40 C.F.R. § 300.315(a).

137 33 C.F.R. Part 136.

138 40 C.F.R. § 300.315(d).

139 See e.g., OIL SPILL PLANNING MOA, *supra* note 29, at 1, 23–25.

140 40 C.F.R. § 300.135(j)(1)–(2).

141 Memorandum from Rear Admiral Paul F. Zukunft, Fed. On-Scene Coordinator, to Unified Area Command Documentation Unit (July 16, 2010) [hereinafter July 16 Memorandum].

142 *Id.*

143 *Id.*

144 U.S. COAST GUARD, COMMANDANT INSTRUCTION MANUAL 16000.11, MARINE SAFETY MANUAL VOLUME VI: PORTS AND WATERWAYS ACTIVITIES 7-21 (Oct. 11, 1998) [hereinafter COMDTINST M16000.11]. Separate provisions of the Marine Safety Manual address records that must be retained from Coast Guard investigations, including Marine Boards of Investigation. See *id.*

- (2) Provides the evidentiary basis to support the imposition of civil or criminal sanctions (see volume V of this manual);
- (3) Document federal expenditures for recovering costs from the responsible party;
- (4) Document OSC decisions and actions throughout the incident; and
- (5) Forecast program resource levels needed for pollution response.¹⁴⁵

Similarly, the NPFC has published materials that generally address the documentation obligations.¹⁴⁶ One of these is a memorandum on documentation and records retention related to internal controls and audits of OSLTF disbursements.¹⁴⁷ This document states that “[t]he FOSC is ultimately responsible for ensuring that records of all transactions authorized are retained in the unit case file.”¹⁴⁸ The NPFC randomly selects OSLTF financial transactions for audit and notifies the unit.¹⁴⁹ Upon notification, the unit must have the case file “ready for any documentation required by the audit.”¹⁵⁰ The case file must include all paperwork relevant to the response effort, including but not limited to, “procurement and credit card information paperwork, POLREPS, news clips, [and] travel documentation.”¹⁵¹ As discussed in greater detail below, “the case file is considered a permanent record . . . and is sent to the National Archives after ten years.”¹⁵²

So what is all this stuff? To fully understand this issue, some context is helpful. With few exceptions, anything that had imagined potential relevance was preserved. Some of that is organized in databases to provide structure and functionality. However, more than half is unstructured data such as photographs, video and raw output from scientific instruments. The categories are numerous and a detailed breakdown would consume the length of this paper.¹⁵³ However, some illustrative examples include:

(1) ICS 214s: The handwritten notes of all responders were recorded in notebooks known by their Incident Command Structure form number, “ICS 214.”¹⁵⁴ This applied to everyone working on the response, anywhere, in any role. All of that material was

145 *Id.*

146 See NAT’L POLLUTION FUNDS CTR., INSTR. 16451.2A, TECHNICAL OPERATING PROCEDURES FOR INCIDENT AND COST DOCUMENTATION ON FPN, CPN, & DPN CASES 11 (July 18, 2016) (updating procedures to reflect changes recommended from the field and improved business practices at the NPFC, including basic incident documentation of responsible parties and costs); NATIONAL POLLUTION FUNDS CENTER, U.S. COAST GUARD, OSLTF DISBURSEMENTS: INTERNAL CONTROLS AND AUDITS (No Date) [hereinafter OSLTF DISBURSEMENTS].

147 OSLTF DISBURSEMENTS MEMO, *supra* note 146, at 3–4.

148 *Id.* at 3.

149 *Id.* at 1.

150 *Id.* at 4.

151 *Id.* at 3.

152 *Id.* at 4.

153 See NODC Support for the Deepwater Horizon Incident, NAT’L CENTERS FOR ENVTL. INFO., <https://www.nodc.noaa.gov/deepwaterhorizon/> (last updated Oct. 8, 2015).

154 See generally ICS Forms, FED. EMERGENCY MGMT. AGENCY, <https://training.fema.gov/icsresource/icsforms.aspx> (last modified Aug. 10, 2017) (including the empty ICE Form 214—the activity log).

collected and a warehouse was rented and operated for approximately five years. During this time, the USCG attempted to organize and scan this material.

(2) Laptop hard drive copies: For all non-government employees, in addition to preserving hard drives, BP caused the hard drives from computers and laptops to be imaged to ensure preservation. This resulted in enormous duplication since the same records appeared on multiple machines and in centralized databases.

(3) Raw/unprocessed data: The output files from devices such as GPS units were copied from the devices and preserved in that raw format; these data were processed and used in various GIS and mapping applications to make it usable.¹⁵⁵ The same process was used with multi-spectral aerial imagery. The unprocessed/unrectified aerial imagery alone accounts for nearly 200,000 gigabytes of data.

The body of material identified by the GCIMT as “response data” accounts for more than three petabytes, excluding backup copies for disaster recovery.¹⁵⁶ For relative comparison, one expert estimated that the US Library of Congress “had collected 235 terabytes of data by April 2011 and a petabyte is more than four times that.”¹⁵⁷ Another estimate puts a single petabyte as the equivalent of twenty million four-drawer filing cabinets filled with text or 13.3 years of continuous HD video.¹⁵⁸ This is a truly enormous, almost overwhelming amount of data.

Starting early 2012, the GCIMT initiated an effort to grapple with the massive amount of information that had been preserved. At one level, this was a purely administrative effort to describe the formats and mechanisms by which the preserved information would be collected and delivered to the direct custody of the USCG for eventual delivery to the NARA. More importantly, there was an effort to determine which data were, in fact, truly relevant to the stated purposes of the regulations. When considered in the context of documentation “sufficient” to satisfy the purposes of the NCP, much of the information described above is seldom relevant and, if relevant, far less likely material. An extreme example would be ESI on the cell phone of an enlisted U.S. Coast Guardsman working at a branch location. Such data has been captured and is still preserved, but has never been relevant or revisited. A better example is the raw data from GPS units mentioned earlier. Once collected, that data was plotted on maps that were in fact relevant and material.¹⁵⁹ However, the raw data collected directly from the GPS units has required significant storage space and expense, but has not been used again for any other purpose. Because we can generate so much data so quickly, and because the

155 See, e.g., Discovery Archive, GULF OF MEX. RES. INITIATIVE, <https://data.gulfresearchinitiative.org/data-discovery> (last visited Nov. 21, 2017) [hereinafter Discovery Archive].

156 Lauren Etter, *BP Cash Creates Oil-Spill Archive Larger Than All U.S. Libraries*, Bloomberg (Aug. 12, 2015, 4:00 AM), <https://www.bloomberg.com/news/articles/2015-08-12/bp-funded-center-vacuums-up-petabytes-of-data-on-gulf-oil-spill/>.

157 Brian McKenna, *What Does a Petabyte Look Like?*, COMPUTER WKLY., (Mar. 20, 2013), <http://www.computerweekly.com/feature/What-does-a-petabyte-look-like/>.

158 Jesus Diaz, *How Large Is a Petabyte?*, GIZMODO (July 08, 2009, 07:30 AM), <http://gizmodo.com/5309889/how-large-is-a-petabyte/>.

159 E.g., Discovery Archive, *supra* note 155.

rate at which we can generate data is only increasing,¹⁶⁰ a more fit-for-purpose system of response documentation is essential.

In planning for future SONS, this issue of data must be explored and revisited periodically. BPXP had the resources and technical capability to preserve and manage this vast amount of data and to do it in a robust manner. Other RPs very well might not have that ability. In that case, a poor-quality effort would only compound the challenges to the USCG to use the data and respond to FOIA requests and to NARA to ingest and manage the data.

The most appropriate solution would be to narrow and more specifically define the categories of information that should be collected by the USCG and transferred to NARA. Those can then be distinguished from all other data and information for which an expanded preservation requirement (i.e. ten years) could be imposed on the RP and other participating parties. Essential Incident Action Plan (IAP) and ICS documentation should be the entire scope of the archive requirement. If this strategy were coupled with development and periodic revision of pre-determined data quality objectives in the Area Contingency Planning, the potential for similar future data bottlenecks should be minimized and overall efficiency promoted.

Beyond the material with genuine value for satisfying the regulatory purposes, other materials should not be processed unless a genuine need arises. For example, the ICS 214 forms and other paper documentation should be preserved for some defined period. However, as that information has proven very unlikely to be used after the response, expensive scanning and other processing of all of these can likely be avoided. Beyond essential ICS documentation, the remainder of any documentation responsibility should be vested in the RP for a defined period of time (e.g. five years), with such obligation being clearly distinct from preservation required for litigation. During that defined period of time, the documents would be available for review or production at the request of the USCG or NPFC. This approach would reduce the amount of required effort for the USCG and costs for the RP. Also, it would avoid the unnecessary use of storage space at the NARA. Consistent with a recurrent point in this paper, the essential elements of NCP complaint response documentation should look the same regardless of whether performed by an RP or the USCG. With the explosion of the volumes of data available, a more measured and surgical approach to response documentation is needed to help ensure predictability of the obligation and appropriate consistency of documentation between responses.

VI. CONCLUSION

During the second Punic War, when told that there was no path to get his army across the Pyrenees and Alps, Hannibal is reputed to have said to his generals that, “we will find a way or we will make one.”¹⁶¹ In many ways, it is a fitting characterization of

160 WILLIAM KOFF & PAUL GUSTAFSON, CSC LEADING EDGE FORUM: DATA REVOLUTION 2 (2011) (estimating that by 2020, data production will be 44 times greater than it was in 2009).

161 The Latin proverb “aut inveniam viam aut faciam” is popularly attributed to Hannibal. *But see* JOHN DEVOE BELTON, A LITERARY MANUAL OF FOREIGN QUOTATIONS 18 (1891) (providing a more recent attribution of the quote—as motto—to Walter Scott in his 1823 work

the DWH spill response. Numerous previously unanticipated situations arose. Out of necessity, much creativity and determination was applied to find solutions. We have argued here that many of the solutions applied to prolonged shoreline cleanup were not aligned with the existing law and that some of those solutions were not as effective or efficient as they could or should have been.

Tremendous effort has been made to revise regulations and share lessons across the industry to ensure that another comparable event never occurs. We hope those efforts are successful, but few systems ever perform perfectly and the world constantly provides new and unanticipated challenges. It would be a mistake to leave the lessons from the first SONS unattended. The adjustments we have suggested are modest; they are not sweeping reforms. Minor adjustments to bring the regulations more in line with the world as we now know it, coupled with greater dynamism in adaptation to future observations would better align our legal systems with the pragmatic reality of dealing with large-scale or long-lived oil spill removals. In the process, we will make our coastlines and marine resources safer.

Nathan Block is a Senior Counsel, Litigation at BP America in Houston, Texas; Jake Rodriguez is a partner at Fowler Rodriguez in New Orleans, Louisiana; Ali Abazari is a partner at Jackson Walker in Austin, Texas. The opinions expressed here are solely those of the authors and are not intended to express the opinions of BP, any BP affiliated entity or the authors' respective law firms.

Quentin Durward); *Aut inveniam viam aut faciam*, DICTIONARY OF FOREIGN PHRASES AND CLASSICAL QUOTATIONS (new & rev. ed. 1908) (providing no attribution).

ENVIRONMENTAL CONSULTANT RISK A DECADE AFTER “ALL APPROPRIATE INQUIRY”

BY ANDREA SHEPARD SHAW

I.	Introduction	29
II.	Background	31
III.	Creating a Standard for “All Appropriate Inquiry”	36
	A. Goals and Key Provisions of the 2006 AAI.....	37
	B. Performance-Based Standard	39
	C. Market Conditions at the Time of Enactment	42
IV.	Amendments to the AAI Since Enactment.....	44
	A. Recognition of ASTM E2247-08 and E2247-16 as a Method for Satisfying “All Appropriate Inquiry”.....	44
	B. Recognition of ASTM E1527-13 as a Method for Satisfying “All Appropriate Inquiry”	45
	C. Removal of the ASTM E1527-05 Standard from the AAI as a Method for Satisfying “All Appropriate Inquiry”	49
V.	Judicial Interpretation of the AAI since Enactment.....	50
VI.	Evaluation of Changes: Environmental Consultants Still Face Uncertainty, Despite Significant Guidance	52
	A. The AAI Provides Significant Guidance and Built-In Protections for the Environmental Consultant	52
	B. Risk Remaining From Uncertainty of a Hindsight Application of the Regulation	54
VII.	Likely Pitfalls and Difficulties for the Environmental Professional Conducting All Appropriate Inquiry	57
VIII.	Practical Solutions to Avoid Risk	60
IX.	Conclusion	61

I. INTRODUCTION

To a large extent, the purpose of environmental consulting is to help property owners and government officials avoid, identify, delineate, or remediate hazardous substance contamination. For years, the practice was limited to evaluating and proposing strategies based on chemical, geologic, hydrologic, and engineering data. In the early 1990’s, however, a new environmental consulting market emerged. Purchasers of commercial real estate, realizing that they assumed liability for contamination discovered on acquired property, regardless of fault or contribution, sought protections under the federal Comprehensive Environmental Response, Compensation and Liability Act’s (CERCLA) lim-

ited defenses.¹ To escape liability, the owner had to prove that he conducted “all appropriate inquiries” into the uses of the property resulting in “no reason to know” of contamination.² The question of how to adequately prove or document this type of due diligence remained unanswered for over twenty years. In the meantime, commercial real estate purchasers hired environmental consultants to document due diligence efforts and provide evidence that defense requirements were met.

To meet this new demand, environmental professionals began engaging in a new form of consulting, one based less on scientific data and more on judgment and experience in contamination potential and migration.³ This more subjective approach to identifying contamination created a significant risk for the environmental consultant. With CERCLA providing little guidance for the environmental consultant on how to conduct “all appropriate inquiry,” the scientists themselves were exposed to claims of malpractice and misrepresentation if contamination was later identified and the purchaser was held liable under CERCLA.⁴

In 2006, the U.S. Environmental Protection Agency (EPA) attempted to define “all appropriate inquiry.”⁵ Environmental consultants anxiously awaited the clarifications, concerned that the agency would supplant decades’ worth of industry standards, which used a prescriptive “check-list” type of methodology.⁶ Upon review of the new standard, known as “All Appropriate Inquiry” (AAI), many consultants were relieved to see that the industry standard was in large part adopted within the regulation.⁷ Unfortunately, many environmental consultants failed to appreciate the most distinguishing feature of the regulation: the performance-based approach.

Under this performance-based standard, “all appropriate inquiry” is malleable. Although the AAI provides guidance as to the tasks likely needed to be performed, the environmental consultant has a significant amount of discretion to expand or contract the scope of work based on the consultant’s judgment, opinion, and experience.⁸ In short, under the performance-based standard, the environmental consultant must do as much or as little work as is necessary to identify contamination.⁹ Questions thus arose as to whether the environmental consultant was tasked with “proving a negative” if obvious contamination was not identified.

Shortly after the AAI’s adoption, I argued in an earlier article that a hindsight approach would likely be applied in determining the adequacy of these environmental due

1 42 U.S.C. § 9607(a)(1) (2002).

2 *Id.* §§ 9601(35)(A)(i), (B)(i).

3 *See infra* note 22 (explaining the shift in consulting services).

4 *See infra* notes 23–29 and accompanying text (listing the ways in which consultants assume liability when conducting due diligence assessments).

5 *See* Andrea Shaw, *A Dirty Job: How Identifying Hazardous Substance Releases Under “All Appropriate Inquiry” Creates Liability for Environmental Professionals*, 40 CUMB. L. REV. 555, 559.

6 *See infra* notes 29–44 and accompanying text (explaining the industry standard approach to defining “all appropriate inquiry”).

7 Shaw, *supra* note 5, at 559.

8 *Id.* at 567.

9 *See infra* Part III.B (explaining the performance-based approach and difficulties in applying this approach to environmental due diligence).

diligence reports.¹⁰ As a result, I propounded that the enactment did little to reduce risk for environmental consultants engaging in this practice.¹¹ Moreover, due to poor market conditions upon enactment, many environmental consultants, fearing they would be priced out of the market and lose limited clientele, continued to create commodity-style “quick and clean” reports to avoid killing real estate deals.¹² These practices only increased the risk for environmental consultants under the AAI.

In this Article, I evaluate agency clarification and judicial interpretation over the decade since the AAI’s enactment to determine whether environmental consultants have received additional guidance in setting the appropriate boundaries of the AAI and how any additional guidance affects their exposure to liability.

In Part II of this Article, I explain the background of CERCLA liability, its defenses, and the undefined nature of environmental due diligence prior to the enactment of the AAI. I also review how the environmental industry standards served to define “all appropriate inquiry” during the decades of EPA silence on the matter. In Part III of this Article, I review the key provisions of the 2006 AAI, explain how this enactment differs from its industry counterpart by adopting a performance-based approach, and evaluate consultant concerns under this type of discretionary standard. In Parts IV and V, I review all amendments to the AAI and the judicial opinions interpreting or employing the AAI language since the 2006 enactment. In Part VI, I evaluate the impact of these changes. I argue that, despite clarity gleaned from the AAI regarding the standard components of due diligence, and even some built-in protections for environmental consultants, the performance-based standard still leaves consultants uncertain about whether they have truly conducted “all appropriate inquiry,” were a judge to review their reports in hindsight. In Part VII, I discuss the areas of the AAI where environmental consultants have the greatest risk of liability and where hindsight review would likely be applied. Last, in Part VIII, I propose several practical solutions for avoiding the potential pitfalls discussed in Part VII, including educating clients, employing contractual limitations on liability, and thoroughly documenting data gaps and recommendations.

II. BACKGROUND

In 1980, in response to the Love Canal disaster in Niagara, New York, Congress passed CERCLA.¹³ The goal of this legislation was to provide a mechanism for imposing

10 See Shaw, *supra* note 5, at 557.

11 See *id.* at 591.

12 *Id.* at 570.

13 42 U.S.C. §§ 9601–9675 (2006) (commonly referred to as “Superfund”). The environmental disaster known as Love Canal, was discovered in the 1970’s when hazardous waste dumping in the 1940’s by the Hooker Chemical Company began leaching into a residential housing community that had been developed over the dump site. The contaminant release resulted in significant birth defects, cancer clusters, and assorted maladies for the people within the community. In addition to health effects, the value of these residential properties plummeted. In an effort to resolve the disaster, the federal government purchased over 200 affected properties and funded initial remediation of the site. CERCLA was enacted in 1980 to try to prevent such a disaster in the future and to address recovery of response costs.

or recovering response and remediation costs from parties responsible for hazardous substance releases.¹⁴ Potentially responsible parties consisted of current owners or occupants of contaminated facilities, past owners or occupants present at the time of the hazardous substance release, generators of the release, and arrangers and transporters of hazardous substances.¹⁵ The most controversial component of CERCLA was the imposition of liability upon current property owners who did not cause or contribute to the release.¹⁶ These owners were subject to joint and several liability as a result of simply entering the chain of title or a lease on the property.¹⁷

To mitigate this inequity, Congress passed the Innocent Landowner Defense in 1986, which provided that a current property owner, subject to liability simply as a result of acquiring title, may escape liability by proving that he had “no reason to know” of contamination on the property, and that prior to purchase he conducted “all appropriate inquiries . . . into the previous ownership and uses of the facility in accordance with generally accepted good commercial and customary standards.”¹⁸

For over twenty years, the “all appropriate inquiry” due diligence requirement was relatively undefined.¹⁹ To determine whether “all appropriate inquiry” was met, the text of the statute simply required an evaluation of: the specialized knowledge or experience of the defendant;²⁰ whether the relationship of the purchase price to the value of the property gave an indication of contamination, commonly known or reasonably ascer-

Superfund Program: Love Canal, Niagara Falls, NY., U.S. ENVTL. PROT. AGENCY, <https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0201290> (last viewed Jan. 28, 2017).

14 42 U.S.C. § 9607(a) (2002).

15 *Id.* §§ 9607(a)(1)–(4).

16 *See, e.g., United States v. A & N Cleaners & Launderers*, 854 F. Supp 229, 240 (S.D.N.Y. 1994) (“If imposing CERCLA liability on [hazardous waste generators] is ‘unfair,’ it is immeasurably more so to impose CERCLA liability on unwitting owners of contaminated property that have played no part in the activities leading to the contamination.”).

17 *See id.*

18 42 U.S.C. §§ 9601(35)(A)(i), (B)(i). To maintain the defense if contamination is later discovered on the subject property, the innocent land owner must continue to exercise “due care” with respect to hazardous substance contamination. *Id.* § 9607(b)(3)(a). The EPA has informally explained that due care includes “continuing obligations” such as: compliance with land use restrictions, taking reasonable steps to address hazardous substance releases, providing regulatory officials cooperation and access to the subject property, complying with information requests, and providing all legally required notices. SUSAN E. BROMM, INTERIM GUIDANCE REGARDING CRITERIA LANDOWNERS MUST MEET IN ORDER TO QUALIFY FOR THE BONA FIDE PROSPECTIVE PURCHASER, CONTIGUOUS PROPERTY OWNER, OR INNOCENT LANDOWNER LIMITATIONS ON CERCLA LIABILITY 2 (2003), <https://www.epa.gov/sites/production/files/documents/common-elem-guide.pdf>.

19 *See Andrea Shaw, A Dirty Job: How Identifying Hazardous Substance Releases Under “All Appropriate Inquiry” Creates Liability for Environmental Professionals*, 40 CUMB. L. REV. 555, 557 (2010). *See also A & N Cleaners*, 854 F. Supp. at 242 (categorizing CERCLA’s ILO defense as requiring compliance with a series of “ill-defined due care and investigatory requirements” and stating that “[i]f Congress must shift the costs of ferreting out contamination from the general public to those involved in real estate transactions it should, at a minimum, define the scope of the required investigation.”).

20 In this case, the defendant would be the prospective purchaser who would be arguing innocent landowner status.

tainable information; the degree of obviousness of the presence or likely presence of contamination; and the ability to detect contamination by inspection.²¹ Legislative history provided no further guidance beyond the simple instruction that “a reasonable inquiry must have been made in all circumstances, in light of best business and land transfer principles.”²²

As a result of the lack of direction, courts began employing a site-by-site approach to evaluating the sufficiency of environmental due diligence.²³ This site-by-site approach resulted in significant confusion and unpredictability, and disproportionately impacted the real estate market.²⁴ As one court notes, prospective purchasers were left awake at night asking, “Have I done a thorough investigation?” and “How much is enough?”²⁵

As courts began adjudicating “all appropriate inquiry” defenses, they quickly learned that cursory investigations by land owners and prospective purchasers themselves were insufficient.²⁶ As a result, the real estate and lending industry turned to environmental consultants to adequately inspect, assess, and synthesize complicated environmental information.²⁷ These due diligence assessments were superficial, however. The focus was typically to identify contamination potential, and only in cases of possible detection would confirmatory laboratory analysis be conducted. As a result, a new field of environ-

21 Superfund Amendments and Reauthorization Act of 1986 (SARA), Pub. L. No. 99-499, § 101(f), 100 Stat. 1613 (1986) (prior to 2002 amendment). *See also* 42 U.S.C. § 9601(35)(B).

22 H.R. CONF. REP. NO. 99-962, at 187 (1986).

23 *See, e.g.,* *Advanced Tech. Corp. v. Eliskim, Inc.*, 87 F. Supp. 2d 780, 785 (N.D. Ohio 2000) (“What constitutes appropriate inquiry is a mixed question of law and fact and will depend on the totality of the circumstances.”).

24 *See A & N Cleaners*, 854 F. Supp. at 241.

25 *Id.* at 242 (quoting *Innocence is a Virtue Seldom Found in a Landowner*, 342 PLI/Real 379 (1989)). *See also* *Juniper Dev. Grp. v. Kahn (In re Hemingway Transp., Inc.)*, 174 B.R. 148, 168 (Bankr. D.Mass. 1994) (“[T]he utility of the defense is unpredictable because of the amorphous nature of the language used by Congress and the seeming unpredictability of the facts.”).

26 *Shaw, supra* note 5, at 557. *See XPD, Inc. v. Watumull Prop. Corp.*, No. Civ. 99-1703-AS, 2004 WL 1103023, *9 (D. Or. 2004) (finding that, because the property owner failed to hire an environmental consultant, did not review environmental agency files, and did not investigate prior owners of the property, a reasonable finder of fact could conclude that the defendant failed to conduct “all appropriate inquiry”). *A & N Cleaners*, 854 F. Supp. at 243–44 (finding that property owners failed to conduct “all appropriate inquiry” because they failed to inquire about the dry cleaner lessee’s disposal practices, investigate newspaper articles discussing chlorinated solvent contamination in the vicinity, and that such investigation likely would likely have required the hiring of an engineer to test the soil on the property); *In re Hemingway Transp. Inc.*, 174 B.R. at 169–73 (holding that a property owner attempting to conduct his own inquiry did not satisfy “all appropriate inquiry” because he failed to visually inspect a portion of the subject property containing industrial debris and dumped barrels and made no attempt to contact government officials about potential migration of contaminants from a nearby Superfund site, even though contamination in the area was common knowledge).

27 *See* James W. Spertus, *Holding Environmental Consultants Liable for Their Negligence: A Proposal for Change*, 64 S. CAL. L. REV. 1143, 1146 (1991) (arguing that prospective purchasers are now dependent upon environmental consultants to escape liability).

mental consulting was born that focused less on hard scientific data and more on judgment, experience, and counseling.²⁸

Purchasers began relying on the opinions and findings of environmental consultants to avoid acquiring contaminated property or to factor the costs of potential cleanup into the negotiated sales price.²⁹ This type of environmental consulting created new risks. First, under CERCLA, purchasers are not excused from liability simply because they order an environmental due diligence report from an environmental consultant.³⁰ If that report is later found faulty or inadequate, and the purchaser had any reason to know contamination existed, liability attaches.³¹ As a result, although the environmental consultant would not be a responsible party under CERCLA, residual liability could flow to the consultant through the client.³² Second, even if CERCLA liability for contamination does not attach, the client will want to recover for damages beyond cleanup costs, such as devaluation of the property, litigation expenses, and lost opportunity costs during cleanup, etc. Third, often many parties beyond the purchaser rely upon the findings of environmental due diligence reports, such as lenders and subsequent purchasers.³³ Courts have found these parties to be appropriate plaintiffs in professional negligence or misrepresentation cases due to their foreseeable reliance.³⁴ As a result, there is significant risk to the consultant when clients and third parties rely on pre-acquisition environmental due diligence reports, wherein subjective analysis of non-scientific data forms the basis of conclusions and recommendations.³⁵

28 In the context of pre-acquisition environmental due diligence, evaluation of the subject property is generally superficial in a Phase I assessment unless indications of contamination arise during the investigation. Only if contamination is suspected would an environmental consultant perform soil or groundwater testing and laboratory analysis to confirm this suspicion, and generally under a separate cover, called a Phase II assessment. To do so otherwise, would exceed typical purchaser cost constraints. Instead, environmental consultants relied upon visual inspection, historical and governmental document review, and interviews with persons familiar with the property.

29 Shaw, *supra* note 5, at 557–58. See also, Spertus, *supra* note 27, at 1146.

30 Shaw, *supra* note 5, at 560. See Standards and Practices for All Appropriate Inquiries, 70 Fed. Reg. 66,070, 66,086 (Nov. 1, 2005) (to be codified at 40 C.F.R. pt. 312).

31 See Standards and Practices for All Appropriate Inquiries, 70 Fed. Reg. at 66,086. See also, Shaw, *supra* note 5, at 560. Even if liability does not attach, the property owner must comply with “continuing obligations in order to maintain the defense. See Bromm, *supra* note 18, at 6.

32 Shaw, *supra* note 5, at 560.

33 Lisa A. Jensen, *The Risk in Defining Risk: Potential Liability of Environmental Consultants and Engineers*, 23 *Env'tl. Rep.* (BNA) 1955, at 1956–57 (Dec. 4, 1992).

34 See Shaw, *supra* note 5, at 560. See also *Grand Street Artists v. Gen. Elec. Co.*, 19 F. Supp. 2d 242, 248 (D.N.J. 1998); *Sykes v. Propane Power Corp.*, 541 A.2d 271, 274–75 (N.J. Super. Ct. App. Div. 1988); Dean M. Cordiano, *An Environmental Consultant's Guide to Identifying and Avoiding Liability*, II(A)–(B), FINDLAW, <http://corporate.findlaw.com/litigation-disputes/an-environmental-consultant-s-guide-to-identifying-and-avoiding.html> (last visited Nov. 17, 2017); Lisa A. Jensen, *The Risk in Defining Risk: Potential Liability of Environmental Consultants and Engineers*, 23 *Env'tl. Rep.* (BNA) 1955, at 1956 (Dec. 4, 1992).

35 See Spertus, *supra* note 27, at 1181 (“Environmental consultants engage in a public profession and hold themselves out as specially qualified to diagnose hazardous waste problems on property. As a consequence of profiting from their professed expertise, consultants should

Recognizing this risk, environmental professionals scrambled to create an efficient method for identifying contamination that would work under the strict time and cost constraints of commercial real estate transactions. In 1993, the American Society for Testing and Materials (ASTM)³⁶ attempted to standardize the practice and define commercial standards within the environmental industry by creating the “Phase I Environmental Site Assessment Process” (“Phase I standard”).³⁷ Under the 1993 ASTM Phase I standard, the environmental consultant’s duties included the following: (1) a site visit to visually identify current uses of hazardous substances and current or threatened releases; (2) an interview of the current property owner; (3) a historical records search to determine what prior uses might suggest a historical release of hazardous substances; (4) a government database search to identify any reported releases of hazardous substances on the property; and (5) a report documenting the environmental professional’s findings, opinions, and conclusions as to the existence of hazardous substance releases or threats of releases (known as recognized environmental conditions, or “RECs”).³⁸ One notable feature of the 1993 ASTM Phase I standard was the prescriptive nature of the due diligence assessment. The standard focused on documenting the methodology of the inquiry and the consultant’s reasoning rather than on the ultimate conclusions.³⁹ To this effect, the standard listed assorted sources that the environmental consultant must review and set limitations on that source review. For example, the environmental consultant needed to only research historical use back to the year 1940 in five-year intervals,⁴⁰ and interview only enumerated state and local officials.⁴¹ Provided the environmental consultant satisfied these directives, “all appropriate inquiry” was assumed to have been met. In fact, for years, the ASTM even recognized a check-list “form” assessment, known as the E1528-Transaction Screening Assessment, as one means of meeting the environmental due

face liability for failing to exercise the degree of care and skill commonly used by others in their profession.”) *C.f.* Standards and Practices for All Appropriate Inquiries, 70 Fed. Reg. at 66,086.

36 Started in 1898, the American Society for Testing and Materials (now known as ASTM International) is a voluntary standards development organization that creates consensus standards for a variety of industries. *The History of ASTM International*, ASTM INT’L, https://www.astm.org/ABOUT/history_book.html (last visited Jan. 23, 2017). ASTM standards often guide the design, manufacturing and trade of many products and services used in the global economy. *Id.*

37 ASTM INT’L, E1527-93 STANDARD PRACTICE FOR ENVIRONMENTAL SITE ASSESSMENTS: PHASE I ENVIRONMENTAL SITE ASSESSMENT PROCESS § 1.1 (1993) [hereinafter ASTM E1527-93].

38 Shaw, *supra* note 5, at 542; ASTM INT’L, E1527-05 STANDARD PRACTICE FOR ENVIRONMENTAL SITE ASSESSMENTS: PHASE I ENVIRONMENTAL SITE ASSESSMENT PROCESS §§ 9, 10, 8.3, 8.2, 12 (2005) [hereinafter ASTM E1527-05]. RECs are defined as “the presence or likely presence of any hazardous substance or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into the structures on the property or into the ground, groundwater, or surface water of the property.” *Id.* § 1.1.1.

39 See ASTM E1527-05, *supra* note 38, § 1.1.1.

40 *Id.* §§ 8.3.2, 8.3.2.1.

41 *Id.* §§ 11.5.1, 11.5.1.1–11.5.1.4.

diligence requirements of CERCLA.⁴² Although this form assessment was eventually disfavored as a tool for meeting “all appropriate inquiry,”⁴³ the ASTM Phase I standards sought to define the minimum level of inquiry required of the environmental consultant, and remained the standard until 2006.⁴⁴

III. CREATING A STANDARD FOR “ALL APPROPRIATE INQUIRY”

Although the environmental consulting industry had created a workable standard for environmental due diligence, confusion still existed over whether this standard would be sufficient to satisfy “all appropriate inquir[ies]” in a court of law.⁴⁵ In 2002, Congress enacted the Small Business Liability Relief and Brownfield Revitalization Act (SBLR-BRA), which mandated that the EPA define “all appropriate inquiry” once and for all, particularly in light of new defenses to CERCLA that required due diligence prior to application.⁴⁶ After a lengthy negotiated rulemaking session, the EPA promulgated the final rule in November 2006, “Standards and Practices for All Appropriate Inquiries” (“2006 AAI”).⁴⁷

42 ASTM INT’L, E1528-00 STANDARD PRACTICE FOR ENVIRONMENTAL SITE ASSESSMENTS: TRANSACTION SCREEN PROCESS (2000) [Hereinafter ASTM E1528-00]. The transaction screening assessment consisted of a questionnaire to be conducted by the environmental consultant and other parties that served as a “check-list” for inquiry completion.

43 Compare ASTM E1528-00 (“The purpose of this practice, as well as Practice E1527, is to define good commercial and customary practice in the United States of America for conducting an environmental site assessment of a parcel of commercial real estate with respect to the range of contaminants within the scope of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) and petroleum products. As such, this practice is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner defense to CERCLA liability: that is, the practices that constitute “all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice” as defined in 42 U.S.C. [section] 9601(35)(B).”), with ASTM INT’L, E1528-14E1 STANDARD PRACTICE FOR LIMITED ENVIRONMENTAL DUE DILIGENCE: TRANSACTION SCREEN PROCESS § 4.2.1 (2014) (“This document is not intended to permit a user to satisfy CERCLA LLPs, that is, the practices that constitute ‘all appropriate inquiries into the previous ownership and uses of the property consistent with good commercial or customary practice’ as defined in 42 U.S.C. §9601(35)(B).”).

44 See Standards and Practices for All Appropriate Inquiries, 70 Fed. Reg. at 66,070, 66,072 (Nov. 1, 2005) (providing notice that the “interim [ASTM] standard will no longer be the operative standard for conducting all appropriate inquiries” once AAI is enacted).

45 *Watco v. Pickering Env'tl. Consultants, Inc.*, No. W2006-00978-COA-R3-CV, 2007 Tenn. App. LEXIS 364, *60 (Tenn. Ct. App. 2007) (holding that compliance with the ASTM standard does not conclusively establish that an environmental professional conformed to the standard of care).

46 Small Business Liability Relief and Brownfields Revitalization Act, Pub. L. No. 107-118, 115 Stat. 2356, § 223(2).

47 Innocent Landowners, Standards for Conducting All Appropriate Inquiries, 40 C.F.R. § 312.20 (2006); see also Standards and Practices for All Appropriate Inquiries, 70 Fed. Reg. at 66,070 (providing notice of the EPA’s final rule and discussing the changes from, as well as the public comments to, the proposed rule).

A. GOALS AND KEY PROVISIONS OF THE 2006 AAI

The goal of the 2006 AAI was to identify conditions “indicative of a release or threatened release of hazardous substances.”⁴⁸ To effectuate this goal, the 2006 AAI assigned duties to both the environmental professional and the prospective purchaser.⁴⁹ These duties came in the form of both requirements and recommendations. The duties of the environmental professional are:

- *Interviews*: Interviews must be conducted to reveal current and past uses of property and potential for contamination (*inter alia*).⁵⁰ These interviews must include an inquiry of the current owner and occupant, and when the property is abandoned, a neighbor.⁵¹ The 2006 AAI also provides a list of suggested contacts to interview, but does not limit the inquiry to that list.⁵²
- *Historical Records Search*: Historical records must be searched back to the date of first development to identify former uses that could have caused or contributed to contamination.⁵³ Although the 2006 AAI provided a list of suggested sources, unlike the preceding ASTM Phase 1 standards, it did not prescribe a search interval or give a specific year at which the environmental professional could end the search.⁵⁴
- *Government Records Search*: A governmental records review was required to identify reported releases of hazardous substances on the subject property and in the surrounding area.⁵⁵ This governmental records review consisted of federal, tribal, state, and local environmental database searches on the subject property and within a specified radius of the property.⁵⁶ The 2006 AAI provided that the environmental professional may review actual government files if the database search suggested it was necessary to identify RECs, but does not require it.⁵⁷
- *Visual Inspection*: A visual inspection of the site was required to identify signs of contamination or sources of contamination.⁵⁸ The inspection had to include areas where hazardous substances “may have been used, stored, handled, or disposed.”⁵⁹ If the property was inaccessible, the 2006 AAI allowed for inspection from the property boundaries and by aerial imagery.⁶⁰

48 40 C.F.R. § 312.1(c)(1) (2017).

49 The prospective purchaser also has several duties under AAI, including inquiries into (1) the specialized knowledge or experience on the part of the land owner, (2) the relationship of the purchase price to the market value of the property, and (3) recorded environmental cleanup liens. If any of this information is provided to the consultant, it must be evaluated to determine the degree of obviousness mentioned above. *Id.* § 312.21(b).

50 *Id.* §§ 312.20(e)(ii), 312.23 (a).

51 *Id.* §§ 312.23(b), (d).

52 *See id.* § 312.23(a)–(c).

53 *Id.* § 312.24.

54 *Id.* § 312.24(b).

55 *Id.* § 312.26.

56 *See id.* §§ 312.26 (a)–(c).

57 Standards and Practices for All Appropriate Inquiries, 70 Fed. Reg. 66,070, 66,094-95 (Nov. 1, 2005).

58 40 C.F.R. § 312.27.

59 *Id.* § 312.27(a)(1).

60 *Id.* §§ 312.27(a)(2), (c).

- *Commonly Known/Reasonably Ascertainable Information*: The environmental professional was required to investigate commonly known and reasonably ascertainable information.⁶¹ The consultant's own knowledge and experience with the subject property may be sufficient, but the 2006 AAI also provided a list of suggested sources where commonly known information could be obtained, such as media sources and neighboring property owners.⁶²
- *Degree of Obviousness*: The environmental professional was required to evaluate the degree of obviousness of contamination or suspected contamination on the subject property.⁶³ This duty required the consultant to view all the above data as a whole, and make decisions regarding the presence or likely presence of contamination based on the synthesis of the assorted sources of information.⁶⁴
- *Report*: The environmental professional was required to produce a written report detailing the consultant's findings and opinions regarding any releases or threatened releases at the subject property.⁶⁵ Importantly, the 2006 AAI required the environmental professional detail any and all data gaps that could impede or prevent identification of releases.⁶⁶ The 2006 AAI also suggested sampling and chemical analysis to address data gaps, although it stops short of requiring it.⁶⁷ When data gaps are identified, the 2006 AAI required the environmental professional provide recommendations for addressing the data gaps and to confirm the consultant's findings.⁶⁸ Finally, the report had to include a declaration that the preparer meets the definition of an environmental professional under the 2006 AAI and that the inquiry was conducted in accordance with the 2006 AAI.⁶⁹

At first blush, this standard looks very similar to the 2005 ASTM Phase I standard in that the environmental consultant had to conduct interviews, government records searches, historical records searches, a site visit, and prepare a report detailing findings, opinions, and conclusions.⁷⁰ In fact, the EPA formally recognized that the 2005 ASTM Phase I standard was consistent with the 2006 AAI and could be used as an alternative method to satisfy "all appropriate inquiry."⁷¹ However, security in the similarity is misplaced. For as much as the 2006 AAI drew from the 2005 ASTM Phase I standard, it deviated from the prescriptive approach environmental consultants relied upon in dis-

61 *Id.* § 312.30.

62 *Id.* §§ 312.30(b), (c).

63 *Id.* § 312.31.

64 See Standards and Practices for All Appropriate Inquiries, 70 Fed. Reg. 66,070, 66,101–02 (Nov. 1, 2005) ("[T]he rule requires parties to consider whether or not the totality of information collected prior to acquiring the property indicates that the parties should be able to detect a release or threatened release on, at, in, or to the property.").

65 40 C.F.R. § 312.21(c)(1).

66 *Id.* § 312.21(c)(2).

67 *Id.* § 312.20(g); Standards and Practices for All Appropriate Inquiries, 70 Fed. Reg. at 66,089.

68 40 C.F.R. § 312.31(b).

69 *Id.* § 312.21(d).

70 *Id.* §§ 312.21, 312.23, 312.24, 312.26, 312.27.

71 *Id.* § 312.11.

cerning the end of the investigations.⁷² Under the performance-based standard of the 2006 AAI, those same sources of information required under the 2005 ASTM Phase I standard were only a starting point.⁷³

B. PERFORMANCE-BASED STANDARD

By adopting a performance-based standard, rather than a prescriptive standard, the EPA placed the goal of the inquiry above the methodology used in performing the inquiry.⁷⁴ Whereas a prescriptive standard focuses on the journey rather than the destination, the performance-based approach focuses on the destination rather than the journey. Remembering that the objective of the 2006 AAI was to identify existing or threatened hazardous substance contamination, the methodology prescribed in the 2006 AAI was not fixed and served only as a guide to achieving the objective.⁷⁵

This flexible standard was identified in several caveats to the rule's language. For instance, in defining each of the environmental consultant's duties, the methodology was qualified with phrases such as, "to the extent necessary to achieve the objectives and performance factors . . ."⁷⁶ or "for the purposes of achieving the objectives and performance factors . . ."⁷⁷ Therefore, the environmental consultant was neither limited to, nor required to, research all sources recommended within the standard.⁷⁸ The environmental consultant was tasked with setting the boundaries of the investigation based on the consultant's judgment, training, and experience.⁷⁹ If the consultant's training and experience suggested further inquiry may achieve the goal, then he needed to dig further and review additional sources. As a result, the EPA placed great discretion and responsibility on the environmental consultant to assist the client in documenting "appropriate" due diligence and avoiding liability.⁸⁰

The 2006 AAI was not the first environmental regulation to employ a performance-based standard for compliance. In fact, air regulations frequently employ these tools. For example, in setting national emission standards, the EPA sets a feasibly attainable contaminant limit without dictating the methodology for achieving compliance.⁸¹ The goal of this approach is to allow the industry flexibility in meeting the standard and to pro-

72 Standards and Practices for All Appropriate Inquiries, 70 Fed. Reg. at 66,086.

73 *Id.* at 66,087.

74 *See id.* at 66,086–87.

75 *See id.*

76 40 C.F.R. §§ 312.23(c), 312.30(c).

77 *See id.* §§ 312.23(a), 312.24(a), 312.26(a), 312.27(a).

78 *See* Standards and Practices for All Appropriate Inquiries, 70 Fed. Reg. 66,070, 66,086–87 (Nov. 1, 2005) (explaining that the environmental consultant can limit the inquiry to a particular source if it yields information required to meet the objective, but "if the environmental professional or person conducting the inquiries determines through such review and evaluation that the information is either not thorough or not reliable, then further inquiries should be made to ensure that the information gathered is both thorough and reliable.").

79 *See id.* at 66,087.

80 Standards and Practices for All Appropriate Inquiries, 70 Fed. Reg. at 66,086.

81 *Clean Air Act Overview: Building Flexibility with Accountability into Clean Air Programs*, U.S. ENVTL. PROT. AGENCY, <https://www.epa.gov/clean-air-act-overview/building-flexibility-accountability-clean-air-programs> (last visited January 23, 2017).

mote advances in technology.⁸² While these types of standards have worked well in the context of air emission regulation, I argue that they do not work in the context of pre-acquisition environmental due diligence.

To explain, in attempting to comply with air emission standards, compliance is measurable at the time of performance.⁸³ Upon submitting documentation to governing agencies, the regulated party knows, based on objective, quantitative laboratory data, whether it achieved compliance or is in violation.⁸⁴ On the other hand, when performing pre-acquisition due diligence, the environmental consultant is often basing the consultant's findings on information such as visual inspection, interviews, historical records, government records, etc.—qualitative data from which he must extrapolate a conclusion.⁸⁵ This information often does not include any laboratory data from which to confirm the consultant's opinions.⁸⁶ Therefore, upon submitting the consultant's report to the prospective purchaser, the consultant believes that the findings, opinions, and conclusions are correct, but he cannot be certain. The environmental consultant performing AAI is often dealing with educated guesses, albeit reasonable ones. Any failure to achieve the goal of AAI would often not be known until years after the property had already been transferred. In fact, by using a performance-based standard, the EPA explains that “compliance with all the appropriate inquiries requirements ultimately will be determined in court . . .” and not by the consultant at the time of submission.⁸⁷

Take, for example, an environmental consultant who performs an AAI assessment on a hypothetical 200-acre undeveloped property in rural Florida. He performs a site visit where no current contamination sources are visually identifiable. He performs a government database search that reveals no documented hazardous substance releases on or around the property. Historical records are scarce due to the undeveloped nature and rural setting of the property, yet nothing raises red-flags concerning historical contamination sources. The consultant interviews the current property owner, one prior property owner, government officials, and a few neighbors concerning the history of the property. None of these interviews reveal information suggesting hazardous substance contamination or threatening uses. Based on reviewing all required and recommended sources listed in the AAI, the environmental consultant has no reason to suspect contamination, thus no reason to perform laboratory sampling. He concludes that the property contains no RECs. In reliance upon this report, the purchaser acquires the property,

82 *Id.*

83 *Id.*

84 *Id.*

85 40 C.F.R. §§ 312.23, 312.24, 312.26, 312.27.

86 Although AAI suggests that soil and groundwater sampling may be necessary in certain situations, it is often unable to be conducted within the “reasonable time and cost constraints” of a commercial real estate transaction. Therefore, this type of analysis would only be conducted if the weight of the investigation suggests contamination is likely. *See id.* § 312.20 (f)–(g). To explain, a confirmatory soil or groundwater sampling event can take anywhere from a couple of weeks to a month to complete and cost anywhere from a couple thousand dollars to tens of thousands of dollars. In the context of commercial real estate transactions where the due diligence period typically lasts on average two to three weeks, this is not a practical option unless there is strong suspicion contamination may be found.

87 Standards and Practices for All Appropriate Inquiries, 70 Fed. Reg. 66,070, 66,087 (Nov. 1, 2005) (to be codified at 40 C.F.R. pt. 312).

leverages against the property, and develops the land for residential use. Ten years later, when building Phase II of a residential development, the current owner finds an old landfill on the property that is the source of newly discovered contamination. After discovering the contamination, the owner speaks with an elderly neighbor who was not interviewed in the earlier report and reports that, between 1940 and 1960, a former property owner allowed the county to use a portion of the property for assorted landfilling activities. Did the environmental consultant perform an adequate AAI assessment?

Under the performance-based standard, the goal of identifying hazardous substance contamination was not met, despite investigating every source that was required or recommended in the text of the AAI. Could the environmental consultant have interviewed every single neighbor of a 200-acre property? Perhaps. But would doing so be feasible within the strict time restraints of a commercial real estate transaction? And what if it was not a neighbor who knew of the contamination, but an individual who lived a mile away? Is that a practically reviewable source? Moreover, the environmental consultant could have performed laboratory soil and groundwater sampling to confirm no contamination existed on the property; but where would the consultant direct its efforts? On which acre of the property should wells be drilled and soil sampled collected? On which portion of that acre? And who pays for all of this seemingly wasteful sampling? Surely, the commercial real estate market would not bear the costs of sampling, which may reach the tens of thousands of dollars, simply to prove a negative. Where does the inquiry end?

Often only in hindsight do we learn of additional sources of information or are able to place information in context. In hindsight, we can easily reason that interviewing one more neighbor was within reasonable time and cost constraints because, *after the fact*, we know that only one interview was necessary. In hindsight, some topographical features become obvious indicators of a landfill, whereas without context these features seem benign. In hindsight, additional investigation seems completely reasonable and a folly to not conduct. In short, the practicality and reasonableness of acquiring additional information can change when the whole picture is revealed. Such is the risk to an environmental consultant subject to a performance-based standard.

These same concerns were raised during the public comment period prior to the AAI's adoption. Many environmental consultants worried that this performance-based approach would result in consultants not knowing when to stop their inquiries for fear that a hindsight approach would be applied by the courts.⁸⁸ "With a seemingly infinite number of sources to investigate, it could always be said that if the environmental professional simply turned over one more stone he would have found contamination."⁸⁹ This fear was well-founded. As one writer noted, prior to the AAI, "courts generally applied a

88 See Standards and Practices for All Appropriate Inquiries, 70 Fed. Reg. at 66,085–86.; U.S. ENVTL. PROT. AGENCY, RESPONSE TO COMMENT DOCUMENT ALL APPROPRIATE INQUIRIES REGULATION 74–77, 80 (2005), available at <https://www.epa.gov/brownfields/brownfields-all-appropriate-inquiries>.

89 Shaw, *supra* note 5, at 568. See also ASTM E1527-05, *supra* note 38, § X1.4.3.2 ("[E]ven a subsurface investigation has its limitations since one can always dig down one foot deeper, take one more sample, or conduct one more test. The problem of how much inquiry should be conducted, or at what level a party should begin, in one sense involves proving a negative, that is, that no contamination is present.").

sort of Catch-22 reasoning—that if contamination could have been discovered it should have been discovered, and if the purchaser did not undertake enough investigation to discover it, then he had not conducted ‘all appropriate inquiries.’”⁹⁰ Even a federal court stated, “[the] utility of the [ILO] defense is unpredictable because of the amorphous nature of the language used by Congress and the seeming unpredictability of the application of the law to the facts.”⁹¹

In response, the EPA lauded the flexibility and discretion the performance-based standard provided the environmental consultant.⁹² The agency argued:

[B]y establishing clear objectives and setting parameters to the investigation through a set of performance factors that include gathering information that is publicly available, obtainable from its source within reasonable time and cost constraints, and which can practicably be reviewed, the approach taken in the final rule provides reasonable goals and endpoints to the information collection requirements.⁹³

The EPA further explained that it was never its intent to create a checklist of tasks sufficient to meet “all appropriate inquiry,” as each site was vastly different and required a different level of inquiry.⁹⁴ Moreover, “the EPA urged the environmental professional to remain cognizant of his clients’ interests and notes that the point of the ‘all appropriate inquiry’ is for the landowner to qualify for CERCLA liability protection,”⁹⁵ not limit the environmental professional’s duty.⁹⁶

C. MARKET CONDITIONS AT THE TIME OF ENACTMENT

Concerns of many environmental professionals regarding the performance-based approach were further exacerbated by the economic conditions at the time of enactment and shortly thereafter. In 2006, the real estate industry was experiencing an unprecedented boom.⁹⁷ Environmental consultants were inundated with work assessing these transactions. Environmental consultants, real estate agents, and lenders had become accustomed to commodity-style reports that employed a checklist approach that could be conducted within the tight real estate closing schedule.⁹⁸ Moreover, significant pressure

90 Shaw, *supra* note 5, at 569 (quoting Seth A. Davis, *When “All” May Not Be Enough*, ENVTL. TRANSACTIONS & BROWNFIELDS COMM. NEWSLETTER (ABA Section of Environment, Energy and Resources Law) Nov. 2006, at 7–8).

91 *Juniper Dev. Grp. v. Kahn (In re Hemingway Transp., Inc.)*, 174 B.R. 148, 168 (Bankr. D.Mass. 1994).

92 Standards and Practices for All Appropriate Inquiries, 70 Fed. Reg. at 66,086–87.

93 *Id.* at 66,086.

94 *Id.*

95 Shaw, *supra* note 5, at 568. See Standards and Practices for All Appropriate Inquiries, 70 Fed. Reg. at 66,086 (explaining that the inability of an environmental professional to determine whether contamination of a threat of contamination exists, “can have significant consequences regarding a prospective landowner’s ultimate ability to claim protection from CERCLA liability”).

96 *Cf.* Standards and Practices for All Appropriate Inquiries, 70 Fed. Reg. at 66,086.

97 Shaw, *supra* note 5, at 574.

98 Comment by Georgina Dannatt, U.S. Env’tl. Prot. Agency Public Meeting to Discuss Standards and Practices for All Appropriate Inquiries 23–25 (Nov. 18, 2004), <http://www.regula>

was placed on environmental consultants to not find environmental defects on properties.⁹⁹ Many consultants continued churning out due diligence assessments to take advantage of the hot market, failing to appreciate the added risk of a performance-based standard in part because of its facial similarity to the ASTM Phase I standard.¹⁰⁰

Shortly after enactment, however, the real estate market crashed, slowing the environmental due diligence market to a crawl.¹⁰¹ Consultants feared killing real estate deals and alienating already scarce clients.¹⁰² In marketing to fewer purchasers, consultants began drastically reducing the cost of environmental assessments.¹⁰³ To accommodate the low rate, many environmental professionals performed the bare minimum inquiry permitted under the ASTM Phase I Standard or the AAI.¹⁰⁴ As a result, consultants who were content with preparing low-quality assessments received the lion's share of available work, and conscientious consultants, who raised their prices to reflect added risk and requirements, were priced out of the market.¹⁰⁵

In 2010, I concluded that the threat of hindsight review and the poor quality of environmental due diligence assessments under the depressed market created a significant threat of liability for the environmental consultant. The remainder of this Article seeks to determine whether, after a decade of the AAI, this hypothesis was correct. Specifically, whether the EPA or judiciary have clarified the boundaries of the AAI, the threat of hindsight review, and ultimately the level of risk environmental consultants engage in when performing AAI.

tions.gov (enter "EPA-HQ-SFUND-2004-0001-0359" into search box) [hereinafter Dannatt Comment].

99 Shaw, *supra* note 5, at 574.

100 *Id.* at 574–75.

101 See ENVIRONMENTAL DATA RESOURCES, FIELD NOTES, ESA REPORT APR. 2008 2 (Envtl. Data Resources Market Res. Group ed., 2008) [hereinafter APRIL 2008 ESA REPORT] (comparing the number of phase I assessments conducted in the first quarter of 2007 to the first quarter of 2008 from over 75,000 to 49,500).

102 See *id.* at 6–7 (explaining, in an interview with Ken Feldman, the pressure on environmental consultants to not impede the real estate deal).

103 Compare Dean Jeffrey Telego & Nicole G. Singh, *Perfection is the Enemy of Good: An Insiders Perspective on EPA's All Appropriate Inquiry Proposed Rulemaking*, Env'tl. Due Diligence Guide Rep. (BNA) No. 145, § 231:1485 (2004) (estimating that the cost of an AAI-compliant environmental assessment is between \$2,800 and \$4,500), with Dianne Crocker, *Exploring the Differential in Lenders' Phase I ESA Prices vs. National Average*, ENVTL. DATA RES. (Jan. 4, 2013), <http://edrnet.com/exploring-differential-lenders-phase-esa-prices-vs-national-average/> (reporting that in 2012, some lenders reported paying as little as \$1,000 for a Phase I assessment, and some environmental professionals reported charging as little as \$1,300) [hereinafter Crocker, *Exploring the Differential*].

104 See Pat Ware, *Parties Object to EPA Decision to Allow Two Standards for All Appropriate Inquiries*, 44 Env'tl. Rep. (BNA) 2,531 (Aug. 23, 2013) (quoting Julie Kilgore, chair of ASTM's Phase I Task Force, explaining that the motivation for changing the 2005 ASTM standard was the repeated reports of poor quality Phase I assessments being generated.).

105 Telephone Interview with William G. Rollins, Jim Stidham & Assocs., Inc. (Oct. 31, 2016) (explaining that between 2008 and 2012, his firm could not compete with less reputable consultants offering cheap and poor-quality assessments, and that in his opinion, it was not worth the risk of performing such assessments).

IV. AMENDMENTS TO THE AAI SINCE ENACTMENT

Unforeseen by consultants at the time, the 2006 AAI standard was just the beginning of clarifying “all appropriate inquiry.” Through a series of ASTM standard revisions, the EPA amended the AAI in an attempt to provide additional guidance and flexibility to users and preparers of these reports.¹⁰⁶

A. RECOGNITION OF ASTM E2247-08 AND E2247-16 AS A METHOD FOR SATISFYING “ALL APPROPRIATE INQUIRY”

In December of 2008, the EPA amended the AAI to include ASTM E2247-08, the *Phase I Environmental Assessment Process for Forestland and Rural Property*.¹⁰⁷ ASTM E2247-08 is a new standard that defines the appropriate level of due diligence for properties over 120 acres in size.¹⁰⁸

Conducting an environmental site assessment on large tracts has always required a somewhat different tool box to identify environmental conditions likely to arise in rural or forestry settings, and to overcome physical obstacles to inspection. To explain, on a large undeveloped tract, access to the property is usually limited to a few dirt roads or trails.¹⁰⁹ In many instances, the property can be impassable due to dense brush or wetlands.¹¹⁰ In addition to limited access, historical records for rural and forested lands are also limited. To remedy these difficulties, ASTM E2247-08 provides alternatives to the environmental professional in three ways. First, it allows the use of remote sensing technology (such as aerial photography or aerial flyovers) to visually inspect inaccessible areas of the property.¹¹¹ If a structure or suspicious feature is identified, it must then be “ground truthed.”¹¹² Second, the standard suggests investigating additional governmental records tailored to “undeveloped” uses, such as threatened and endangered species records, best management practice violations for water quality protection, and records with the states’ departments of natural resources or forestry (or similar agencies).¹¹³ Additionally, these databases must be searched using a radius that begins at property boundaries, rather from the center of the property.¹¹⁴ Third, the historical records search for

106 Amendment to Standards and Practices for All Appropriate Inquiries under CERCLA, 73 Fed. Reg. 78,651, 78,652 (Dec. 23, 2008) (addition of ASTM E2247-08); Amendment to Standards and Practices for All Appropriate Inquiries under CERCLA, 78 Fed. Reg. 79,319 (Dec. 30, 2013) (addition of ASTM E1527-13); Amendment to Standards and Practices for All Appropriate Inquiries, 79 Fed. Reg. 60,087 (Oct. 6, 2014) (removes reference to ASTM E1527-05).

107 Amendment to Standards and Practices for All Appropriate Inquiries under CERCLA, 73 Fed. Reg. at 78,651.

108 ASTM INT’L, E2247-08 STANDARD PRACTICE FOR ENVIRONMENTAL SITE ASSESSMENTS: PHASE I ENVIRONMENTAL ASSESSMENT PROCESS FOR FORESTLAND OR RURAL PROPERTY § 1.1 (1993) [hereinafter ASTM E2247-08].

109 Cf. Pat Ware, *Drones Could be Boon in Site Assessments but Legal Status Remains Hazy, Parties Say*, *Env’tl. Due Diligence Guide Rep.* (BNA) (Sept. 5, 2014).

110 *Id.*

111 ASTM E2247-08, *supra* note 108, § 9.2.3.

112 *Id.*

113 *Id.* § 8.2.2.

114 *Id.* § 8.1.2.

large tracts now includes reviewing available oil and mineral development maps and cattle dipping vat registries.¹¹⁵ Although ASTM E2247-08 did not supplant the AAI, its reference in the rule provided an additional manner in which to conduct “all appropriate inquiry” and meets the performance objectives.¹¹⁶

In September of 2017, the EPA amended the AAI once again to reflect ASTM’s updates to E2247, known as ASTM E2247-16.¹¹⁷ The 2016 ASTM standard does not make substantive changes, instead it brings many definitions and requirements in line with the 2013 ASTM Phase I standard.¹¹⁸ Notable changes include: the elimination of an arbitrary 120 acre limit on the usage of the standard, and the requirement¹¹⁹ that the consultant visually inspect all areas of “environmental interest,” not simply those containing structures.¹²⁰ Recognition of the 2016 ASTM standard as a means of satisfying AAI requirements is effective March 14, 2018.¹²¹

B. RECOGNITION OF ASTM E1527-13 AS A METHOD FOR SATISFYING “ALL APPROPRIATE INQUIRY”

In December of 2013, the EPA further amended the AAI to include a reference to the new 2013 ASTM Phase I standard, E1527-13 - *Standard Practice for Environmental Site Assessment: Phase I Environmental Site Assessment Process*.¹²² ASTM E1527-13 is a revision of the 2005 ASTM Phase I standard that the EPA previously adopted. The purpose of the ASTM’s revision was to ensure that the standard comported with good commercial and customary practices currently being conducted in the industry.¹²³ Three new features were included in the revision: (1) the creation of an additional category of REC;¹²⁴ (2) the requirement that the environmental consultant review actual government files if the governmental database search reveals red flags,¹²⁵ and (3) the requirement that the environmental consultant evaluate the risk of vapor migration onto the property.¹²⁶

115 *Id.* §§ 8.3.4.3(2), (3).

116 40 C.F.R. § 312.11(a) (2017).

117 Amendment to Standards and Practices for All Appropriate Inquiries under CERCLA, 82 Fed. Reg. 43,310-43,312 (Sept. 15, 2017) (Addition of ASTM E2247-16).

118 See ASTM INT’L, E2247-06 STANDARD PRACTICE FOR ENVIRONMENTAL SITE ASSESSMENTS: PHASE I ENVIRONMENTAL ASSESSMENT PROCESS FOR FORESTLAND OR RURAL PROPERTY § 1.1 [hereinafter ASTM E2247-16]; U.S. Env’tl. Protection Agency, *E2247 Summary of Changes* (June 20, 2017), available at <https://www.regulations.gov/document?D+EPA-HQ-OLEM-2016-0786-0005>.

119 See ASTM E2247-16, *supra* note 118.

120 *Id.* at § 9.3.

121 82 Fed. Reg. 43,310.

122 Amendment to Standards and Practices for All Appropriate Inquiries under CERCLA, 78 Fed. Reg. 79,319 (Dec. 30, 2013).

123 ASTM INT’L, E1527-13 STANDARD PRACTICE FOR ENVIRONMENTAL SITE ASSESSMENTS: PHASE I ENVIRONMENTAL SITE ASSESSMENT PROCESS § 1.1 (2013) [hereinafter ASTM E1527-13].

124 *Id.* § 3.2.18.

125 *Id.* § 8.2.2.

126 *Id.* § 3.2.56.

First, the 2013 ASTM Phase I standard created three distinct classifications for RECs.¹²⁷ A REC indicates the presence or likely presence of hazardous substances or petroleum products in, on, or at the property due to a release or material threat of a release.¹²⁸ A historical REC (HREC) indicates that a release of hazardous substances or petroleum products has occurred, but that the release has been “addressed to the satisfaction of the applicable regulatory authority” and the property meets an unrestricted use criteria where no activity and use limitations are imposed.¹²⁹ The 2013 revision added a new classification, the Controlled REC (CREC). A CREC is similar to an HREC in that a past release has been addressed to the satisfaction of regulatory authorities, but unlike the HREC, a CREC is subject to engineering and institutional controls, meaning that the site has activity and land use restrictions imposed to prevent worsening of conditions.¹³⁰ If an environmental professional encounters a CREC, he is not required to evaluate the effectiveness of the control or compliance with restrictions.¹³¹

Second, the ASTM 2013 Phase I standard clarified that reviewing environmental database reports alone is not necessarily the stopping point for governmental records searches.¹³² To explain, environmental professionals generally use commercial services to run environmental database reports that meet the requirements of the AAI and ASTM Phase I standards. If the commercial database reports reveal that either the subject property or a nearby facility has suffered a release, prudent consultants have always sought to obtain additional files from the respective environmental department to add value to the raw data included in the database report.¹³³ If the government file search is successful, it will often yield contaminant plume maps (i.e. scientific data) from which the environmental professional can make professional judgments about the level of risk to the subject property or recommend further action.

Unfortunately, due to the highly competitive pricing in the environmental assessment market prior to the adoption of the 2013 ASTM Phase I standard, many less reputable consultants controlled costs by excluding actual government file reviews from the scope of their Phase Is and charged an additional fee to complete the task.¹³⁴ On the

127 *See id.* §§ 1.1.1, 3.2.42, 3.2.18.

128 *Id.* § 1.1.1.

129 *Id.* § 3.2.42.

130 *Id.* § 3.2.18. To clarify, many properties with hazardous substance or petroleum releases that have engaged in state or federal cleanup have been issued “No Further Action” (NFA) letters. An NFA letter does not signify that a site is “clean.” On the contrary, remnant contamination is likely to remain, simply at low levels that are no longer actionable. Consultants have always struggled with determining in which category to place these sites in. To categorize them as RECs is not wholly accurate because the site has undergone remediation. On the other hand, to categorize them as HRECs is inaccurate because the release is still present.

131 *Id.* § 3.2.18 n.3.

132 *See id.* § 8.2.2.1.

133 *Id.*

134 Dannatt Comment, *supra* note 98, at 26. *See also* Pat Ware, *EPA to Withdraw Direct Final Rule with Dual All Appropriate Inquiries Standards*, *Envtl. Rep. (BNA)* (Sept. 13, 2013) (quoting Larry Schnapf who explains that, because of the increased costs many consultants abused the flexible language of the standard.). Larry Schnapf, *EPA Enables Confusing 2-Tier System*, *LAW360*, Sept. 13, 2013, <https://www.law360.com/articles/471109/epa-enables-con->

other hand, in some cases, even reputable consultants were prohibited from searching actual government files due to the extreme time constraints placed on the assessment. For example, the environmental professional is often tasked with conducting a Phase I within a week or two of closing. Although local governmental records are usually accessible within reasonable time frames, a public information request to a state or regional environmental agency will generally take twenty days to receive an approval or denial of records, let alone weeks to receive the actual documents.¹³⁵ Many consultants simply are not given enough time by clients to complete this task, resulting in significant data gaps in the reports. To bridge the gap, the 2013 ASTM standard clarified that, if a file review is necessary, *and can be completed within twenty days*, the environmental professional has a duty to review the file.¹³⁶ If the consultant does not review the files, he must give written reasons for why an actual file review was not necessary.¹³⁷

Third, and most contentious, is the ASTM's inclusion of vapor migration as a release to be identified.¹³⁸ Much of the controversy surrounding the inclusion of vapor migration in the 2013 ASTM Phase I standard resulted from confusion between the terms vapor migration and vapor intrusion.¹³⁹ Vapor migration occurs when vapors from an on-site or off-site contaminant source impact the subsurface of the target property. Vapors may be migrating from an off-site source (e.g., dry cleaner or gas station) or may be volatilizing into the soil from an on-site source (e.g., contaminated groundwater or contaminated soil). These vapors can migrate along the soil and groundwater-contaminant plumes, or they can deviate from the plume if the subsurface is disturbed, either by natural or man-made conduits.

Vapor intrusion, on the other hand, occurs when contaminated vapors beneath the subsurface are released into the structures at the facility. Consultants have long considered vapor intrusion to fall within the Indoor Air Quality (IAQ) exception to the 2005 ASTM Phase I standard.¹⁴⁰ Indoor Air Quality has always been deemed as a non-scope item that can be added to a Phase I, but that is not required to meet "all appropriate

fusing-2-tier-system (explaining that actual government file reviews could increase the cost of Phase I assessments "anywhere from a few hundred dollars to up to 60% of the Phase I cost depending upon the state and type of property.") [hereinafter Schnapf, *2-Tier System*].

135 Moreover, the sheer volume of government files is unknown. As one environmental consultant explained, "There might be files of two pages or hundreds of thousands of pages," creating a delay in assessment and a budgetary unknown. Pat Ware, *File Reviews Under ASTM Standard Will Be Greatest Challenge, Speaker Says*, *Envtl. Rep. (BNA)* (Apr. 5, 2013).

136 Cf. ASTM E1527-13, *supra* note 123, §§ 8.2.2.1, 8.1.5.

137 *Id.* § 8.2.2.1.

138 *See id.* § 3.2.56. *See also* U.S. ENVTL. PROT. AGENCY, RESPONSE TO COMMENTS DOCUMENT: AMENDMENT TO STANDARDS AND PRACTICES FOR ALL APPROPRIATE INQUIRIES, cmt. 1 (June 2014), *available at* <https://www.regulations.gov/document?D=EPA-HQ-SFUND-2014-0474-0007> [hereinafter 2014 RESPONSE TO PUBLIC COMMENT].

139 *See* 2014 RESPONSE TO PUBLIC COMMENT, *supra* note 138, at cmt. 5; Dianne Crocker, *Where Specifically does ASTM E1527-13 Address Vapor?*, *ENVTL. DATA RES.* (Feb. 6, 2014), <http://edrnet.com/specifically-astm-e-1527-13-address-vapor/>; Larry Schnapf, *A Hard Look at a 'Clarified' Site Assessment Standard*, *LAW 360* (Dec. 4, 2013), <https://www.law360.com/articles/492618/a-hard-look-at-a-clarified-site-assessment-standard> [hereinafter Schnapf, *Hard Look*].

140 ASTM E1527-05, *supra* note 38, § 13.1.5.12.

inquiry.”¹⁴¹ This confusion was exacerbated by the former ASTM definition of a REC, which included releases into buildings, despite IAQ exclusions.¹⁴² Vapor intrusion requires costly air sampling and testing to confirm the presence of contaminants. The idea that the Phase I would be revised to include air sampling concerned environmental consultants already attempting to keep the costs of due diligence within a competitive range.

By limiting vapor investigation simply to that contained in the substrata outside of the buildings, environmental professionals have an easier task than initially perceived. This is not to say that there are no additional costs involved in the exercise of identifying vapor migration.¹⁴³ In fact, the ASTM has created a separate standard for the assessment of vapor migration;¹⁴⁴ however, neither the 2013 ASTM standard, nor the AAI require this particular standard to be used.¹⁴⁵ Yet, much of the same data used in a Phase I assessment is also used to assess vapor migration.¹⁴⁶ For instance, governmental database searches already conducted in a Phase I and the AAI will yield information about potential vapor sources (contaminated sites) within a given radius.¹⁴⁷ Governmental file searches required under the 2013 ASTM Phase I standard clarify the threats identified in source radius maps.¹⁴⁸ Because vapors generally migrate along the soil and groundwater plume, much is known from existing information gathered in a Phase I. If the subject property contains a soil or groundwater plume, the presence of contaminated vapors can be assumed. However, if the source is off-site, additional investigation may be required to determine if other pathways to the subject property have been exposed. For example, the consultant will likely need to check for soil disturbances or utility lines where vapors can reroute and travel to the subject property with less resistance. In any event, both the ASTM and the EPA felt these changes were beneficial and represent the custom within the industry.¹⁴⁹

141 *Id.*

142 *Id.* § 1.1.1.

143 See Pat Ware, *EPA to Withdraw Direct Final Rule with Dual All Appropriate Inquiries Standards*, *Env'tl. Rep. (BNA)*, Sept. 13, 2013 (reporting that consultants expected the cost of performing E1527-13 over E1527-05 to rise).

144 ASTM INT'L, E2600-15 STANDARD GUIDE FOR VAPOR ENCROACHMENT SCREENING ON PROPERTY INVOLVED IN REAL ESTATE TRANSACTIONS (2008).

145 ASTM E1527-13, *supra* note 123, § 3.2.56 n 4.

146 See Squire Patton Boggs, *Complying with the ASTM E1527-13 Vapor Encroachment Obligations*, *FRESH PERSPECTIVES ON ENVIRONMENTAL, SAFETY & HEALTH* (May 21, 2014), <http://www.freshlawblog.com/2014/05/21/complying-with-the-astm-e1527-13-vapor-encroachment-obligations/>.

147 Cf. ASTM E1527-13, *supra* note 123, § 8.1.1.

148 *Id.* § 8.2.2.1.

149 See *id.* § 1.1.; U.S. ENVTL. PROT. AGENCY, *RESPONSE TO COMMENTS ON PROPOSED AMENDMENT TO THE STANDARDS AND PRACTICES FOR ALL APPROPRIATE INQUIRIES § 2.2* (Dec. 2013), <https://www.regulations.gov/document?D=EPA-HQ-SFUND-2013-0513-0049> [hereinafter 2013 RESPONSE TO PUBLIC COMMENT].

C. REMOVAL OF THE ASTM E1527-05 STANDARD FROM THE AAI AS A METHOD FOR SATISFYING “ALL APPROPRIATE INQUIRY”

As part of the EPA’s inclusion of the ASTM’s 2013 Phase I Standard as a valid method for satisfying “all appropriate inquiry,” the EPA created some confusion by providing four different standards and methodologies to satisfy “all appropriate inquiry.”¹⁵⁰ At the time of the 2013 amendment, consultants and purchasers had the option to use the text of the AAI, the former 2005 ASTM standard, the 2008 ASTM Standard for rural properties and forest land, or the new 2013 ASTM standard.¹⁵¹ The agency explained that any of these methods would satisfy “all appropriate inquiries.”¹⁵² Some commenters were concerned that this effectively created a two-tiered approach in which consultants could use the least stringent of the four standards.¹⁵³ The 2005 ASTM standard, which was deemed invalid and an inaccurate reflection of “good commercial and customary practice” by its own authoring organization in 2013, was in fact less stringent. Under the 2005 standard, consultants need not perform vapor migration analysis or investigate actual government files.¹⁵⁴ Commenters urged the EPA to simultaneously adopt the 2013 standard and prohibit the 2005 standard to avoid confusion by environmental professionals and limit less stringent assessments in the market that were driving down prices.¹⁵⁵

The EPA responded that the AAI rule itself delineates the duties of the environmental consultant and that the ASTM standards were simply additional options for meeting the AAI, therefore, environmental consultants should have no confusion about how to meet the AAI as the text itself remained unchanged.¹⁵⁶ Moreover, the agency explained that a grace period was necessary to transition into the new standard because the AAI requires assessments to be completed within one year of acquisition and updated within 180 days of a prior assessment on the same property.¹⁵⁷ Had the EPA not provided the grace period, many consultants and users under contract for 2005 ASTM Phase I assessments would have been unduly burdened.¹⁵⁸ After responding to public comment, in October of 2014, the EPA removed any reference to the 2005 ASTM standard from the AAI.¹⁵⁹

150 40 C.F.R. § 312.11(a)–(c) (revised in 2014); See Amendment to Standards and Practices for All Appropriate Inquiries under CERCLA, 78 Fed. Reg. 79,319, 79,320 (Dec. 30, 2013).

151 40 C.F.R. § 312.11(a)–(c) (revised in 2014); See 78 Fed. Reg. at 79,320.

152 40 C.F.R. § 312.11 (a)–(c) (revised in 2014).

153 Schnapf, *2-Tier System*, *supra* note 134.

154 Compare ASTM E-1527-05, *supra* note 38, with ASTM E1527-13, *supra* note 123.

155 See *supra* note 146, § 2.2.

156 *Id.*

157 See 2014 RESPONSE TO PUBLIC COMMENT, *supra* note 138, at cmt. 4.

158 *Id.*

159 Amendment to Standards and Practices for All Appropriate Inquiry, 79 Fed. Reg. 60,087 (Oct. 6, 2014) (codified at 40 C.F.R. pt. 312).

V. JUDICIAL INTERPRETATION OF THE AAI SINCE ENACTMENT

At present, no court has directly evaluated the sufficiency of pre-acquisition environmental assessments using the 2006 AAI rule to satisfy “all appropriate inquiry.”¹⁶⁰ Cases decided since 2006 have either dealt with property acquisitions prior to 2006, which would be subject to earlier standards, or evaluate state equivalents of “all appropriate inquiry.” Although there are no cases directly on point, recent cases involving state court use of the federal AAI regulation to assist in interpreting similar state statutes could provide insight into how a court might apply the 2006 AAI rule. The following two cases suggest that courts will likely still apply a site-by-site approach and intrusive sampling may be required to meet “all appropriate inquiry” if conditions at the site suggest contamination exists.

First, in *Maturo v. Commissioner of the Department of Environmental Protection*, the Superior Court of Connecticut held that the current owner of a former gasoline station was not an Innocent Landowner under Connecticut law, in part because he did not conduct laboratory sampling to confirm the suspicion of petroleum contamination.¹⁶¹ In 1986, Frederick Maturo purchased a former gasoline station that the state later found to be contaminated.¹⁶² In determining whether Maturo was an innocent land owner under Connecticut law, the trial court looked to the federal AAI regulation for assistance.¹⁶³ The court reviewed several federal cases that evaluated the sufficiency of “all appropriate inquiry” to guide its own decision, but never indicated that it was applying the text of the 2006 AAI rule or 2005 ASTM Phase I standard itself.¹⁶⁴ Instead, it repeatedly lamented the vagueness of the federal standard and determined that a site-specific approach was warranted.¹⁶⁵ Using the federal standard as a guide, the court held that Mr. Maturo was not an innocent land owner and did not conduct “all appropriate inquiry” based on the following facts: (1) Mr. Maturo knew the site had been used as a gas station, and any buyer in 1986 would have been aware of the risk of contamination associated with this type of use; (2) Mr. Maturo observed gasoline inventory records that suggested a loss of product; (3) Mr. Maturo noticed a rotten egg smell coming from the running water on the site; (4) an addendum to the real estate contract disclosed the contaminated nature of the water well on site; (5) Mr. Maturo failed to ask the seller about the rotten egg smell; (6) Mr. Maturo failed to ask a neighbor about the rotten egg

160 Note that ASTM in its Legal Background appendix references a case entitled *Ashley II of Charleston v. PCS Nitrogen, Inc.*, 791 F. Supp. 2d 431 (D.S.C. 2011). ASTM E1527-13, *supra* note 123, at 38 n.181. ASTM indicates that this case directly addresses the application of AAI. *Id.* However, after thorough review, this case does not address AAI head on. Instead because of the purchase date in 2003, the U.S. District Court for South Carolina recognized ASTM E1527-00 as the standard in place at the time. *Ashley II*, 791 F. Supp. 2d at 473. In any event, without thorough reasoning, the court held that Ashley had conducted “all appropriate inquiry” because it hired an environmental consultant to perform a Phase I report and relied on that consultant to conduct the work properly. *Id.* at 500.

161 *Maturo v. Comm’r of Dept. Envtl. Prot.*, No. CV910313753S, 2008 WL 1734580, at *28 (Conn. Super. Ct. March 19, 2008).

162 *Id.* at *1.

163 *Id.* at *4.

164 *See id.* at *7–8.

165 *Id.* at *8.

smell who could have told him about the contamination; and (7) Mr. Maturo failed to contact the Department of Environmental Protection, which would have revealed a 15-gallon spill of petroleum.¹⁶⁶

In holding Maturo liable, the Connecticut court reasoned that the nature of the site's prior use dictates the thoroughness of inspection.¹⁶⁷ Notably, the court held that, based on the nature of the suspected contamination, visual inspection alone was not sufficient to meet "all appropriate inquiry," suggesting that soil or groundwater testing was warranted.¹⁶⁸ On the other hand, the court refused to apply a hindsight approach, stating "knowledge of contamination or reason to know it might exist cannot be established by pointing to the undisputed fact that contamination existed at the time of purchase then cataloguing all the hypothetical ways a visual inspection could reveal in certain circumstances [evidence of contamination]."¹⁶⁹

In contrast, in *State v. Howe Cleaners*, the Supreme Court of Vermont held that a current owner of contaminated property had no reason to know of contamination because he relied upon a seemingly valid, but incorrect, environmental assessment report. In 1999, John Fiore purchased a former dry-cleaning facility where he ran a pizza restaurant.¹⁷⁰ Prior to the purchase, Fiore visually inspected the property and reviewed a Phase I environmental assessment report prepared by an environmental consultant, which revealed no "significant environmentally hazardous conditions" and recommended no further work.¹⁷¹ This same consultant removed a tank on the property years before the sale at issue and detected no contamination during laboratory sampling.¹⁷² The State of Vermont relied upon the consultant's historical reports that identified no contamination.¹⁷³ In attempting to impose liability, the State of Vermont argued that Fiore failed to conduct all appropriate inquiry by relying upon an ultimately flawed report.¹⁷⁴ At the urging of the State, the Vermont Supreme Court applied the federal "all appropriate inquiry" standard to the case for assistance in interpreting the Vermont statute.¹⁷⁵ Although the court did not squarely address the underlying compliance of the consultant's report under the 2006 AAI standard, it held that Fiore had conducted "all appropriate inquiry" because he visually inspected the property, which revealed no obvious signs of contamination, and relied upon a seemingly valid Phase I assessment.¹⁷⁶ Moreover, the court concluded that each of the performance factors of the AAI, including those performed by the consultant, weighed in favor of Fiore.¹⁷⁷ Further, the court rejected the state's contention that soil sampling needed to be conducted as part of "all appropriate inquiry,"

166 *Id.* at *9–29.

167 *Id.* at * 11.

168 *Id.*

169 *Id.*

170 *State v. Howe Cleaners*, 9 A.3d 276, 278 (Vt. 2010).

171 *Id.* at 287.

172 *Id.* at 291.

173 *Id.*

174 *Id.* at 288.

175 *Id.* at 290–292.

176 *Id.* at 292.

177 *Id.* at 291.

even though it might have revealed contamination, because no other signs suggested contamination would be present.¹⁷⁸

In sum, these two cases are encouraging, but ultimately not determinative. On one hand, the Connecticut court specifically opposed a hindsight approach to due diligence review and agrees that the federal standard provides vague guidance in conducting “all appropriate inquiry.”¹⁷⁹ Moreover, the Vermont court did not approve of needless spending on laboratory sampling where there was no suspicion of contamination.¹⁸⁰ The dicta of *Maturo* and holding of *Howe* bode well for the environmental professional.

On the other hand, not only do these two cases lack precedential value for a federal court applying the AAI, they seem to fall on opposite ends of the spectrum. In *Maturo*, contamination was obvious and, in fact, disclosed to the purchaser. In *Howe*, the obviousness of contamination was not at issue because the environmental consultant relied on earlier scientific data for his opinions. It is unclear how a court would decide the sufficiency of “all appropriate inquiry” if the obviousness of contamination were more debatable. All that can be gleaned is that inquiry beyond the text of the AAI, particularly costly laboratory sampling, may be required to confirm or deny contamination. As a result, it appears additional time is needed to truly discern how the judiciary will evaluate base level environmental assessments.¹⁸¹

VI. EVALUATION OF CHANGES: ENVIRONMENTAL CONSULTANTS STILL FACE UNCERTAINTY, DESPITE SIGNIFICANT GUIDANCE

Looking back at the EPA’s enactment of the AAI and subsequent amendments over the past decade, an environmental consultant has a wealth of guidance in performing “all appropriate inquiries.” Not only has the AAI itself recommended dozens of search criteria and sources for review,¹⁸² but the EPA has referred to several permutations of the ASTM standards to provide more clarity and flexibility for conducting “all appropriate inquiry.”¹⁸³ It is almost hard to imagine that the agency was ever silent on these matters. In fact, several provisions of the AAI have a protective effect on the environmental consultant if applied properly.

A. THE AAI PROVIDES SIGNIFICANT GUIDANCE AND BUILT-IN PROTECTIONS FOR THE ENVIRONMENTAL CONSULTANT

Under the AAI, the environmental professional now knows that the EPA expects the professional to: (1) conduct interviews;¹⁸⁴ (2) review historical records;¹⁸⁵ (3) review

178 *Id.* at 289.

179 *Id.* at 288.

180 *Id.* at 289.

181 *I.e.* Those assessments failing to expand the inquiry beyond the listed suggested sources in AAI.

182 *See* 40 C.F.R. §§ 312.23–.27 (2017).

183 *Id.* § 312.11.

184 *Id.* § 312.23.

185 *Id.* § 312.24.

government environmental records;¹⁸⁶ (4) perform a visual inspection of the property;¹⁸⁷ (5) investigate commonly known and reasonably ascertainable information;¹⁸⁸ (6) review all data to determine the degree of obviousness;¹⁸⁹ and (7) prepare a detailed report identifying hazardous substance releases.¹⁹⁰ In addition to establishing this general inquiry as a baseline, with the adoption of ASTM E2247-08 and ASTM E1527-13, the environmental consultant also now knows that: (1) anomalies identified in aerial imagery on large tracts should be ground truthed;¹⁹¹ (2) governmental file reviews are required;¹⁹² and (3) vapor migration ought to be assessed as any other contaminant would.¹⁹³ In anticipating his duties under CERCLA, the environmental consultant is miles from where he started.

In fact, in addition to the guidance, several requirements of the AAI provide built-in protection for the environmental professional. First, the AAI requires data gaps be identified, their significance explained, and recommendations for their resolution given.¹⁹⁴ By being forced to disclose data gaps, the environmental professional can freely disclaim knowledge over conditions that could not be accurately assessed due to matters beyond his control. Second, by requiring recommendations for additional investigation where warranted,¹⁹⁵ the prospective purchaser cannot claim that he was unaware of the need to act to satisfy due care obligations. Third, by allowing for the use of remote sensing technology on inaccessible tracts of land,¹⁹⁶ the environmental professional is relieved of the duty to walk or travel every portion of the property. Fourth, the AAI requires a specific declaration that the report is prepared in accordance with the AAI.¹⁹⁷ As a result, the environmental professional limits the inquiry only to the AAI and prevents scrutiny of non-scope issues like asbestos, mold, lead-based paint, and indoor air quality. Fifth, as the prospective purchaser's duty,¹⁹⁸ the environmental professional is relieved from reviewing environmental cleanup liens and evaluating the purchase price relative to the market value. Finally, the AAI limits an environmental consultant's inquiry to those resources that are publicly available, within reasonable time and cost constraints,¹⁹⁹ suggesting the environmental professional need not use extreme means to meet the performance objectives.

These directives, suggestions, and protections should give environmental consultants an added level of security. If contamination is later found on the subject property and the consultant followed the framework provided in the AAI or the ASTM standards, the

186 *Id.* § 312.26.

187 *Id.* § 312.27.

188 *Id.* § 312.30.

189 *Id.* 312.31.

190 *Id.* 312.21.

191 ASTM E2247-08, *supra* note 108, § 9.2.3.

192 ASTM E1527-13, *supra* note 123, § 8.2.2.1.

193 *Id.* § 3.2.56.

194 40 C.F.R. § 312.21(c)(2).

195 *Id.* § 312.31(b).

196 ASTM E2247-08, *supra* note 108, § 9.2.3.

197 40 C.F.R. § 312.21(d).

198 *See id.* §§ 312.28, .29.

199 *Id.* § 312.20(f).

consultant should feel comfortable that the inquiry will provide the landowner with liability protection.

In fact, believing that its standards do not require an environmental consultant to “prove a negative,” ASTM consistently provides the following statement in each iteration of its standards:

It should not be concluded or assumed that an inquiry was not all appropriate inquiry merely because the inquiry did not identify [RECs] in connection with a property. Environmental site assessments must be evaluated based on the reasonableness of judgments made at the time and under the circumstances in which they were made. Subsequent environmental site assessments should not be considered valid standards to judge the appropriateness of any prior assessment based on hindsight²⁰⁰

The EPA has now reviewed this exact language at least three times in three different ASTM standards.²⁰¹ After reviewing each standard, the EPA has further adopted the ASTM standards as a manner of satisfying the AAI.²⁰² Nowhere has the EPA specifically disclaimed this language. And, as noted above, one Connecticut court categorically rejected a hindsight approach to due diligence review.²⁰³ But how much weight will ASTM’s commentary and a single non-binding state case be given in light of the EPA’s objective in employing the performance-based approach?

B. RISK REMAINING FROM UNCERTAINTY OF A HINDSIGHT APPLICATION OF THE REGULATION

Regardless of improved clarity, potential liability for the environmental consultant performing AAI remains. The AAI’s performance-based standard serves as a persistent reminder that performing the minimum level of inquiry under the AAI or ASTM Phase I standards may not be enough. Even if the consultant complies with each directive in the AAI or recognized ASTM Phase I standards, “all appropriate inquiry” might still not have occurred.²⁰⁴

Simply compare the language in the 2013 ASTM Phase I standard and the AAI. The ASTM standard states “[t]he purpose of this Phase I Environmental Site Assessment is to identify, *to the extent feasible* pursuant to the processes described herein, [RECs] in connection with the property.”²⁰⁵ On the other hand, the language leading the directives of the AAI reads, “*to the extent necessary* to achieve the objectives and performance

200 ASTM E1527-13, *supra* note 123, § 4.5.4; *see also* ASTM E1527-05, *supra* note 38, § X1.4.3.2 n.25 (stating that the ASTM committee believes that “proving a negative” is “beyond any reasonable interpretation of Congressional intent”).

201 ASTM E1527-05, *supra* note 38, § 4.5.4; ASTM E1527-13, *supra* note 123, § 4.5.4; ASTM E2247-08, *supra* note 108, § 4.5.4.

202 40 C.F.R. § 312.11.

203 *See supra* Section V.

204 ASTM E1527-05, *supra* note 38, § X1.4.3.2 (“[E]ven a subsurface investigation has its limitations since one can always dig down one foot deeper, take one more sample, or conduct one more test. The problem of how much inquiry should be conducted, or at what level a party should begin, in one sense involves proving a negative, that is, that no contamination is present.”).

205 ASTM E1527-13, *supra* note 123, § 7.1.

factors of Sections 312.20(e) and (f).”²⁰⁶ The word “feasible” limits the environmental professional’s duty to achieve the objective to that which is capable of being done.²⁰⁷ On the other hand, the term “necessary” creates a compulsion to achieve the objective,²⁰⁸ i.e. to definitively find or not find releases. Therefore, the same questions asked prior to adoption of the AAI—“Have I done enough?” “How much is enough?”—still plague environmental consultants and their clients a decade after the AAI.²⁰⁹

Moreover, despite the fact that the EPA reviewed²¹⁰ ASTM’s “hindsight” language in at least three versions of their standard²¹¹ and later accepted the standards as meeting “all appropriate inquiry,”²¹² the EPA has remained silent on whether the AAI requires the environmental consultant to prove a negative. “Nothing in the text of [the] AAI, its preambles, or public comment responses, suggests a hindsight approach will not be applied.”²¹³

Instead, responding to commenters during the 2013 amendment comment period, the EPA emphasized that, “even in cases where environmental investigations were performed, courts look to the quality of the investigation and reasonableness of the conclusions reached”²¹⁴ In fact, despite the AAI specifically stating that the standard does not require sampling and analysis,²¹⁵ the EPA went on to cite a Kentucky case where a landowner failed to satisfy all appropriate inquiry, in part because his environmental consultant neglected to perform or recommend further sampling after identifying contamination.²¹⁶ In this case, at the time of purchase, sampling or recommending sampling was a discretionary part of the Phase I due diligence assessment, as it is now.²¹⁷ Despite disclaiming agreement or disagreement with the holding of that case,²¹⁸ the EPA illustrated that something above the minimum standard is required for the AAI because courts will evaluate the sufficiency of the AAI in light of reasonableness.²¹⁹ Moreover,

206 40 C.F.R. §§ 312.23(c), .30(c).

207 *Feasible*, MERRIAM-WEBSTER COLLEGIATE DICTIONARY (11th Ed. 2003).

208 *Necessary*, MERRIAM-WEBSTER COLLEGIATE DICTIONARY (11th Ed. 2003).

209 *See* *Maturo v. Comm’r of Dept. Env’tl. Prot.*, No. CV910313753S, 2008 WL 1734580, at *6 (Conn. Super. Ct. March 19, 2008).

210 Amendment to Standards and Practices for All Appropriate Inquiries, 78 Fed. Reg. 49,716 (Aug. 15, 2013) (ASTM requested the EPA review its proposed changes to the E1527 standard prior to finalization to confirm it complied with AAI).

211 *See* ASTM E1527-05, *supra* note 38, § 4.5.4; ASTM E1527-13, *supra* note 123, § 4.5.4; ASTM E2247-08, *supra* note 108, § 4.5.4.

212 40 C.F.R. § 312.11 (2017).

213 *Shaw*, *supra* note 5, at 569.

214 2013 RESPONSE TO PUBLIC COMMENT, *supra* note 149, § 2.3.

215 Standards and Practices for All Appropriate Inquiries, 70 Fed. Reg. 66,070, 66,101 (Nov. 1, 2005).

216 2013 RESPONSE TO PUBLIC COMMENT, *supra* note 149, § 2.3. (citing *500 Assoc. v. Vt. Am. Corp.*, 768 F. Supp.2d 914, 921 (W.D. Ky. 2011)).

217 Prior ASTM Phase I standards specifically excluded soil and groundwater sampling from the scope of work. Instead, if RECs were identified and the purchaser chose to proceed, a Phase II environmental assessment would be ordered where those specific areas of concern identified as RECS would be sampled and analyzed by a laboratory.

218 2013 RESPONSE TO PUBLIC COMMENT, *supra* note 149, § 2.3.

219 *Id.*

the EPA indicated that, due to the potential liability to the property owner under CERCLA, the persons “conducting the investigation have a strong incentive to ensure the investigation is done properly and thoroughly.”²²⁰

One example of the EPA itself seeming to rely on hindsight is found in the agency’s response to public comment on the 2014 AAI amendment regarding vapor migration.²²¹ One commenter argued that the 2013 ASTM standard’s requirement to include vapor migration frustrated the purpose of the AAI considering that vapor migration is not regulated by any governing agency, nor must it be cleaned up.²²² The EPA responded that, regardless of whether a regulatory agency would require cleanup, the presence of contaminated vapors is an indicator of other forms of contamination leading to the ultimate goal of the AAI.²²³ Notably, the EPA quipped that “the scope of the AAI Rule and the ASTM E1527-05 standard *always* included the requirement [to assess vapor migration].”²²⁴ The problem is that no part of either the AAI or the ASTM Phase I standards mentioned the word “vapor” prior to the 2013 ASTM revision. In fact, to date, the AAI still does not contain the word “vapor.” Yet, over the past decade, awareness of the dangers of vapor migration prompted the environmental industry to evolve,²²⁵ resulting in the creation of the ASTM’s own Vapor Encroachment standard E2600-08²²⁶ and the first mention of vapor migration in a Phase I standard in 2013.²²⁷

Simply because many environmental consultants began addressing vapor migration in the decade since the AAI’s adoption does not prove that it was intended to be included in the AAI at the time of enactment, or does it? A United States Bankruptcy court explained that the AAI’s legislative history indicates “that the standard of “all appropriate inquiry” was intended to evolve continuously and [defendants would] be held to higher standards as public awareness of the hazards associated with hazardous substance release has grown. . . .”²²⁸ Moreover,

[t]he requirement was intended to be flexible: Congress used terms like “appropriate” and “reasonable” in describing the necessary inquiry. The choice of such terms indicates . . . that Congress was not laying down [a] bright line rule. . . .

220 *Id.*

221 *Id.*; *see also*, Amendment to Standards and Practices for All Appropriate Inquiries, 79 Fed. Reg. 60,088 (Nov.1, 2005).

222 2014 RESPONSE TO PUBLIC COMMENT, *supra* note 138, cmt. 1.

223 *Id.*

224 Amendment to Standards and Practices for All Appropriate Inquiries, 79 Fed. Reg. at 60,088 (emphasis added). As one attorney notes, by calling the 2013 ASTM standard a “clarification,” rather than a revision, opens the door to suggesting those consultants who were not performing vapor migration analysis were not performing according to industry standards and not performing “all appropriate inquiry.” Schnapf, *Hard Look*, *supra* note 139.

225 Schnapf, *Hard Look*, *supra* note 139.

226 ASTM INT’L, E2600-15 STANDARD GUIDE FOR VAPOR ENCROACHMENT SCREENING ON PROPERTY INVOLVED IN REAL ESTATE TRANSACTIONS (2008).

227 *See* ASTM E1527-13, *supra* note 123, § 3.2.56.

228 *Juniper Dev. Grp. v. Kahn (In re Hemingway Transp., Inc.)*, 174 B.R. 148, 166 (Bankr. D.Mass. 1994) (quoting H.R.CONF.REP. NO. 962 (1986), U.S. Code Cong. & Admin. News 1986, p. 2835.).

Rather, Congress recognized that each case would be different and must be analyzed on its own facts.²²⁹

In fact, courts have recognized that “evolving technology and savvy land purchasers” necessitate the need for changes to the “all appropriate inquiry” analysis.²³⁰ Therefore, while the function of ASTM revisions are to adjust to industry trends and reflect the most up to date industry consensus and best practice methods,²³¹ the text of the AAI is intended to remain ubiquitous, so that the courts can flesh out industry trends and standard practices case-by-case.

In another confusing response to public comment, the EPA seems question the sufficiency of the 2013 ASTM standard to meet “all appropriate inquiry,” despite expressly adopting it as a means of satisfying the AAI.²³² First, the EPA explains that the 2013 ASTM standard “reflects best practices and level of rigor that will afford prospective property owners necessary and essential information when . . . meeting continuing obligations under the CERCLA liability protections. . . .”²³³ This statement is consistent with the agency’s statements that the ASTM standards are equally stringent as the AAI and can be used to satisfy the AAI. Yet in the same breath, the EPA repeatedly declares that the ASTM standards are not the standard for meeting “all appropriate inquiry”; only the AAI is the standard for meeting “all appropriate inquiry.”²³⁴ The EPA seems to be teetering upon contradiction. It appears to enjoy the articulation of the ASTM standards, yet not want to be bound to them. The problem is that, for the past decade, the EPA has declared that prospective owners and environmental consultants can use either ASTM standards or the AAI rule to meet “all appropriate inquiry.”²³⁵ In light of the EPA’s recent statement that the ASTM standards are not the standard for “all appropriate inquiry” and its own flexible language,²³⁶ will courts honor assessments being conducted under any ASTM standard, particularly if an advance in the industry precedes a future ASTM revision?

VII. LIKELY PITFALLS AND DIFFICULTIES FOR THE ENVIRONMENTAL PROFESSIONAL CONDUCTING ALL APPROPRIATE INQUIRY

In light of the evolving, ubiquitous AAI standard and potential hindsight approach that may be employed by the courts, environmental professionals need to pay particular attention in the discretionary portions of the AAI or the 2013 ASTM standard. The following likely scenarios are ripe for hindsight review:

229 *Id.*

230 *State v. Howe Cleaners*, 9 A.3d 276, 338 n. 14 (Vt. 2010) (Johnson, R. dissenting).

231 *See* ASTM E1527-13, *supra* note 123, § 3.2.56.

232 *See* 2013 RESPONSE TO PUBLIC COMMENT, *supra* note 149, § 2.2.

233 *Id.* § 2.1.

234 *See id.* § 2.2.

235 *See* 40 C.F.R. § 312.11 (2017).

236 *I.e.* “[t]o the extent necessary” *Id.* §§ 312.23(c), .30(c).

1. Failing to interview a suggested contact that ends up having information about the site.²³⁷
2. Failing to explore a large tract of land by ground,²³⁸ despite remote sensing tools failing to identify a suspicious condition.
3. Failing to review actual governmental files²³⁹ that could have revealed contamination, despite declaring such review was unnecessary.
4. Failing to review sufficient historical periodicals or media,²⁴⁰ where investigation of a particular source or search interval would have revealed a threatening past use.
5. Failing to extend the investigation sufficiently to surrounding properties that could be a threat to the subject property, where expansion would have revealed a threat to the site.²⁴¹
6. Failing to fill a data gap by sampling potential contaminated media,²⁴² where sampling could have confirmed contamination.
7. Agreeing to unreasonable time and cost restraints²⁴³ on the assessment.

These scenarios are exacerbated by current market conditions. As seen shortly after enactment, in 2008 when the real estate market crashed, demand for environmental assessments was either non-existent or slowed to a crawl.²⁴⁴ During this period and the years that followed, those few assessments ordered were awarded to the lowest bidder, many times at a significant discount.²⁴⁵ Whereas prior to 2008, the standard AAI or Phase I assessment would cost somewhere between \$2,800 to \$4,500 to adequately assess the property,²⁴⁶ between 2008 and 2012 reports of assessments being conducted for as low as \$700 to \$1200 were not unheard of.²⁴⁷ In fact, reports of these same

237 *Cf. Id.* 312.23 (additional interviews are discretionary).

238 *Cf. ASTM E2247-08, supra* note 108, § 9.2.3.

239 *Cf. 40 C.F.R. § 312.26* (actual government file review is discretionary).

240 *Cf. Id.* § 312.24 (failing to define an appropriate search interval for historical records or limit review to a specific list of sources); *Id.* § 312.30(c)(4) (leaving the source of commonly known information open ended and to the discretion of the environmental consultant).

241 *Cf. Id.* § 312.26 (actual government file review is discretionary).

242 *Cf. Id.* § 312.31(b) (suggesting the consultant provide recommendations for additional investigation if the ability to detect contamination by additional investigation is feasible).

243 *Cf. Id.* § 312.20(f)(1) (limiting inquiry only to “reasonable time and cost constraints”).

244 *See APRIL 2008 ESA REPORT, supra* note 101, at 2.

245 *See Parties Object to EPA Decision to Allow Two Standards for All Appropriate Inquiries*, *Envtl. Rep. (BNA)* (Aug. 23, 2013) (citing Mark Eisner, as noting that price is the “primary criteria most clients use in selecting consultants . . .” and that environmental due diligence has become “highly commoditized.”).

246 *Telego & Singh, supra* note 103, § 231:1490.

247 *See Report Says Oversight of Investigations is Flawed, Cites Failure to Ensure Compliance*, *Envtl. Rep. (BNA)* (Feb. 18, 2011) (quoting Larry Schnapf, “[s]ubstandard reports are spit out and the reports have been made into a commodity that can be offered for as little as \$700”); Telephone Interview with William G. Rollins, Jim Stidham & Assoc., Inc. (Oct. 31, 2016) (explaining that, between 2008 and 2012, his firm could not compete with less reputable consultants offering assessments as low as \$800 to \$1200, and in his opinion, it was not worth the risk of performing such assessments). *See also Crocker, Exploring the Dif-*

discount assessments persist today, despite a mild resurgence and optimism in the market.²⁴⁸

Unfortunately, the level of thoroughness needed to complete an assessment at the level of stringency the AAI or ASTM standards require is simply not feasible under the discounted rate.²⁴⁹ Even if we assume the environmental consultant can conduct the assessment for this bargain price, does this truly reflect an understanding of the risk posed to the consultant in light of the performance-based standard of the AAI? And, would the prospective purchaser want a consultant that does not truly appreciate this risk?²⁵⁰ If the environmental professional appreciates the risk, there is an added incentive to find potential releases on the property.²⁵¹ As a result of this pervasive bargain pricing despite the heightened risk, many reputable, quality environmental professionals have left the market.

Yet, the blame for poorer quality reporting cannot be placed squarely on the environmental professional. Along with demanding the lower cost assessments, prospective purchasers, lenders, and real estate agents continue to place unreasonable time constraints on the AAI and ASTM assessments.²⁵² When a prospective purchaser or lender demands a one-week turnaround on an assessment, environmental consultants are hard-

ferential, *supra* note 103 (reporting that, in 2012, some lenders reported paying as little as \$1,000 for a Phase I assessment, and some environmental professionals reported charging as little as \$1,300).

248 Telephone Interview with William G. Rollins, Jim Stidham & Assoc., Inc. (Oct. 31, 2016) (confirming that reports of bargain assessments ranging between \$800 and \$1,200 still exist in the current market).

249 See Pat Ware, *Assessment Standard to Leave “All Appropriate Inquiries” Rule Intact*, *Envtl. Rep.* (BNA) (May 25, 2012) (explaining that, “[I]n a public listening session on the all appropriate inquiries rule, [the] EPA was told that many Phase I reports are prepared at such low costs they are not reliable and do not provide substantive proof of contamination.”). See also *Report Says Oversight of Investigations is Flawed, Cites Failure to Ensure Compliance*, *Envtl. Rep.* (BNA) (Feb. 18, 2011) (reporting that, in a review by the EPA Inspector General of AAI investigations prepared for government Brownfields sites by environmental consultants, thirty-five of the thirty-five assessments reviewed did not meet the AAI standard).

250 See 2013 RESPONSE TO PUBLIC COMMENT, *supra* note 149, § 2.3 (reminding the commenters of that the burden of AAI falls on the purchaser and as a result there is an incentive to ensure inquiries are being conducted appropriately); *EPA Hears Comments, Recommendations on Brownfields Due Diligence Inquiry Rule*, *Envtl. Rep.* (BNA) (Mar. 19, 2010) (quoting Mary Hurley, a real estate developer, “When I order a phase I, I want one that is quantitative and that I can hang my hat on, because I want licenses and insurance I can depend on.”).

251 See Shaw, *supra* note 5, at 562–63.

252 See Dianne Crocker, *Commercial Property Due Diligence Benchmark Survey: 2016 Forecast – Part 2 Turnaround Time Pressure*, *ENVTL. DATA RES.* (Jan. 27, 2016), <http://edrnet.com/tat-if-firms-are-charging-for-faster-delivery/>. See also Dianne Crocker, *Recovery, Optimism, Caution: A Look at Risk Management in 2016*, *ENVTL. DATA RES.* (Jan. 11, 2016), <http://edrnet.com/recovery-optimism-caution-a-look-at-risk-management-in-2016/> (explaining that, in the past consultants had as much as four weeks to complete due diligence, whereas now, consultants generally only have 14 business days, and that many consultants are asked for even shorter turn-around times).

pressed to complete thorough record reviews, let alone conduct all necessary interviews. Furthermore, these same parties place increasing pressure on the environmental professional to not kill the deal by requesting to discuss (i.e. debate) RECs prior to finalization of the reports and requesting that recommendations not be included in the reports.

VIII. PRACTICAL SOLUTIONS TO AVOID RISK

Despite these risks and poor market conditions, environmental professionals are not handicapped from protecting themselves and raising the bar in the profession. Reducing risk of liability begins with educating clients. A common problem occurs when the prospective purchaser does not appreciate the difference between his liability exposure and his lender's liability exposure.²⁵³ To explain, lenders do not have the same liability for contamination found on properties within their portfolio as their borrowers.²⁵⁴ Provided the lender does not participate in management more than necessary to protect its security interest, and does not participate in environmental decisions on the property, the lender has no CERCLA liability.²⁵⁵ Even in the context of foreclosure, lenders have limited liability for hazardous substance releases.²⁵⁶ The primary reason lenders require environmental due diligence assessments is to confirm whether the existence of contamination would impair the ability of the borrower to pay the loan.²⁵⁷ Simply put, lenders order assessments sufficient to assess their business environmental risk and nothing more. The borrower on the other hand, assuming the lender has the same risk tolerance, orders nothing more than the bank requires.²⁵⁸ Yet as discussed above, this prospective purchaser bears the lion's share of liability. Therefore, the environmental professional should assess their client's purpose in acquiring a due diligence assessment (i.e. whether to establish a CERCLA defense, value the property, or satisfy lender requirements), educate the client on the difference between the client's risk and the lender's risk, and confirm that the appropriate level of assessment is being conducted.²⁵⁹ As the environmental professional explains the heightened level of scrutiny the AAI requires, the increased cost and time required of proper investigations will not be as shocking to the client.

Another way for the environmental professional to limit risk is by including limitations in the contract with the client. If the client imposes tightened time restraints on the property, or limits the scope of work, the environmental professional needs to note this in the contract itself. If limitations are placed on the environmental professional, then the assessment may not conform to the AAI nor an ASTM standard. As such, the

253 See Shaw, *supra* note 5, at 554–55.

254 *Asset Conservation Act*, 42 U.S.C. § 9601(20)(A) (1996).

255 *Id.* § 9601(20)(F).

256 *Id.* § 9601(20)(E)(ii) (1996).

257 See APRIL 2008 ESA REPORT, *supra* note 101, at 1, 4; Telego & Singh, *supra* note 103, §§ 231:1484, :1489.

258 See Shaw, *supra* note 5, at 554–55.

259 *Id.* See Barry Trilling, *Practical Considerations in the Selection and Performance of the Environmental Professional to Conduct All Appropriate Inquiry*, REAL ESTATE FINANCE, Apr. 2005, at 20, 21.

environmental professional should clearly state that, under these conditions, significant data gaps are likely and that CERCLA liability protections could be compromised. On the other side, if additional inquiries are required beyond the AAI and the ASTM standards, the environmental professional should clearly state that these are non-scope items, lest he set a heightened standard of care for himself in the future.

Last, the environmental professional, under limitations imposed by the client, should invest time in the data gap and recommendation sections of the final AAI or ASTM report. The professional should clearly list each and every data gap, the reasons for the data gap, and how those data gaps are likely to have impacted the findings of the report. The professional should not attempt to dilute the impact of unreasonable time restraints on the project out of allegiance to the client. Although the AAI requires that recommendations for addressing data gaps be included in the AAI report itself, many clients request the recommendations be prepared in a separate letter or not be included at all. The environmental consultant needs to realize that failure to provide recommendations could prevent the client from meeting “due care” requirements under the CERCLA defenses in the future, which could result in liability for the client and for himself.²⁶⁰ Moreover, because courts have consistently found that subsequent purchasers are within the scope of foreseeable plaintiffs,²⁶¹ placing recommendations outside of the report creates a risk that those subsequent purchasers never learn of the recommendations, again creating potential liability. Although it appears possible to satisfy the AAI by putting the recommendations in a cover letter or separate document for the actual purchaser of the report, the environmental consultant should (1) ensure that letter including recommendations actually reaches the prospective purchaser, not just the bank or real estate agent facilitating the transaction; and (2) consider limiting reliance on the report by third parties.

IX. CONCLUSION

At the beginning of my research, I hoped to find some clarity a decade after adoption of the AAI regarding environmental consultant liability and whether courts would be applying a hindsight approach to their assessments in light of the performance-based standard of the AAI. I have found clarity, simply not that which reduces consultant potential liability. Instead, I learned that the EPA’s performance-based approach requires consultants apply a unique investigative strategy for each property they assess, and that boilerplate environmental assessments were intended to be a thing of the past. Although the AAI provides several methodologies to achieve “all appropriate inquiry,” I found that the ultimate course of investigation is left to the discretion of the environmental consultant. When there is any “red-flag” raised during the assessment, consultants are expected to go beyond the methodologies prescribed in the standard. Therefore, after a decade, consultants can be sure that the standard of care has been raised under the AAI.

260 Cf. Schnapf, *Hard Look*, *supra* note 139.

261 See *Grand St. Artists v. Gen. Elec. Co.*, 19 F. Supp. 2d 242, 248 (D.N.J. 1998). See also *Sykes v. Propane Power Corp.*, 541 A.2d 271, 274–75 (N.J. Super. Ct. App. Div. 1988); *Cordiano*, *supra* note 34, §§ II(A)–(B).

In light of this increased responsibility, I found that environmental consultant risk has likewise increased. Although no court has yet addressed environmental consultant liability under the 2006 AAI rule directly, I would continue to warn consultants of the risk of hindsight review. Despite ASTM's consistent rejection the idea of hindsight review, after reviewing the EPA's own commentary, the issue of "proving a negative" is not yet resolved. By employing the performance-based approach, it appears that the EPA sought to have the courts determine whether "all appropriate inquiries" were met, *after the fact*. In doing so, the agency shifted the burden of determining appropriate assessment practices to the courts, the party with the least experience in the matter. Furthermore, by arguing that vapor migration was "always" intended to be included in the inquiry, despite no evidence of this in the text of the regulation or accompanying commentary, the EPA relies on hindsight itself. Moreover, by contradicting itself on whether ASTM's standards are in fact equivalent to the AAI, the EPA continues to generate insecurity for environmental consultants. In short, this "flexible" standard, by design, creates a moving target for the environmental consultant.

As a result of the confusion over the performance-based standard and volatile market conditions, in the decade since the AAI's adoption, a roller coaster of anxiety has plagued the environmental consulting community. Some consultants refused to increase the quality of assessment in response to the AAI, seeking instead to cut corners, slash prices, and undermine the market. For these consultants, liability is coming and there will be little defense for the continuation of generating commodity-style reports. On the other hand, those consultants who have hung on and, despite significant market pressure to the contrary, increased the quality of assessment should be able to mitigate the risk of hindsight review and the moving compliance target. Many of the AAI's own provisions can be used to reduce consultant risk. Moreover, in addition to confirming the sufficiency of their errors and omissions insurance policies, consultants can take practical steps to further reduce risk, such as: educating clients on the AAI and setting reasonable expectations on time and cost under the performance-based standard; expressing limitations placed on the assessment in the service contract and in the report itself; and thoroughly documenting data gaps and recommendations. Therefore, although environmental consultant risk remains high under the AAI, this Article reveals the ability of consultants to move beyond the regulation's apparent deficiencies and continue to raise the bar in the profession.

Andrea Shepard Shaw is an instructor and adjunct professor at Samford University's Cumberland School of Law. She received her Bachelor of Science in Geology from Florida State University in 2001 and her Juris Doctor from the Cumberland School of Law in 2010. Prior to her legal career, the author worked as an environmental consultant conducting Phase I and Phase II Environmental Site Assessments.

ZEN AND THE ART OF PRACTICE: ETHICAL CONSIDERATIONS WHEN AN ATTORNEY AND CONSULTANT REPRESENT THE SAME CLIENT

BY R. WALTON SHELTON^{1,2}

I.	Introduction	63
II.	Zen and the Practice of Law	64
	A. Mindfulness	64
	B. Religious Roots of Mindfulness	65
	C. Mindfulness and the Practice of Law in Texas	66
	1. Texas Lawyer's Creed	66
	2. Practical Considerations	67
III.	Ethical Considerations in Common Representation by an Attorney and a Consultant	68
	A. Hypothetical	68
	B. Disciplinary Rules of Professional Conduct	68
	C. Selected Issues and Considerations—Attorneys and Technical Consultants	69
	1. Legal vs. Technical Advice	70
	2. Unauthorized Practice of Law	70
	3. Pursuit of Client's Interests	76
	4. Confidentiality	77
IV.	Conclusion	78

I. INTRODUCTION

Mindfully focusing on tasks and relationships without the dispersion caused by multitasking is a high ethical imperative. For attorneys, the result of such focus is truly working toward clients' best interests. The challenges associated with common representation of a client with a technical consultant highlight the importance of striving for mindfulness, which is the epitome of professionalism.

How many things can we do or think about at one time? When the answer is more than one, how many are we doing well? The first part of this article highlights the impor-

1 Editor's Note: A variation of this article was originally presented at the 18th Annual Changing Face of Water Rights CLE in San Antonio, Texas, on February 23, 2017.

2 At the outset, please note that this article includes a general and partial discussion of certain issues solely from the author's viewpoint. The author does not intend for any part of the discussion to be relied upon or serve in any way as legal advice.

tance of doing one thing at a time in law practice as in life. In other words, it focuses on authentically being focused. As portions of the Texas Lawyer's Creed remind us, this is truly part of our calling—a vocational imperative. This general discussion of mindfulness is followed by a more particular look at certain ethical considerations in a somewhat common scenario for environmental and water attorneys: when an attorney and technical expert (i.e., a consultant who is not an attorney) represent the same client. Although the two parts of the article might initially appear unrelated, they are in fact fundamentally joined. Mindfulness should be an integral component of *all* aspects of practice.

II. ZEN AND THE PRACTICE OF LAW

A. MINDFULNESS

Multitasking is common in our culture.³ It often seems like a necessity in most any busy law practice setting. Doing things one at a time and sequentially are rarities.⁴ There is little, if any, room or time for the exercise of mindfulness, but such focus is imperative. Essentially, mindfulness is the high calling of singular attention and awareness in the present moment.⁵ It involves being fully present *now*.⁶ Living and practicing one moment at a time is at the heart of authentic life experience as well as the practice of law.

Mindfulness is a key aspect of many religious faith and philosophic traditions.⁷ Although many associate mindfulness most closely with Zen Buddhism and other meditative traditions,⁸ it has broader religious and secular applicability.⁹ Mindfulness is “deliberately paying attention in the present moment.”¹⁰ It involves “deliberate, present-moment non-judgmental awareness of whatever passes through the five conventional senses and the mind.”¹¹ More simply, mindfulness means paying solitary attention to what one is doing now without preoccupation or other dispersion.

The benefits of being mindful and living mindfully extend to and are arguably at the very center of an ethical and effective law practice. After all, it is difficult to “zealously

3 See Anne Enquist, *Multitasking and Legal Writing*, 18 PERSPECTIVES: TEACHING LEGAL RESEARCH & WRITING 7, 7 (2009).

4 *Id.*

5 See Robert Zeglovitch, *The Mindful Lawyer*, GPSOLO MAG., October/November 2006, at 56, 57.

6 *See id.*

7 *See, e.g.*, HUSTON SMITH, THE RELIGIONS OF MAN 121 (1st Perennial Library ed. 1965).

8 *See infra* Part II.B.

9 *See* PHILOSOPHY EAST/WEST: EXPLORING INTERSECTIONS BETWEEN EDUCATIONAL AND CONTEMPLATIVE PRACTICES 9, (Oren Ergas & Sharon Todd eds., 2006) (hereinafter PHILOSOPHY EAST/WEST).

10 Zeglovitch, *supra* note 3, at 57.

11 Leonard L. Riskin, *Awareness and the Legal Profession: An Introduction to the Mindful Lawyer Symposium*, 61 J. LEGAL EDUC. 634, 635 (2012).

pursue [a] client[s] interests,”¹² “exercise independent professional judgment,”¹³ or “render candid advice”¹⁴ when one is mentally multitasking or otherwise distracted.

B. RELIGIOUS ROOTS OF MINDFULNESS

The origin and development of the concept and practice of mindfulness are enormous subjects well beyond the scope of this article. Nevertheless, some comments and observations are appropriate. These brief comments relate to the Buddhist beginnings of the concept and its expansion beyond Buddhist roots to the West. This introduction is a predicate to focusing attention on the importance of mindfulness to the practice of law.

Prioritization of being mindful has long roots, including within Buddhism. Buddha was born in the middle of the Sixth Century B.C.E.¹⁵ In Huston Smith’s foundational work in the 1950s¹⁶ on the world’s great religious traditions, *The Religions of Man*, he emphasizes Buddha’s¹⁷ answer when asked just who and what he was: “I am awake.”¹⁸ Per Smith, that is what “Buddha” means as the Sanskrit root points to both waking up and knowing.¹⁹ Importantly, being fully awake with knowledge and complete awareness in the present is the core of being mindfully focused.²⁰

According to Smith, Buddha taught “a religion of intense self-effort,”²¹ encouraged “the way of intentional living, [that] he called the Path,”²² and included “right mindfulness” as one key to such path.²³ Without question, living mindfully in *any* century requires serious, consistent personal effort and discipline and is a noble, narrow path of life indeed.

Similar to other religions, including Judaism and Christianity,²⁴ Buddhism is multifaceted because it is divided into certain threads or schools.²⁵ One key thread, which has had and continues to exert a profound impact on Western religion and thought, is Zen Buddhism.²⁶ Basically, Zen means “the meditation that leads to insight.”²⁷ Generally, although Buddhism is an Eastern religion, Zen ideas have significantly impacted and

12 TEX. DISCIPLINARY RULES PROF’L CONDUCT preamble ¶ 3, *reprinted in* TEX. GOV’T CODE ANN., tit. 2, subtit. G, app. A (West 2013) (TEX. STATE BAR R. art. X, § 9).

13 *Id.* R. 2.01.

14 *Id.*

15 SMITH, *supra* note 7, at 91.

16 Huston Smith’s classic study was first published in 1958. *Id.* at copyright page.

17 Buddha’s full name was Siddhartha Gautama of the Sakyas. *Id.* at 91. He was born in northern India about 560 B.C.E. *Id.*

18 *Id.* at 90.

19 *Id.*

20 THICH NHAT HANH, *THE MIRACLE OF MINDFULNESS!* 11 (Mobi Warren trans., 1975).

21 *Id.* at 107.

22 *Id.* at 116.

23 *Id.* at 121. Right mindfulness is one step of the “Eightfold Path.” *See id.* at 155.

24 E.g., Christianity split into Eastern and Western, Western split into Catholic and Protestant—and there have been multiple splits otherwise and within each of these. *Id.* at 132.

25 *Id.*

26 Buddhism split into two significant branches, Mahayana and Theravada, shortly after the death of Buddha. *See id.* at 132, 139. Zen is one of several schools or ways deriving from the Mahayana line. *See id.* at 139–140.

27 *Id.* at 140.

informed the West.²⁸ This section briefly highlights a few examples with perspectives on mindfulness as a bridge to law-practice-related considerations.

Thich Nhat Hanh is a popular Zen author and advocate who has had significant influence in the West.²⁹ He was a Vietnamese peace advocate in the 1960s and has become a prolific author of Zen-related books.³⁰ Martin Luther King, Jr. nominated Hanh for the Nobel Peace Prize in 1967.³¹ Thomas Merton, an American Catholic writer who has been influential within and outside of Christianity, who was also a 1960s-era social activist and a Jesuit monk, called Hanh his “brother.”³² Merton was ecumenical in his approach to Christian faith and embraced Zen and other Eastern religious ideas and parallels to Christianity.³³ Hanh also embraced parallels with Christianity.³⁴

One of Hanh’s excellent works is *The Miracle of Mindfulness*.³⁵ In this book, Hanh notes that he “use[s] the term ‘mindfulness’ to refer to keeping one’s consciousness alive to the present reality.”³⁶ Further, “[m]indfulness frees us of forgetfulness and dispersion and makes it possible to live fully each minute of life.”³⁷ Lorne Ladner, a clinical psychologist, professor, and director of a Buddhist center in Virginia, encourages and uses a dialogue of sorts between Buddhism and Western psychology in *The Lost Art of Compassion*.³⁸ According to Ladner at the outset of his work:

Buddhist masters always have emphasized that each moment of life is precious. In any given moment, we can allow life to pass us by or we can be mindful of what’s most essential, living with genuine purpose, energy, and joy When we’re aware and awake in a given moment, we have the capacity to make that moment extraordinary.³⁹

C. MINDFULNESS AND THE PRACTICE OF LAW IN TEXAS

1. TEXAS LAWYER’S CREED

What does any of this have to do with the practice of law in Texas? The preamble-like “Order of Adoption” to the November 1989 Texas Lawyer’s Creed from the Supreme Court of Texas and the Court of Criminal Appeals begins: “The conduct of a

28 See PHILOSOPHY EAST/WEST, *supra* note 9, at 9.

29 See Arnold Kotler, *Introduction* to THICH NHAT HANH, PEACE IS EVERY STEP, at ix, x–xv (Arnold Kotler ed., paperback ed. 1992).

30 See *id.*

31 *Id.* at xi.

32 David Steindl-Rast, *Foreward* to THICH NHAT HANH, LIVING BUDDHA, LIVING CHRIST, at xiii, xiv (Penguin Grp., 10th Anniversary ed. 2007).

33 See, e.g., Merton’s notes for a paper to have been delivered at Calcutta (October 1968), in THE ASIAN JOURNAL OF THOMAS MERTON 311 (Amiya Chakravarty et al. eds., 1973).

34 See, e.g., Steindl-Rast, *supra* note 32, at xvii.

35 HANH, *supra* note 20.

36 *Id.* at 11.

37 *Id.* at 15.

38 See generally LORNE LADNER, THE LOST ART OF COMPASSION (2004). Ladner particularly highlights Tibetan traditions for “cultivating compassion,” *id.* at xiii, and “the ideas and methods so freely offered by the Mahayana Buddhist traditions of Central Asia,” *id.* at xvii.

39 *Id.* at 3.

lawyer should be characterized at all times by honesty, candor, and fairness.”⁴⁰ That sounds familiar to most every attorney in Texas. The Order continues: “In fulfilling his or her primary duty to a client, a lawyer *MUST BE EVER MINDFUL* of the profession’s broader duty to the legal system.”⁴¹ In the Order, the two highest courts in our state also emphasize: “We must *ALWAYS BE MINDFUL* that the practice of law is a profession.”⁴²

Consolidating mindfulness considerations into a worthy, ethical, and professional objective in the spirit of the “aspirational”⁴³ and inspirational Creed:

A LAWYER SHOULD BE EVER MINDFUL IN THE PRACTICE OF LAW—
fully attentive to the moment, including the task or the person in front of her or
him.

2. PRACTICAL CONSIDERATIONS

Affirming the excellence of mindfulness as a concept is one thing. Translating it into something practical and beneficial in the legal workplace is quite another. Working toward a focused, present-oriented personal and work life will always be a work in progress. One helpful tool for implementation is a short, doable list of points or steps for intentionally approaching each day, a segment of it, or a particular task. On a personal level, my lists are the Neanderthal type prepared with a pen on actual paper as opposed to using smart communication devices. This old-style approach helps me slow down, which itself is a good starting point for any daily agenda. I use short lists as a law professor and practitioner. I make a short list of steps to follow in each class that I teach as well as in each meeting or conference call related to my law practice. I am better at making lists, however, than mindfully walking through them.

An agenda is helpful as long as we truly see only one thing—better yet, one moment—at a time. Problems arise, however, when we think too much about all of the steps, question and re-think ones we have already taken, or anticipate what is left. A daily plan with a reasonable number of objectives to accomplish can facilitate being mindful, but completion of the list should not be an absolute or dominant concern. Flexibility and willingness to react to unexpected developments in line with our priorities during any day are especially important.

Further, as a personal note, over the years, I have found it helpful to add in all capitals at the top of a daily list words and phrases like “mindful,” “slow,” “distinct,” “clarity,” and “be where you are and make it count.” After all, *HOW* we do each thing (quality) is more significant than *HOW MUCH* we do (quantity).

Hanh and Ladner offer practical, applicable wisdom in their works noted above. Regarding the importance of doing one thing at a time, Hanh suggests:

Whatever the tasks, do them slowly and with ease, in mindfulness. Don’t do any task in order to get it over with. Resolve to do each job in a relaxed way, with all

40 THE TEXAS LAWYER’S CREED – A MANDATE FOR PROFESSIONALISM (promulgated by the Supreme Court of Texas and the Court of Criminal Appeals Nov. 7, 1989) (hereinafter TEXAS LAWYER’S CREED).

41 *Id.* (emphasis added).

42 *Id.* (emphasis added).

43 In the Order of Adoption for the TEXAS LAWYER’S CREED, the courts describe the rules in the CREED as “primarily aspirational.” *Id.*

your attention. . . . No matter [the] task . . . do it slowly and evenly, without reluctance.⁴⁴

Enhancing these thoughts, Ladner observes:

We spend so much of our time doing things automatically that it is important to assess . . . our habits. . . . Whenever we think that how we spend a given . . . hour is unimportant, and whenever we think we need to rush through what we're doing so that later we can get to something more relaxing, meaningful, or important, we are cheating ourselves.⁴⁵

In addition to cheating ourselves, in a practice setting, we are also potentially doing a disservice to our clients and our profession. Although it is not easy, Ladner reminds us that “any of us can pause in this moment to consider what’s most essential and then live this moment in a *deliberate* [and] *meaningful* . . . way.”⁴⁶

Without a consistent reminder in our practice of law or anything else, focus eludes us and dispersion sets in. The consistent, ethical practice of law is a high calling indeed. Mindfulness is a foundation of it.

III. ETHICAL CONSIDERATIONS IN COMMON REPRESENTATION BY AN ATTORNEY AND A CONSULTANT

A. HYPOTHETICAL

Transitioning to focus on a few ethical dimensions of an environmental attorney’s relationship with an environmental consultant in the context of representing the same client, consider the following basic hypothetical in a transactional setting.

The client (C) is the potential purchaser of Brownacre, a tract of commercial real estate. The attorney (A) is C’s attorney related to environmental and water issues. The technical person is an environmental consultant (E), who is C’s environmental and water expert. More particularly, C has hired E to perform a pre-acquisition environmental assessment or audit (including checking groundwater supply). E will perform his work during a specified Investigation Period with related access provisions in a Purchase Agreement between C and the owner and potential seller (S) of Brownacre.

B. DISCIPLINARY RULES OF PROFESSIONAL CONDUCT

There are numerous ethical issues and nuances relevant to this hypothetical, including many related to the triangulated relationship among C, A, and E. This article highlights a few potentially significant issues with comments and practical examples, keying off selected portions of the Creed and the Texas Disciplinary Rules of Professional Conduct (Rules).

44 HANH, *supra* note 20, at 29.

45 LADNER, *supra* note 38, at 4.

46 *Id.* (emphasis added).

The Rules are minimal standards.⁴⁷ Whereas the Rules are mandatory, the comments to the Rules are instructive suggestions of a permissive character.⁴⁸ Thus, the Rules are essentially the professional ethical “floor” in Texas.

Our ethical objective as attorneys should be much higher than the letter of the Rules. Paragraph 9 of the Preamble to the Rules states: “Each lawyer’s own conscience is the touchstone against which to test the extent to which . . . actions may rise above the disciplinary standards [of the Rules].”⁴⁹ The Rules and related comments also do not “exhaust the moral and ethical considerations that should guide a lawyer, for no worthwhile human activity can be completely defined by legal rules.”⁵⁰ Importantly, the Preamble further emphasizes that our “incentive [should be] to attain the HIGHEST POSSIBLE DEGREE of ethical conduct.”⁵¹

C. SELECTED ISSUES AND CONSIDERATIONS—ATTORNEYS AND TECHNICAL CONSULTANTS

In a very real and practical sense related to the hypothetical, A and E should be a complementary and cooperative team with a keen understanding of C’s objectives in the transaction. They should work together for the benefit of C. More often than not, that is what C as their client will expect. Nevertheless, A’s duties and loyalty to C should trump any team spirit with E.⁵²

Sometimes before engaging an attorney, a client first hires a consultant and signs the consultant’s standard contract with a specified scope of work for an All Appropriate Inquiry/ASTM pre-acquisition audit.⁵³ Many typically refer to the report that the consultant prepares after investigation as a “Phase I” or “Phase I Environmental Site Assessment/ESA.”⁵⁴ In the hypothetical, assume C initially hires E to perform a Phase I and other investigation. Subsequently, C engages A and essentially says, “Bringing you in is a bit overkill on my part because E is primarily advising me, so please just work with E and avoid any duplication.” In this hypothetical context, we will focus on just a few of the potentially myriad issues.

47 TEX. DISCIPLINARY RULES PROF’L CONDUCT preamble ¶ 7, *reprinted in* TEX. GOV’T CODE ANN., tit. 2, subtit. G, app. A (West 2013) (TEX. STATE BAR R. art. X, § 9). The Rules state “minimum standards of conduct below which no lawyer can fall without being subject to disciplinary action.” *Id.*

48 *See id.* ¶ 10.

49 *Id.* ¶ 9.

50 *Id.* ¶ 11.

51 *Id.* ¶ 9 (emphasis added).

52 *See id.* ¶ 3.

53 *See* 40 C.F.R. § 312.20 (2017) (the All Appropriate Inquiry or “AAI” Rule). ASTM International (formerly known as the American Society for Testing and Materials) has offered a progression of versions of a “Standard Practice for Environmental Site Assessments” since 1993. ASTM INTERNATIONAL, ASTM E1527-13: STANDARD PRACTICE FOR ENVIRONMENTAL SITE ASSESSMENTS: PHASE I ENVIRONMENTAL SITE ASSESSMENT PROCESS 1 n.1 (2013). The most recent version is November 2013. *Id.* The EPA’s AAI Rule notes that the ASTM standard (ASTM E1527-13) can be used to satisfy a portion of AAI. 40 C.F.R. § 312.11(b) (2017).

54 *See* 42 U.S.C. § 9601(35)(B)(iv)(II) (2012).

1. *LEGAL VS. TECHNICAL ADVICE*

Rule 1.03 [Communication] (b) A lawyer shall explain a matter to the extent reasonably necessary to permit the client to make informed decisions regarding the representation.⁵⁵

The line between environmental and water law related legal and technical expertise, advice, and advocacy is often blurry. This is especially the case from C's perspective. In some cases, it is easy to understand that hiring E and A seems a bit duplicative to C. A should consider clearly explaining the distinct yet complementary roles of A and E, in part to avoid any misunderstanding about A and E's respective areas of expertise.

In addition to covering this with the client, attorneys often need to ascertain whether the technical consultant understands the line between legal and technical input and advice and how the two areas will be integrated in communication with the client.⁵⁶ Similarly, the attorney should be vividly aware of the scope of the legal representation.⁵⁷

Some of the following discussion elaborates more particularly on the distinction between legal and technical input and its relevance.

2. *UNAUTHORIZED PRACTICE OF LAW*

a. *TEXAS RULES*

Rule 2.01 [Advisor] In advising or otherwise representing a client, a lawyer shall exercise independent professional judgment and render candid advice.⁵⁸

Rule 5.05 [Unauthorized Practice of Law] (b) [A lawyer shall not] assist a person who is not a member of the bar in the performance of activity that constitutes the unauthorized practice of law.⁵⁹

There are, without question, some gray areas along the border between legal and technical advice. E can potentially encroach on or go beyond the line toward giving legal advice. In this regard, the border between legal and technical is perhaps best thought of as a line of sorts.

The State Bar Act defines the practice of law in two parts.⁶⁰ As the Supreme Court of Texas has observed, the "two major parts [include] one encompassing services rendered in connection with legal proceedings and one encompassing services rendered out of court."⁶¹ More particularly, the first portion specifies the preparation of pleadings and "other document[s] incident to an action or special proceeding . . . on behalf of a client before a judge in court . . ."⁶² This is perhaps what most anyone would expect law practice to involve, namely, representing clients in lawsuits in courts as well as in other legal proceedings and forums.

55 TEX. DISCIPLINARY RULES PROF'L CONDUCT R. 1.03 (b).

56 *See id.* R. 1.02.

57 *Id.*

58 *Id.* R. 2.01.

59 *Id.* R. 5.05(b).

60 *See Unauthorized Practice Comm. v. Cortez*, 692 S.W.2d 47, 49 (Tex. 1985).

61 *Id.*

62 TEX. GOV'T CODE ANN. § 81.101(a) (West 2013).

The second part of the definition of law practice, however, is much broader.⁶³ The “practice of law” also includes “the giving of advice or the rendering of any service requiring the use of legal skill or knowledge”⁶⁴ Sixty years ago, one appellate court observed: “The practice of law is not limited to the conduct of cases in court. It embraces in general ALL ADVICE TO CLIENTS AND ALL ACTION TAKEN FOR THEM in matters connected with the law.”⁶⁵

Importantly, the two-part definition of practice of law in the State Bar Act is not exclusive.⁶⁶ As the State Bar Act notes: “The definition in this section is not exclusive and does not deprive the judicial branch of the power and authority under both this chapter and the adjudicated cases to determine whether other services and acts not enumerated may constitute the practice of law.”⁶⁷ Thus, courts in Texas have inherent power to define and decide what constitutes the practice of law in Texas.⁶⁸

The State Bar Act definition with judicial enhancement defining the practice of law in Texas is relevant to the prohibition under the Rules that attorneys must not assist non-attorneys in such practice.⁶⁹ In contrast, the Texas Penal Code specifies certain crimes related to unauthorized law practice.⁷⁰

Under the Penal Code, the unauthorized practice of law in Texas is a misdemeanor,⁷¹ but if a person has been previously convicted, it is a third degree felony.⁷² The Penal Code provision specifies an offense more narrowly than the State Bar Act definition of law practice.⁷³ Particularly, offenses under the Penal Code provision relate to personal injury or property damage claim contexts⁷⁴ or contracting with someone to “select and retain” an attorney.⁷⁵ Whereas Disciplinary Rule 5.05(b), noted above, applies to attorneys and prohibits an attorney from assisting another person in unauthorized practice,⁷⁶ the Penal Code provision applies to persons who are not licensed to practice law.⁷⁷ Additionally, the Penal Code specifies a separate offense for falsely hold-

63 *See id.*

64 *Id.*

65 *Quarles v. State Bar of Tex.*, 316 S.W.2d 797, 803 (Tex. Civ. App.—Houston 1958, no writ) (emphasis added).

66 TEX. GOV'T CODE § 81.101(b).

67 *Id.*

68 *See Unauthorized Practice Comm. v. Cortez*, 692 S.W.2d 47, 51 (Tex. 1985).

69 *See* TEX. DISCIPLINARY RULES PROF'L CONDUCT R. 5.05(b), *reprinted in* TEX. GOV'T CODE ANN., tit. 2, subtit. G, app. A (West 2013) (TEX. STATE BAR R. art. X, § 9).

70 *See* TEX. PENAL CODE ANN. § 38.123(c) (West 2016).

71 *Id.*

72 *Id.* § 38.123(d).

73 *See, e.g., id.* § 38.123(a)(1)–(4).

74 *Id.*

75 *Id.* § 38.123(a)(5).

76 TEX. DISCIPLINARY RULES PROF'L CONDUCT R. 5.05(b), *reprinted in* TEX. GOV'T CODE ANN., tit. 2, subtit. G, app. A (West 2013) (TEX. STATE BAR R. art. X, § 9).

77 *See* TEX. PENAL CODE § 38.123(b). This section also applies to attorneys who are not in good standing before the State Bar. *Id.*

ing oneself out to be an attorney with the intent for economic gain, which is a third degree felony.⁷⁸

b. THE UNAUTHORIZED PRACTICE OF LAW COMMITTEE AND TEXAS COURTS

Regarding the practice of law in Texas, the Unauthorized Practice of Law Committee (UPL) is a “permanent entity in the State Bar administration” with “investigative and prosecutorial powers, as well as the responsibility to inform the State Bar and others about the unauthorized practice of law.”⁷⁹ The UPL essentially polices unauthorized practice in Texas, provides information to the Supreme Court of Texas and the State Bar of Texas, and has the authority to initiate related legal proceedings to prohibit unauthorized practice.⁸⁰ These proceedings can also be prosecuted by others, including local bar associations and grievance committees.⁸¹ Importantly, as the Supreme Court of Texas has stated, “[The UPL] is thus empowered, *not to adjudicate whether activities constitute the unauthorized practice of law, but to seek adjudication of that issue* in appropriate forums”⁸² It is Texas courts that have the inherent authority to define and regulate the practice of law. Specifically, “[t]he Supreme Court of Texas has inherent power to regulate the practice of law in Texas for the benefit and protection of the justice system and the people as a whole.”⁸³ Further, per the Court:

The courts have the duty and authority to supervise the legal profession by ensuring that those practicing law are qualified and by determining the boundaries of the practice of law. The direct policing relationship between the courts and the legal profession does not exist between the courts and other professions.⁸⁴

When the UPL files a lawsuit alleging the unauthorized practice of law, such lawsuit sometimes follows a complaint to the UPL or a UPL subcommittee and a related investigation.⁸⁵ For relief, the UPL typically seeks injunctive relief to stop the alleged unauthorized practice⁸⁶ For example, in *Brown v. Unauthorized Practice of Law Committee*, the Dallas Subcommittee of the UPL received multiple complaints about Brown essentially acting as an insurance consultant before authorizing an investigation of the allegations.⁸⁷

78 *Id.* § 38.122. There are few reported opinions discussing prosecutions under Penal Code sections 38.122–.123, apparently indicating prosecution is pursued only in egregious circumstances. *See, e.g., Satterwhite v. State*, 979 S.W.2d 626, 629 (Tex. Crim. App. 1998) (en banc) (affirming felony conviction of attorney under section 38.122 for holding himself out as a lawyer during a period of suspension).

79 *In re Nolo Press/Folk Law, Inc.*, 991 S.W.2d 768, 771 (Tex. 1999). *In re Nolo Press* includes background information about the formation and history of the UPL. *See id.*

80 *See id.* at 772; TEX. GOV'T CODE ANN. § 81.104 (West 2013).

81 *See In re Nolo Press*, 991 S.W.2d at 773.

82 *Id.* at 772 (emphasis added).

83 *Id.* at 769.

84 *Unauthorized Practice Comm. v. Cortez*, 692 S.W.2d 47, 51 (Tex. 1985) (emphasis added).

85 *See, e.g., Brown v. Unauthorized Practice of Law Comm.*, 742 S.W.2d 34, 36 (Tex. App.—Dallas 1987, writ denied).

86 *See id.*

87 *Id.*

Subsequently, the subcommittee recommended suit to the UPL, and the UPL sued for and obtained permanent injunctive relief.⁸⁸

c. ENVIRONMENTAL CONSULTANTS

Although there do not appear to be any reported cases in Texas involving environmental consultants and the alleged unauthorized practice of law,⁸⁹ cases involving other experts who are not attorneys are instructive. One of the best examples is an opinion from the 1980s. In *Cortez*, the Supreme Court of Texas considered a UPL action against providers of immigration services who were not attorneys.⁹⁰ In its description of services offered by the Cortezes, the Court noted that “the most common practice performed” was completion of a form for issuance of Immigrant Visas and related consultation.⁹¹ Importantly, the Court observed: “Although the act of recording a client’s responses to the questions on the form . . . probably does not require legal skill or knowledge, the act of determining whether the [form] should be filed at all does require special legal skills.”⁹² After noting that the information on the form, including the applicant’s address and being in the country illegally, enhanced the possibility of deportation, the Court stated, “advising [clients] as to whether to file [the form] requires a careful determination of legal consequences.”⁹³

d. OTHER JURISDICTIONS

The majority of jurisdictions have statutes or rules defining the “practice of law,” the “unauthorized practice of law,” or both.⁹⁴ As one would expect, these statutes vary in many ways, from the scope of unauthorized practice definitions to penalties for violations.⁹⁵ Just as the statutes vary, so do the applied judicial tests.⁹⁶ Like Texas, there do not appear to be any reported cases involving environmental consultants and the alleged unauthorized practice of law in other jurisdictions.⁹⁷

e. EXAMPLES

An example of E possibly touching or crossing the line into the realm of legal counsel relates to groundwater quality and reporting requirements in Texas. Generally, the

88 *Id.*

89 Based on January 4, 2017 searches.

90 *Unauthorized Practice Comm. v. Cortez*, 692 S.W.2d 47, 48 (Tex. 1985).

91 *Id.* at 48.

92 *Id.* at 50.

93 *Id.*

94 Am. Bar Ass’n, 2015 Survey of Unlicensed Practice of Law Committees 1 (2015).

95 Compare S.C. CODE ANN. § 40-5-310 (2014) (a person who violates this section is guilty of a felony), with N.M. STAT. ANN. § 36-2-28.1 (2015) (authorizing private remedies), and N.M. STAT. ANN. § 36-2-28.2 (2015) (limiting penalty in Attorney General actions to civil penalties not to exceed \$5,000.00).

96 Compare *In re Bercu*, 78 N.Y.S.2d 209, 216 (App. Div. 1948) (adopting an incidental test stating “[t]he application of legal knowledge . . . is only incidental to the accounting functions”), with *Agran v. Shapiro*, 273 P.2d 619, 626 (Cal. Ct. App. 1954) (rejecting the incidental test stating accountants may not give legal advice or interpret case law incidental to their work).

97 Based on January 4, 2017 searches.

existence of groundwater impact or the threat of such impact is a technical issue; whereas the legal consequences of that information are legal issues. The reality is that the two are intertwined, which adds complexity to the distinction.

A comment to Disciplinary Rule 2.01 mandating that a lawyer “exercise INDEPENDENT PROFESSIONAL JUDGMENT and render candid advice”⁹⁸ is instructive. Comment 4 suggests: “Matters that go beyond strictly legal questions may also be in the domain of another profession.”⁹⁹ Examples provided in the comment include psychiatry, clinical psychology, accounting, and financial “specialists.”¹⁰⁰ Further, the comment offers:

Where consultation with a professional in another field is itself something a competent lawyer would recommend, the lawyer should make such a recommendation. At the same time, a lawyer’s advice at its best often consists of recommending a course of action in the face of conflicting recommendations of experts.¹⁰¹

Assume in our hypothetical that, after completing the Phase I work and submitting a report, E suggests follow-up intrusive sampling (often referred to as Phase II work) because of the commercial and industrial history of Brownacre and the surrounding area. In this next phase of investigation, E discovers “historical contamination” (aka “historical impact”). Essentially, this means that there are detectable concentrations of pollutants in the samples at the time of sampling, but the origin of the impact is unknown (i.e., there is no documented or other known release or spill event or other source). In E’s Phase II report to C, E states that “you must report this to TCEQ under Chapter 26 of the Water Code.”

The issues and complexities related to whether the discovery of historical contamination triggers a reporting requirement in Texas are beyond the scope of this article. It is a thorny LEGAL issue, but that is essentially the point. C needs legal analysis and related advice. I have seen this definitive “must report” type conclusion by one or more experts in the past. Yet, if we lined up ten of the most prominent Texas environmental attorneys to offer an interpretation of potentially relevant portions of the Texas Water Code¹⁰² in this regard, my guess is that we would hear a variety of well-reasoned, legitimate answers and advice for C.

As attorneys, we should avoid encouraging or even condoning by silence E giving legal advice.¹⁰³ Distinguishing legal and technical advice can, of course, be more challenging than in this example. In some compliance audit settings,¹⁰⁴ the distinction can be especially tricky. This is also beyond the scope of this article, but suffice it to say that often, at a minimum, both A and E should be involved in analysis and related counsel

98 TEX. DISCIPLINARY RULES PROF’L CONDUCT R. 2.01, *reprinted in* Tex. Gov’t Code Ann., tit. 2, subtit. G, app. A (West 2013) (TEX. STATE BAR R. art. X, § 9) (emphasis added).

99 *Id.* R. 2.01 cmt. 4.

100 *Id.*

101 *Id.*

102 *See, e.g.*, TEX. WATER CODE ANN. §§ 7.147, 26.039(b), 26.121 (West 2008 & Supp. 2016).

103 TEX. PENAL CODE ANN. § 38.123 (West 2016).

104 Generally, compliance audits involve hard analytical looks at whether properties and operations comply with applicable Environmental Law requirements, such as permit requirements. In some circumstances, compliance analysis is appropriate in a transactional setting as well.

and input to C.¹⁰⁵ In many cases, E can appropriately assist A as a technical expert in A's legal analysis and provision of counsel to C.¹⁰⁶ In the historical-impact-reporting-issue circumstances, E's technical analyses regarding detected pollutants relative to the site's operational history, the duration of these pollutants' presence in the soil, whether pollution concentrations in the soil threaten groundwater or other state water, and similar issues can be vital to A's consideration of and counsel to C regarding reporting requirements and other issues.¹⁰⁷

Another example of E in the hypothetical potentially edging too close to law practice relates to one possible objective of C in hiring E in the first place. The best reason for a potential purchaser of commercial or industrial real estate to hire experts for a pre-acquisition environmental investigation generally is to gather information toward an informed decision about the transaction. Nevertheless, sometimes the concern is potentially qualifying for a defense to liability.¹⁰⁸

In the hypothetical, C hired E to complete an environmental audit before C's potential acquisition of Brownacre.¹⁰⁹ Assume that after E completes the audit process, E sends a report to C and includes the following statements: "The investigation followed and this report was prepared in accordance with the Environmental Protection Agency's (EPA) All Appropriate Inquiry Rule. This qualifies you for the Innocent Landowner Defense under CERCLA." The first sentence does not appear problematic. It relates to carrying out the prescribed scope of work in an EPA rule¹¹⁰ that Congress directed the EPA to promulgate under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).¹¹¹ The second sentence, however, is a possible problem because it involves a legal conclusion. In fact, establishment of the defense is generally a challenging endeavor with numerous criteria.¹¹² E's pre-acquisition audit, while important, relates to one element of the defense in demonstrating no constructive knowledge of contamination before acquisition.¹¹³ While carrying out the audit itself is within E's province, counsel about its relationship to potential applicability of a CERCLA or any other legal defense or consequence is part of A's expertise as an attorney.¹¹⁴

105 See TEX. DISCIPLINARY RULES PROF'L CONDUCT R. 2.01 & cmts. 3–4.

106 See *id.*

107 See *id.*

108 *E.g.*, under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), carrying out all appropriate inquiry includes a properly scoped pre-acquisition audit by an environmental professional, which is one of numerous criteria for a defense to and two exemptions from liability. See 42 U.S.C. §§ 9601(35)(B)(i)(I), 9607(b)(3) (innocent landowner defense), 9607(q) (contiguous properties exemption), 9601(40), 9607(r) (bona fide prospective purchaser exemption) (2012); see, e.g., *PCS Nitrogen, Inc. v. Ashley II*, 714 F.3d 161, 179–81 (4th Cir. 2013) (discussing defensive criteria); see also 40 C.F.R. § 312 (2017) (related EPA rule).

109 See *infra* Part III.A.

110 40 C.F.R. § 312.1(a).

111 42 U.S.C. § 9601(35)(B)(ii).

112 See 42 U.S.C. §§ 9601(35), 9607(b)(3); see also *PCS Nitrogen*, 714 F.3d at 179–81.

113 42 U.S.C. §§ 9601(35)(A)(i), (B)(i), (B)(i)(I), 9607(b)(3).

114 See TEX. DISCIPLINARY RULES PROF'L CONDUCT R. 2.01 & cmts. 3–4, reprinted in TEX. GOV'T CODE ANN., tit. 2, subtit. G, app. A (West 2013) (TEX. STATE BAR R. art. X, § 9).

f. MINDFULLY PRACTICING LAW ONLY

In some circumstances, an attorney should be the one exercising care *not* to be a technical practitioner, such as avoiding the unauthorized practice of engineering.¹¹⁵ Students sometimes ask me: “Do I need a technical background to be an environmental attorney?” An attorney having a scientific or technical education can be an asset, especially in terms of better understanding what environmental and other technical consultants do and in asking them questions on behalf of a client like C. Nevertheless, returning to our opening theme of *mindfulness*, acting in one capacity is the best idea. For an attorney, that means being *solely* the best and most focused legal counselor one can be in any given situation and moment.

3. PURSUIT OF CLIENT’S INTERESTS

Creed § II: “A lawyer shall employ all appropriate means to protect and advance the client’s legitimate rights, claims, and objectives.”¹¹⁶

Preamble to Rules ¶ 3: “In all professional functions, a lawyer should zealously pursue clients’ interests within the bounds of the law.”¹¹⁷

Returning to the hypothetical described above with A and E working for C, assume that C signed E’s contract and then retained A. When C hired E, C signed E’s standard environmental-consultant contract.

With all due respect to technical consultants, many times E’s adhesion contract has self-serving provisions for E. A should review and advise C of E’s contractual terms and their potential consequences.¹¹⁸ It is certainly easier when C has not yet signed E’s contract, but even when C has already signed the contract (as in our hypothetical), C potentially should consider re-negotiating terms via amendment provisions in E’s contract or by using termination provisions to start over.

Although C might not have asked A to review E’s contract with C, A might suggest it as part of A’s obligation as legal advisor to “render candid advice.”¹¹⁹ As one of the comments to the Texas Rule on being an advisor suggests: “[A] lawyer may initiate advice to a client when doing so appears to be in the client’s interest.”¹²⁰

C might be reluctant and might also be wary of incurring significant legal fees to deal with the contract. Sometimes, however, E’s contract will have some low hanging fruit to allow for efficiency. For example, focusing on liability caps and indemnity agreements can lead to some reasonable, efficient, and economic suggestions. For example, A may suggest raising the amount of any liability cap to at least the amount of E’s errors and omissions (E & O) maximum coverage and clearly and conspicuously specifying that E’s indemnity of C covers C’s strict liability under environmental laws.¹²¹ In my experience, E’s are often readily open to these and similar reasonable suggestions.

115 See TEX. OCC. CODE ANN. § 1001.301 (West 2012).

116 TEXAS LAWYER’S CREED, *supra* note 38.

117 TEX. DISCIPLINARY RULES OF PROF’L CONDUCT preamble ¶ 3.

118 See *id.* R. 2.01.

119 *Id.* R. 2.01.

120 *Id.* R. 2.01 cmt. 5.

121 See *Ethyl Corp. v. Daniel Constr. Co.*, 725 S.W.2d 705, 708 (Tex. 1987) (applying express negligence rule); *Houston Lighting & Power Co. v. Atchison, Topeka & Santa Fe Ry. Co.*,

I do recall one uneasy occasion when I suggested on behalf of a client in C's circumstances that E's liability cap should be adjusted to match or exceed the maximum limit of E's E & O insurance. E was unwilling and asked, "What about you doing the same in your contract with C?" Easy answer: "What contract?"

4. CONFIDENTIALITY

As a last dimension to our discussion, assume that, when C retains A with the comment about potential overkill and avoiding duplicity relative to E's work, C adds, ". . . plus, I need you involved so that it all stays confidential." After further discussion, you understand that confidentiality is a huge priority for C.

The brief comments below focus on the attorney-client privilege. The Texas environmental-audit statutory privilege¹²² and Work Product Doctrine¹²³ are also possibilities for C, but their potential applicability is usually more limited than the attorney-client privilege. For example, the statutory privilege is quite young (1995 forward)¹²⁴ and is limited to state civil and administrative matters¹²⁵ while the Work Product Doctrine keys to anticipation of litigation and is qualified.¹²⁶ In contrast, the attorney-client privilege is time honored across numerous forums.¹²⁷

Nevertheless, such privilege is difficult to establish, and the party asserting it has the burden to prove all elements.¹²⁸ Similar to other privileges, the attorney-client privilege is usually an exception to what we can think of as a general rule: that litigants must disclose relevant evidence/information in legal proceedings so that justice can be done.¹²⁹ Privileges run counter to this general rule because of countervailing policy considerations that are preferred to full disclosure, such as persons in our society having confidential access to legal counsel.¹³⁰ As the Supreme Court of Texas recently empha-

890 S.W.2d 455, 459 (Tex. 1994) (holding that fair notice standard behind the express negligence rule applies to strict liability) *See also* *Fina, Inc. v. ARCO*, 200 F.3d 266 (5th Cir. 2000).

122 TEX. HEALTH & SAFETY CODE ANN. § 1101.101 (West 2017).

123 *See* TEX. R. CIV. P. 192.5; *Marathon Oil Co. v. Moye*, 893 S.W.2d 585, 589 (Tex. App.—Dallas 1994, no writ).

124 Environmental, Health, and Safety Audit Privilege Act, 74th Leg., R.S., ch. 219, § 5, 1995 Tex. Gen. Laws 1963, 1965 (amended 1997) (current version at TEX. HEALTH & SAFETY CODE § 1101.101).

125 TEX. HEALTH & SAFETY CODE § 1101.101(b).

126 *See* TEX. R. CIV. P. 192.5.

127 *Upjohn Co. v. United States*, 449 U.S. 383, 389 (1981) ("The attorney-client privilege is the oldest of the privileges for confidential communications known to the common law."). Additionally, the attorney-client privilege appears to be more reliable than certain statutorily created privileges. *See, e.g.*, Environmental, Health, and Safety Audit Privilege Act, 74th Leg., R.S., ch. 219, § 5 (current version at TEX. HEALTH & SAFETY CODE § 1101.101).

128 *See, e.g.*, *In re Small*, 346 S.W.3d 657, 663 (Tex. App.—El Paso 2009, no pet.); *United States v. Citgo Petroleum Corp.*, Cr. No. C-06-563, 2007 WL 1125792, at *6 (S.D. Tex. April 16, 2007); *see also In re Christus Santa Rosa Health Sys.*, 492 S.W.3d 276, 279 (Tex. 2016) (in context of medical peer review committee privilege).

129 *See* TEX. R. CIV. P. 192.3(a).

130 *See Upjohn*, 449 U.S. at 389.

sized, “Privileges are disfavored in the law because they ‘contravene the fundamental principle that the public . . . has a right to every man’s evidence,’ and should, therefore, be strictly construed.”¹³¹

One significant hurdle to the attorney-client privilege in an environmental-audit setting, such as in our hypothetical, is the involvement of E. The attorney-client privilege is designed to protect confidential communications solely between an attorney and client related to legal advice.¹³² E is a third party torpedo to the attorney-client privilege because disclosure to a third party breaks the confidence and waives the privilege.¹³³ C wanting A involved along with E to keep everything quiet reflects a common King Midas misunderstanding that merely involving an attorney transforms communications to a confidential mode. That is not the case.¹³⁴

Nevertheless, in limited circumstances where E is the technical expert for and agent of A to assist A in his or her rendition of legal advice for C, the privilege might apply.¹³⁵ Numerous issues and potential variations of this “set-up” arise. Who hires E? Who pays E? What are the lines of communication with E? Regardless of the set-up, A perhaps should alert C that there are no guarantees of confidentiality, especially with E involved in the process.¹³⁶ A process where control is asserted and care is used in all communications, especially any written ones (e-mail, tweets, Facebook, and all) can be most helpful. Using oral communications (including before any written drafts) in old style contexts (such as meetings and conference calls) also can be helpful. Limiting the number of people from E’s organization who are involved in the project and having them communicate directly with A is important. Further, E communicating with A only, or if necessary, with C only if A is present, can be beneficial. In a nutshell, and going back to our theme of being mindful, exercising great care in all communications is important to maximize the potential for the privilege to apply and, if it does not, avoiding overly vulnerable discoverable communications.

IV. CONCLUSION

Most meaningful aspects of personal and professional life involve hard work that is continually in process and subject to refinement. Striving toward full attention in each moment and relationship is among the noblest pursuits of all. In the context of joint representation of a client with a technical expert, for example, mindfulness can help an attorney balance teamwork with prioritizing a client’s best interests. For attorneys, such focus is arguably the highest expression of professionalism, enabling us to pursue our clients’ objectives without distraction.

131 *In re Christus Santa Rosa*, 492 S.W.3d at 280 (quoting *Jordan v. Court of Appeals for the Fourth Supreme Judicial Dist.*, 701 S.W.2d 644, 647 (Tex. 1985)).

132 See TEX. R. EVID. 503(b)(1)(A).

133 See *In re Small*, 346 S.W.3d at 663.

134 *Id.*

135 See TEX. R. EVID. 503(a)(5).

136 See TEX. DISCIPLINARY RULES PROF’L CONDUCT R. 2.01, reprinted in TEX. GOV’T CODE ANN., tit. 2, subtit. G, app. A (West 2013) (TEX. STATE BAR R. art. X, § 9).

Walt Shelton has taught part-time at Baylor Law School since 1990. He teaches four environmental and natural resource protection law courses and supervises environmental externships. Professor Shelton is the co-chair of the Law School Committee of the State Bar of Texas Environmental & Natural Resources Law Section. He also maintains a solo practice in Austin. Professor Shelton thanks Ms. Alexandra Gioiello for her excellent research and editing assistance. She is a graduate of Baylor Law School. In addition to being a stellar student, Lieutenant Gioiello serves our country in the United States Navy. After graduation in 2018, she will continue her service in the Navy Judge Advocate General's Corps.

TO INFINITY AND BEYOND: THE FUTURE LEGAL REGIME GOVERNING NEAR-EARTH ASTEROID MINING

BY ERIN C. BENNETT

I.	Introduction	81
II.	Outer-Space Law and Its Impact on Near-Earth Asteroid Mining	83
	A. The Outer Space Treaty	83
	B. Convention on International Liability for Damage Caused by Space Objects	85
	C. The Moon Treaty	87
III.	Environmental and Space Law: Applicability to Near-Earth Asteroid Mining	89
	A. The National Environmental Policy Act	89
	B. NASA’s Accompanying NEPA Regulations	91
	C. The Clean Air Act	93
	D. U.S. Commercial Space Launch Competitiveness Act	96
IV.	Conclusion	98

I don’t think the human race will survive the next thousand years, unless we spread into space. There are too many accidents that can befall life on a single planet. But I’m an optimist. We will reach out to the stars. – Stephen Hawking¹

I. INTRODUCTION

Our solar system is an extraordinary phenomenon. Within its boundaries, scientists have successfully identified planets, stars, meteoroids, comets, and the interplanetary medium.² While mankind’s study of the cosmos seems articulated and advanced, we have barely exposed the mysteries our solar system encompasses. There is, however, something within our solar system that catches the eyes of both scientists and entrepreneurs alike: asteroids. “Asteroids are lumps of metals, rock and dust, laced with ices and tar, which

1 Roger Highfield, *Colonies in Space May be Only Hope, Says Hawking*, THE TELEGRAPH, (Oct. 16, 2001), <http://www.telegraph.co.uk/news/uknews/1359562/Colonies-in-space-may-be-only-hope-says-Hawking.html>.

2 *Our Solar System*, KIDSASTRONOMY.COM, http://www.kidsastronomy.com/solar_system.htm (last visited Feb. 24, 2017).

are the cosmic leftovers from the solar system's formation about 4.5 billion years ago."³ Most of the asteroids are located between Mars and Jupiter in a grouping known as the Main Asteroid Belt.⁴ While "house-sized" asteroids are considered small, those smaller fragments contain metals worth millions of dollars.⁵ Due to commercial mining, such metals exist in scarce quantities on Earth.⁶ Therefore, the era of near-Earth asteroid mining is upon us.⁷

Asteroid mining is the exploitation of raw materials from asteroids and other minor planets, including near-Earth objects.⁸ These raw materials include precious metals, such as gold and silver.⁹ With terrestrial natural resources slowly diminishing, President Barack Obama signed into law the U.S. Commercial Space Launch Competitiveness Act.¹⁰ As applied, this Act prohibits the private or public sector ownership of an asteroid.¹¹ However, a private or public entity—should it develop the means by which to mine in space—may legally possess any natural resource it can extract from said asteroid.¹² When signed, this Act forged a path for any entity to begin the preparations necessary to extract precious metals and natural resources from an asteroid.¹³ Additionally, it is predicted that, by 2025, private asteroid-mining companies, such as Planetary Resources and Deep Space Industries, will launch the first asteroid-mining expedition in the world.¹⁴ It is thus thought that the first water droplets could be extracted from an asteroid by the first half of the 2020s.¹⁵ This extraction will mark the beginning of new era—an era in which humanity will have moved off our planet and established a permanent presence amongst the stars.¹⁶ Therefore, near-Earth asteroid mining can no longer be considered an enterprise of the distant future.

3 William Steigerwald, *New NASA Mission to Help Us Learn How to Mine Asteroids*, NASA (Aug. 8, 2013), <https://www.nasa.gov/content/goddard/new-nasa-mission-to-help-us-learn-how-to-mine-asteroids> (internal quotations omitted).

4 Nola Taylor Redd, *Asteroid Belt: Facts & Formation*, SPACE.COM (May 4, 2017, 8:51 PM), <http://www.space.com/16105-asteroid-belt.html>.

5 Steigerwald, *supra* note 3.

6 SHANE D. ROSS, NEAR-EARTH ASTEROID MINING 5–6 (2001) available at <http://www2.esm.vt.edu/~sdross/papers/ross-asteroid-mining-2001.pdf>.

7 Mike Wall, *Asteroid Mining May Be a Reality by 2025*, SPACE.COM (Aug. 11, 2015, 7:00 AM), <http://www.space.com/30213-asteroid-mining-planetary-resources-2025.html>.

8 ROSS, *supra* note 6, at 1.

9 *Id.* at 4.

10 U.S. Commercial Space Launch Competitiveness Act, Pub. L. No. 114-90, 129 Stat. 704 (2015).

11 *Id.*

12 *Id.*

13 *Id.*

14 Wall, *supra* note 7.

15 *Id.*

16 See Thomas Heath, *Space-Mining May be Only a Decade Away. Really.*, THE WASHINGTON POST (Apr. 28, 2017), https://www.washingtonpost.com/business/space-mining-may-be-only-a-decade-away-really/2017/04/28/df33b31a-29ee-11e7-a616-d7c8a68c1a66_story.html (explaining how water's potential use as a fuel source could be "[p]art of the key to unlocking affordable space travel and space industrialization.").

Of course, extracting a surplus of minerals—some perhaps unknown to mankind—from a space rock near Earth’s atmosphere raises many red flags. One prevalent red flag involves the difficulty in tailoring current space treaties and environmental laws to protect the United States’ international ties and Earth’s natural environment alike. To some, the benefits of near-Earth asteroid mining greatly outweigh the burdens, including the negative environmental impacts.¹⁷ To others, this is not the case.¹⁸ One major concern amongst environmentalists is air quality.¹⁹ Currently, terrestrial mining burdens Earth’s air quality with hazards such as fly ash, bottom ash, and flue-gas desulfurization.²⁰ Near-Earth asteroid mining could contribute to a slew of environmental issues,²¹ requiring the United States to refine its current environmental laws.²²

Part I of this Note describes current outer-space laws and their impacts on near-Earth asteroid mining, focusing primarily on the Outer Space Treaty, the Moon Treaty, and the Convention on International Liability for Damage Caused by Space Objects. Part II of this Note analyzes applicable existing United States environmental laws and necessary amendments that would prepare the United States for an extraterrestrial mining future. Currently, existing United States environmental laws and regulations, such as the National Environmental Policy Act (NEPA), National Aeronautics and Space Administration’s (NASA) NEPA regulations, and the Clean Air Act (CAA) are not sufficient to govern the potential effects of near-Earth asteroid mining. This Note explores the intricacies of the relationship between the current environmental legal regime and a new frontier.

II. OUTER-SPACE LAW AND ITS IMPACT ON NEAR-EARTH ASTEROID MINING

A. THE OUTER SPACE TREATY

On October 10, 1967, the Outer Space Treaty, formally the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including

17 Sarah Cruddas, *Could the Untold Riches in Asteroids and Other Planets Be the Key to Exploring the Wider Universe?*, BBC NEWS (Jan. 5, 2016), <http://www.bbc.com/future/story/20160103-the-truth-about-asteroid-mining>.

18 See *Rocket Launches May Need Regulation to Prevent Ozone Depletion, Says New Study*, U. Colo., Boulder (Mar. 31, 2009), <http://www.colorado.edu/today/2009/03/31/rocket-launches-may-need-regulation-prevent-ozone-depletion-says-new-study> [hereinafter *Rocket Launches*].

19 *Id.* (“‘As the rocket launch market grows, so will ozone-destroying rocket emissions,’ said Professor Darin Toohey of CU-Boulder’s atmospheric and oceanic sciences department. ‘If left unregulated, rocket launches by the year 2050 could result in more ozone destruction than was ever realized by CFCs.’”).

20 U.S. DEP’T OF ENERGY, VOL. 1, THE EFFECTS OF FLY ASH AND FLUE-GAS DESULFURIZATION WASTES ON GROUNDWATER QUALITY IN A RECLAIMED LIGNITE STRIP MINE DISPOSAL Site (Aug. 1987).

21 Mike LaBossiere, *The Ethics of Asteroid Mining*, TALKING PHILOSOPHY (Apr. 26, 2012), <http://blog.talkingphilosophy.com/?p=4860>.

22 *Rocket Launches*, *supra* note 18.

the Moon and Other Celestial Bodies, became law.²³ The Outer Space Treaty forms the basis of international space law and is the first treaty adopted that effectively regulates outer space.²⁴ In general, its purpose is twofold. First, the treaty works to bar countries across the globe from entering weapons of mass destruction into Earth's orbit. Second, it limits the use of the moon and other celestial bodies for peaceful purposes only.²⁵

While the Outer Space Treaty's primary mission is to prevent the use of outer space as a vehicle for war, it supports the use of outer space for the benefit and interests of all countries.²⁶ The treaty proposes that outer space exploration be free for all countries and states alike—remaining open for astronauts of all races and nationalities as the envoys of mankind.²⁷ Most importantly, the Outer Space Treaty dictates the following principles: (1) states shall avoid harmful contamination of space and celestial bodies,²⁸ and (2) states shall be liable for damage done to space and celestial bodies that was caused by their space objects.²⁹

In general, the Outer Space Treaty does not negatively affect a private entity's right to mine asteroids.³⁰ In fact, the drafters prepared for the possibility of private space endeavors, such as asteroid mining. Article VI, for instance, states that "[t]he activities of non-governmental entities in outer space, including the moon and other celestial bodies, shall require authorization and continuing supervision by the appropriate State Party to the Treaty."³¹ However, as previously mentioned, Article IX provides that any state or any entity wishing to engage in space exploration must avoid contamination of celestial bodies and avoid damaging said celestial bodies engaging in interstellar undertakings.³² As drilling and excavating result in erosion and unnatural changes in a landscape's surface structure, near-Earth asteroid mining—which would severely alter the landscape of an asteroid—would most likely be prohibited pursuant to the Article IX language.³³ However, because no country or private entity has made any attempt at mining an asteroid, the Outer Space Treaty has yet to be used to determine asteroid mining's legality.³⁴ Before the mining of the first asteroid occurs, it is imperative that the Outer Space

23 The Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, art. I, Jan 27, 1967, 18 U.S.T. 2410.

24 *See id.* at art. IV.

25 *Id.*

26 *See generally id.* at art. I (dictating that the Treaty is to be used for the benefit of mankind, as a whole).

27 *Id.*

28 *Id.* at art. IX.

29 *Id.* at art. VII.

30 *Id.*

31 *Id.* at art. VI.

32 *Id.*

33 *See MARTA MIRANDA ET AL., MINING AND CRITICAL ECOSYSTEMS: MAPPING THE RISKS* (World Resources Institute, 2003).

34 Jason Koebler, *The US Mulls Breaking an International Treaty So Americans Can Mine Asteroids*, VICE: MOTHERBOARD (May 14, 2015, 8:14 AM), <http://motherboard.vice.com/read/the-us-mulls-breaking-an-international-treaty-so-americans-can-mine-asteroids> (explaining that the question of whether asteroid mining would cause a problem under the Outer Space Treaty is unanswered).

Treaty be amended to allow for the extraction of precious metals and other sediment so as to mitigate the risk of breaking the treaty.

Article XV of the Outer Space Treaty lays the foundation for future amendments, providing “[a]ny State Party to the Treaty may propose amendments to [the] Treaty.”³⁵ Once an amendment is proposed, its acceptance is determined by a simple majority vote by the signing nations (“State Parties”).³⁶ While the Outer Space Treaty contains provisions regarding harmful contamination and liability for damage in general, the signatories should amend the Outer Space Treaty to specifically allow near-Earth asteroid mining. A possible amendment could read:

In the exploration and use of outer space, including the moon and other celestial bodies, State Parties to the Treaty may engage in and carry out such endeavors for the purposes of natural resource extraction in conjunction with Article VII of this Treaty. States Parties to the Treaty shall employ maximum cautions regarding such endeavors to ensure the safety of all State Parties’ space-based objects, as well as the terrestrial State Parties, themselves.

The above provision, as well as Article VII, would ensure that countries and private entities do not use space and celestial bodies for testing of any kind. Furthermore, adding the above provision would reinforce the notion that prevention of contamination and liability for contamination apply to near-Earth asteroid mining. Therefore, the Outer Space Treaty should be amended to ensure that signatories to the Treaty, as well as private entities, agree and understand that the Treaty applies to space-based natural resource extraction.

B. CONVENTION ON INTERNATIONAL LIABILITY FOR DAMAGE CAUSED BY SPACE OBJECTS

The Convention on International Liability for Damage Caused by Space Objects (Liability Convention) is a treaty adopted in 1971 by the same State Parties that adopted the Outer Space Treaty.³⁷ The overarching reason for its adoption stems from a series of satellite failures — the first of which was a Soviet satellite named Cosmos 945.³⁸ On January 24, 1978, Cosmos 945 “crashed in northern Canada and spread physical and radioactive debris over an area of 124,000 square miles.”³⁹ Subsequently, in 1979, NASA’s Skylab reentered Earth’s atmosphere and crash-landed in Australia.⁴⁰ In 1993, a 2,000 pound Chinese spy satellite spiraled downward and crashed in the Pacific Ocean, 1,000 miles off the coast of Peru.⁴¹ More recently, in 2016, a European satellite suc-

35 The Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, art. I, Jan 27, 1967, 18 U.S.T. 2410.

36 *Id.*

37 Convention on International Liability for Damage Caused by Space Objects, Nov. 29, 1971, 24 U.S.T. 2389, 961 U.N.T.S. 187 [hereinafter Liability Convention].

38 Andre DeBusschere, Liability for Damage Caused by Space Objects, 3 J. INT. L. & PRAC. 97, 99–100 (1994).

39 *Id.*

40 *Id.* at 100.

41 *Id.*

cumbed to Earth's gravitational pull and disintegrated upon reentry.⁴² Though no damage to property was reported, an estimated twenty-five percent of the xenon-ion propelled⁴³ spacecraft reached Earth's surface and most likely remained for some time without clean-up.⁴⁴ Currently, there are tens of thousands of space vehicles traveling via Earth's orbit, all of which risk possibility of loss.⁴⁵

The Liability Treaty elaborated upon the Outer Space Treaty—specifically Article VII—by specifying: (1) the type of damage of concern under the Outer Space Treaty, (2) where damage must occur to be covered by the Treaty, (3) the liability of a State Party if said Party causes damage, and (4) when and how State Parties may pursue a damage claim.⁴⁶ *Damage* is defined as “loss of life, personal injury or other impairment of health; or loss of or damage to property of States or of persons, natural or juridical, or property of international intergovernmental organizations”⁴⁷ After so many satellite failures, State Parties recognized that “[l]iability for damage caused by space objects [was] becoming of greater practical relevance due to the growing use of outer space technologies and the related increased risk of incidents involving space objects.”⁴⁸ Further, the Liability Treaty defines the term *space object* to include “component parts of a space object as well as its launch vehicle and parts thereof.”⁴⁹ Unfortunately, there is a lack of clarity regarding this final definition.⁵⁰ The definition of *space object* is unclear on whether it “is applicable to damage caused by space debris or caused by human activities in outer space”⁵¹ Furthermore:

[a]dditional potential sources of liability that could not have been contemplated at the time of the drafting and do not fall squarely within the language of the treaty . . . include . . . damage caused by the intentional interference with outer space, the moon, or a celestial body that causes direct harm on earth.⁵²

This being said, the potential calamities of Planetary Resources—an asteroid-mining company whose mission is to capture an asteroid and tow it into Earth's orbit for the purposes of natural resource extraction—may not fall under the Liability Treaty due to

42 Tariq Malik, *1-Ton European Satellite Falls to Earth in Fiery Death Dive*, *Spaceflight*, SPACE.COM (Nov. 10, 2013, 11:00 PM), <http://www.space.com/23544-goce-satellite-falls-from-space.html>.

43 Xenon is the most commonly used propellant in ion propulsion because it is easily ionized and has a high atomic mass. Accordingly, xenon-ion propellant generates a desirable level of thrust when ions are accelerated. NASA – Ion Propulsion, NASA (Jan. 11, 2016), <https://www.nasa.gov/centers/glenn/about/fs21grc.html>.

44 Malik, *supra* note 42.

45 *Space Debris and Human Spacecraft*, NASA, https://www.nasa.gov/mission_pages/station/news/orbital_debris.html (last updated Aug. 4, 2017).

46 Liability Convention, 24 U.S.T. 2389, 961 U.N.T.S. 187, at art. VII.

47 *Id.* at art. I.

48 Elena Carpanelli & Brendan Cohen, *Interpreting “Damage Caused by Space Objects” Under the 1972 Liability Convention*, INT'L INST. OF SPACE L. 1.

49 Liability Convention, 24 U.S.T. 2389, 961 U.N.T.S. 187, at art. I.

50 Carpanelli, *supra* note 48, at 1–2.

51 *Id.* at 2.

52 *Id.*

the ambiguity in the term *space objects*.⁵³ Should the captured asteroid collide with a spacecraft or possibly crash to Earth's surface, Planetary Resources may not be considered liable because it is not clear if an asteroid falls under the definition of *space objects* under the Liability Treaty.⁵⁴

To effectively use the Liability Treaty to protect the human environment while promoting the future of the mining industry, the State Parties to the Treaty should amend the Liability Treaty. Article XXV of the Liability Treaty allows for any State Party to propose amendments, which are adopted via a majority vote.⁵⁵ The amendment should focus primarily on the definition of *space objects* and alter it to incorporate space debris and other objects that would be necessary for humans to extract natural resources. Currently, the definition only incorporates damage done by component parts of a space object, which does not include "back contamination of Earth by extra-terrestrial materials."⁵⁶ A definition that would protect the human environment while creating liability for an asteroid-mining company may say the following: "the term 'space object' includes component parts of a space object as well as its launch vehicle and parts thereof;⁵⁷ or space debris or misplaced extra-terrestrial materials caused by intentional or unintentional human interference with celestial bodies."

Amending the current definition to resemble the above hypothetical would address the apparent lack of liability for asteroid-mining companies such as Planetary Resources. Consequently, this new amendment would help protect the human environment, as space mining industries would be more inclined to take precautions to prevent liability under the Liability Treaty. With this amendment, the Liability Treaty would have more of an impact on environmental protection, while promoting a new frontier.

C. THE MOON TREATY

The Moon Treaty, ratified by multiple State Parties in 1979, is also an expansion of the Outer Space Treaty, which was ratified twelve years prior.⁵⁸ The Moon Treaty continues to promote the use of the moon for the State Parties and the international community while banning the use of outer space, specifically the moon, for war, weapon testing, and military bases.⁵⁹ Perhaps the most controversial piece of the Moon Treaty involves natural resources on the Moon. "The Moon Treaty provides that the Moon and its natural resources are the common heritage of mankind and the harvesting of those resources is forbidden except through an international regime established to govern the exploitation of such resources"⁶⁰ While this may seem inapplicable to near-Earth asteroid mining, Article 1 of the Moon Treaty specifies that the provisions of the Treaty relating to the Moon shall also apply to other celestial bodies within the solar system,

53 Liability Convention, 24 U.S.T. 2389, 961 U.N.T.S. 187, at art. I.

54 Carpanelli, *supra* note 48, at 3.

55 Liability Convention, 24 U.S.T. 2389, 961 U.N.T.S. 187, at art. I.

56 Carpanelli, *supra* note 48, at 2.

57 *Id.* at 1.

58 Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, G.A. Res. 34/68, at art. 1 (Dec. 5, 1979) [hereinafter Moon Treaty].

59 *Id.* at art. 3.

60 Michael Listner, *The Moon Treaty: Failed International Law or Waiting in the Shadows?*, THE SPACE REVIEW, (Oct. 24, 2011), <http://www.thespacereview.com/article/1954/1>.

excluding the Earth.⁶¹ Accordingly, it follows that the Moon Treaty would also apply to asteroids.

With the mention of State Parties, it is important to note that the United States is not a party to the Treaty, though the parties and signatories met in New York City.⁶² While Russia and China also have yet to sign or accede to the Treaty, six nations have officially ratified it, and eleven others have acceded to it.⁶³ Because the United States has not signed this Treaty,⁶⁴ there could be future ramifications concerning the possibility of extracting space-based natural resources, as this Treaty remains valid international law. Moreover, the Moon Treaty is a product of the Outer Space Treaty. As the United States is a State Party to the Outer Space Treaty and its other counterparts, there is a “shadow of customary law that could grow such that non-parties could find themselves overshadowed by the penumbra of the Moon Treaty”⁶⁵ This will prove true if Russia or China accede to or officially sign the Treaty. Should near-Earth asteroid mining become commonplace in the near future, it would serve in the United States’ best interest to, at least, accede to the Treaty.

The United States’ signature or accession to the Moon Treaty would give much needed strength to an otherwise stagnant treaty. But, again, considering the United States’ outward support for the Outer Space Treaty and its other counterparts,⁶⁶ choosing to not to sign the Treaty—while engaging in asteroid mining—would be counterproductive to an international law to which twelve countries have, at least, acceded. To mine asteroids while creating the least amount of controversy with State Parties to the Moon Treaty, the United States should sign said Treaty and seek an amendment.

Currently, Article 11 of the Moon Treaty states:

Neither the surface nor the subsurface of the moon, nor any part thereof or natural resources in place, shall become property of any State, international intergovernmental or non-governmental organization, national organization or non-governmental entity or of any natural person. The placement of personnel, space vehicles, equipment, facilities, stations and installations on or below the surface of the moon, including structures connected with its surface or subsurface, shall not create a right of ownership over the surface or subsurface of the moon or any areas thereof.⁶⁷

Recalling that Article 1 of the Moon Treaty specifies that provisions regarding the moon also apply to other celestial bodies,⁶⁸ it would be necessary for the signatories of the Treaty to amend Article 11 as well. Also, as Article 11 states that the taking of any natural resource from the Moon is strictly prohibited⁶⁹ near-Earth asteroid mining would be expressly prohibited according to the Moon Treaty. The necessary amendment should, first, nix the portion of Article 11 prohibiting the ownership of any natural

61 Moon Treaty, G.A. Res. 34/68, at art. 1.

62 *Id.*

63 Listner, *supra* note 60.

64 *Id.*

65 *Id.*

66 *Id.*

67 Moon Treaty, G.A. Res. 34/68, at art. 11.

68 *Id.* at art. 1.

69 *Id.* at art. 11.

resources upon the moon, as this is the entire objective of space-based natural resource extraction. Secondly, the second sentence of Article 11 could be amended to read as follows:

The placement of personnel, space vehicles, equipment facilities, stations and installations on or below the surface of the moon, including structures connected with its surface or subsurface, *with the exception of any personnel, space vehicles, equipment, facilities, stations or installations necessary for the purposes of natural resource extraction*

With this amendment, near-Earth asteroid mining will no longer be banned via the Moon Treaty. Should the United States accede to the Treaty and propose said amendment, it would avoid international conflict while providing a pathway for a space-based mining.

III. ENVIRONMENTAL AND SPACE LAW: APPLICABILITY TO NEAR-EARTH ASTEROID MINING

A. THE NATIONAL ENVIRONMENTAL POLICY ACT

Though the United States engaged in mining activities for decades, it failed to consider the environmental impacts of such mining ventures. It was not until 1970 that President Richard Nixon signed into law the National Environmental Policy Act.⁷⁰ NEPA's goal is to force federal agencies to consider the environmental effects of an action or project they wish to undertake.⁷¹ "While NEPA sets federal environmental policy, it does not specifically mandate protection of the environment."⁷² Instead, as previously asserted, NEPA forces federal agencies to consider the environmental impacts that their activities will have on the human environment.⁷³ NEPA also mandates that the federal agency must address adequate alternatives to its proposal, and "disclose its findings [of any possible environmental impacts] to the public."⁷⁴

In summary, NEPA requires three steps be taken by federal agencies: (1) the agency must conduct a preliminary inquiry to determine if NEPA applies to the proposed project or activity; (2) the agency must provide an environmental assessment (EA) that determines whether an Environmental Impact Statement (EIS) is required; and (3) the agency must prepare an EIS should the proposed project or activity "significantly affect the quality of the human environment."⁷⁵ If an agency determines the proposal will not have significant impact on the environment, the agency issues a Finding of No Significant Impact statement, or a FONSI.

70 National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321–4347 (2012).

71 Miles Corwin, *The Oil Spill Heard 'Round the World, 1969 Santa Barbara Oil Spill*, LOS ANGELES TIMES I23 (Jan. 28, 1989), http://www2.bren.ucsb.edu/~dhardy/1969_Santa_Barbara_Oil_Spill/Home.html.

72 *National Environmental Policy Act*, WILD LAW, <http://www.wildlaw.org/national-environmental-policy-act/> (last visited Dec. 1, 2017).

73 *Id.*

74 *Id.*

75 *Id.* (quoting NEPA).

Case law further provides specific examples and hones the requirements of federal agencies under NEPA. In the 1976 United States Supreme Court case, *Kleppe v. Sierra Club*, the federal government challenged a D.C. Circuit ruling that compelled the government to issue an EIS regarding development of the Powder River Coal Basin.⁷⁶ The lower court approved four mining plans—all for which the government prepared an EIS—but the Supreme Court stayed an injunction granted by the circuit court.⁷⁷ Thus, the Court reversed the D.C. Circuit on the merits and concluded that: (1) there was no “report or recommendation on a proposal for major federal action with respect to the Northern Great Plains region” that would require an EIS;⁷⁸ (2) NEPA’s EIS requirement is triggered only by a “recommendation or report on a proposal for federal action”⁷⁹; and (3) decisions like the “‘determination of the region, if any, with respect to which a comprehensive statement is necessary’ should properly be left to the expert discretion of the responsible agency.”⁸⁰ Several Justices noted that the government “conceded it would have to prepare an EIS for its national coal-leasing program and did not dispute that it would have to prepare impact statements for local decisions, such as approving a mine plan or issuing a right-of-way permit.”⁸¹ However, the Court rejected the government’s argument that “a statement is required only when the Government itself has designated the activities at issue a program.”⁸² The Court concluded that a comprehensive EIS would sometimes be required when “several proposed actions are pending at the same time.”⁸³

Then, in 2009, the Ninth Circuit decided *South Fork Band v. U.S. Department of the Interior*.⁸⁴ In this case, the South Fork Band Council of Western Shoshone of Nevada sued the Department of the Interior (DOI) and the Bureau of Land Management (BLM) in an effort to stop a gold mining project on Mount Tenabo in Nevada, after the BLM issued a Final Environmental Impact Statement and approved the project.⁸⁵ “The plaintiffs unsuccessfully argued for a preliminary injunction under the Religious Freedom Restoration Act in the lower courts.”⁸⁶ The Ninth Circuit reversed the denial of injunctive relief granted by the district court and reversed the ruling to said court in accordance with the Ninth Circuit’s opinion.⁸⁷ The court granted injunctive relief “pending preparation of an EIS that adequately consider[ed] the environmental impact of the extraction of millions of tons of refractory ore, mitigation of the adverse impact on local springs and streams, and the extent of fine particulate emissions.”⁸⁸ The DOI projected

76 *Kleppe v. Sierra Club*, 427 U.S. 390, 390 (1976).

77 *Id.* at 391.

78 *Id.* at 399.

79 *Id.* at 405–06 (quoting 422 U.S. 289, 320 (1975)).

80 *Id.* at 412.

81 *Id.*

82 *Id.*

83 *Id.*

84 *S. Fork Band v. U.S. Dept. of the Interior*, 588 F.3d 718, 718 (9th Cir. 2009).

85 *Id.* at 721.

86 Arnold W. Reitze, Jr., *The Role of NEPA in Fossil Fuel Resource Development and Use in the Western United States*, 39 B.C. ENV’T. AFF. L. REV. 284, 345 (2012) (Internal quotations omitted).

87 *S. Fork Band*, 588 F.3d at 722.

88 Reitze, *supra* note 86 (quoting *S. Fork Band*, 588 F.3d at 722).

the gold mine to span 6,571 acres of public land and 221 acres of land belonging to the project's proponent.⁸⁹ The court ruled for the Tribes on the NEPA issues⁹⁰ and criticized the BLM's failure to consider the environmental impact of transporting and processing the ore: "the air quality impacts associated with transport and off-site processing of the five million tons of refractory ore are prime examples of indirect effects that NEPA requires be considered."⁹¹

NEPA and the case law interpreting it provides a detailed path for agencies and their implementation of NEPA. While NEPA requirements for agencies may appear to be succinct and straightforward, NASA is not the typical governmental agency in that its mission is to pioneer the future of space exploration. As will be seen in the coming section, NASA will need to implement some changes of its own before it can lend a hand to future asteroid-mining ventures.

B. NASA'S ACCOMPANYING NEPA REGULATIONS

In terms of near-Earth asteroid mining, NEPA's procedures for requiring that agencies take a "hard look" at actions that may negatively impact the quality of the human environment do not need to be amended. However, NASA itself will need to amend its procedures for evaluating its actions pursuant to NEPA.

Under NASA's NEPA, any action that may have an impact on the environment must comply with the regulatory procedures of NASA's NEPA regulations.⁹² Currently, typical actions requiring an environmental assessment (EA) under NASA's NEPA include: (1) "[s]pecific spacecraft development and space flight projects/programs;" (2) "[a]ctions altering the ongoing operations at a NASA Center which could lead directly, indirectly, or cumulatively to substantial natural or physical environmental impacts;" (3) "[c]onstruction or modifications of facilities which are not minor;" (4) "[p]roposed actions that are expected to result in significant changes to established land use; and (5) "[a] space flight project/program that would return extraterrestrial samples to Earth from solar system bodies (such as asteroids, comets, planets, dwarf planets, and planetary moons), which would likely receive an Unrestricted Earth Return categorization"⁹³

Ultimately, because near-Earth asteroid mining requires an EA for space flight projects, as well as for extraterrestrial samples, NASA would need to conduct an EIS. Once NASA determines an EIS is required, NASA must prepare said EIS for actions with the "potential to significantly impact the quality of the human environment." This includes actions for when an EA analysis "demonstrates that significant impacts will potentially occur which will not be reduced or eliminated by changes to the proposed action or mitigation of its potentially significant impacts."⁹⁴ Circumstances that require NASA to prepare an EIS are very similar to the circumstances in which NASA would need to conduct an EA.⁹⁵ Regarding near-Earth asteroid mining, the most important provision for which NASA must conduct an EIS includes the "development and opera-

89 *S. Fork Band*, 588 F.3d at 722.

90 *Id.*

91 Reitze, *supra* note 86, at 345–46.

92 14 C.F.R. § 1216.305 (2017).

93 *Id.* § 1216.305(b).

94 *Id.* § 1216.306.

95 *Id.*

tion of a space flight project/program which would return samples to Earth from solar system bodies (such as asteroids, comets, planets, dwarf planets, and planetary moons). . . .”⁹⁶ While this provision seemingly clarifies that an EIS would be required for near-Earth asteroid mining, there is one issue that may dismantle the EIS requirement. NASA’s NEPA regulations provide a list of categorical exclusions (CatExs).⁹⁷ These exclusions supposedly include NASA actions with no individual or cumulative significant impact on the human environment.⁹⁸ Accordingly, neither an EIS nor an EA is required.⁹⁹ The CatExs contain any administrative actions including personnel actions, procurement of routine goods and services, issuance of rules and manuals, etc. However, NASA also labels any information gathering exercises, “such as inventories, studies, field studies, including water sampling, cultural resources surveys . . . geological surveys . . .” as being within its list of CatExs.¹⁰⁰ While any such field studies, geological surveys, and resource surveys pertaining to near-Earth asteroid mining would take place within space, the natural resources extracted from an asteroid would be brought to Earth, triggering the EIS requirement of NASA’s NEPA regulations. Thus, the EIS requirement appears to directly clash with the CatEx previously detailed.

Perhaps the shortest route in amending NASA’s NEPA regulations is to add a provision to NASA’s EIS requirement, which states that an EIS is required for extraterrestrial natural resource mining and sampling. For example, Part (D) of section 1216.306 could be amended to read as follows:

Development and operation of a space flight project/program which would (i) return samples to Earth from solar system bodies, such as asteroids, comets, planets, dwarf planets, and planetary moons, and (ii) which would return minerals from solar system bodies as a result of natural resource excavation measures, which would likely receive a Restricted Earth Return categorization (as defined in Appendix A to this subpart) from the NASA Planetary Protection Office or the NASA Planetary Protection Subcommittee.

Moreover, the CatEx barring “inventories, studies, field studies, including water sampling, cultural resources surveys . . . geological surveys” from requiring an EIS would need to be removed from NASA’s official CatEx list. Alternatively, this provision would need to categorically exclude terrestrial natural resource sampling only. For example, the provisions could be amended to read:

Information-gathering exercises, such as inventories, audits, studies, and field studies, including *terrestrial* water sampling, cultural resources surveys, biological surveys, *terrestrial* geologic surveys, modeling or simulations, and routine *terrestrial* data collection and analysis activities.

This provision’s removal would reduce the current inconsistencies between the CatEx in question and NASA’s EIS provision. With the above changes, NASA would be well on its way to mining within the cosmos whilst still considering the environmental impacts of said venture on the quality of the human environment.

96 *Id.*

97 *Id.* § 1216.304.

98 *Id.* § 1216.305(b).

99 *Id.*

100 *Id.*

C. THE CLEAN AIR ACT

When rockets launch from Earth, billions of particles are released into the air.¹⁰¹ Among the particles released are carbon dioxide, water vapor, and various other compounds that absorb thermal energy.¹⁰² However, one of the more dangerous pollutants released from rocket launches is soot.¹⁰³ Soot particles include black carbon, a major contributor to global climate change, second only to carbon dioxide.¹⁰⁴ Though soot particles only last for about four years in the stratosphere—as opposed to carbon dioxide, which ranges from 20 years to thousands of years¹⁰⁵—soot particles are extremely effective in changing the radiation balance in the atmosphere.¹⁰⁶

AeroSpace, a corporate entity charged with providing engineering solutions to the nation's most complex space challenges, conducted research regarding the possible impacts of soot and black carbon and their contribution to global climate change.¹⁰⁷ “The authors of the AeroSpace study believe that a fast-growing suborbital launch market could develop over the next decade, with perhaps as many as 1000 suborbital rocket flights per year.”¹⁰⁸ This scenario is based upon current commercial space flights—so, not including near-Earth asteroid-mining ventures—which suggest that a high launch rate market could be established by the year 2025, less than a decade away.¹⁰⁹ Though it is difficult to ascertain what space travel will reveal in the year 2020, it is assumed and, at times, almost certain, that there will be substantially more spacecrafts entering the atmosphere than there are today because near-Earth asteroid mining has yet to transpire and become an industry norm.¹¹⁰

Again, soot particles from space launch ventures have a negative impact on the quality of air.¹¹¹ First, “small particles emitted directly into the stratosphere have lifetimes of years, so soot from many launches will accumulate in the stratosphere to absorb sunlight that would otherwise reach Earth's surface.”¹¹² The soot from rocket launches gathers three times higher than where soot from automobile emissions gathers, making rocket launch soot more integral to climate change than car emissions.¹¹³ Second, “while

101 Nina Rastogi, *Dirty Rocks*, SLATE (Nov. 17, 2009), http://www.slate.com/articles/health_and_science/the_green_lantern/2009/11/dirty_rockets.html.

102 Martin Ross, *Rocket Soot Emissions & Climate Change*, AEROSPACE (2011), <http://www.aerospace.org/crosslinkmag/summer2011/rocket-soot-emissions-and-climate-change/> [hereinafter *Rocket Soot*].

103 *Id.*

104 *Id.*

105 Carbon Brief, *How long do greenhouse gases stay in the air?* GUARDIAN, <https://www.theguardian.com/environment/2012/jan/16/greenhouse-gases-remain-air> (last visited Feb. 27, 2018).

106 Rastogi, *supra* note 101.

107 *Rocket Soot*, *supra* note 102.

108 *Id.*

109 Wall, *supra* note 7; *See Rocket Soot*, *supra* note 102.

110 *Rocket Soot*, *supra* note 102.

111 *Id.*; Rastogi, *supra* note 101.

112 *Rocket Soot*, *supra* note 102.

113 *See id.* (“The soot from about four years of launches from suborbital rockets is estimated to gather into a thin cloud about 40 kilometers (24 miles) above the surface, an altitude *three times higher than where typical airline traffic travels.*”(emphasis added)).

rockets burn much less fuel than airliners, rockets emit up to one thousand times more soot per amount of fuel burned than aircraft.”¹¹⁴ Because rocket soot has a longer lifetime than other soot, the effect of rocket soot is amplified, creating a much higher risk to air quality than soot from a typical aircraft.¹¹⁵ “Even though the amount of propellant burned by rockets—and . . . their carbon dioxide emissions—is small compared to the fuel burned each year by the aviation industry, the accumulation of stratospheric soot could represent a net additional heating, or radiative forcing, on the atmosphere comparable to all of aviation.”¹¹⁶

The AeroSpace study projects as many as 1000 suborbital rocket flights per year, but AeroSpace remains silent regarding the possibility of near-Earth asteroid mining.¹¹⁷ It is possible that near-Earth asteroid mining may introduce a plethora of new rocket models and equipment into the atmosphere, all with their own soot emissions.¹¹⁸ As previously discussed, near-Earth asteroid mining and the idea of multiple countries launching multiple rockets into the stratosphere could have a larger effect on the Earth’s air quality than rockets currently do.¹¹⁹

“Combustion emissions from rocket launches change the composition of the atmosphere. The changes can be divided into transient changes near the launch site that affect air quality in the lowermost troposphere and long-term global changes in the composition of the stratosphere.”¹²⁰ Large industrial processes that contribute to stratospheric composition are assessed with respect to the amount of ozone depletion they would cause. Simply put, this is because ozone depletion is a critical concern for the world.¹²¹ “When an assessment suggests unacceptably large ozone loss for a particular process, regulatory actions to limit or modify that process might be enacted to protect the ozone layer,” such as rules promulgated by the Environmental Protection Agency (EPA) under the CAA.¹²²

Climate change is, to some extent, a separable problem from ozone depletion.¹²³ Rocket engines emit greenhouse gases in increments trivial to other amounts of greenhouse gases emitted.¹²⁴ “Annual carbon dioxide emissions from rockets . . . are [only] several kilotons (KT) compared to emissions of several hundred KT from aircraft which, in turn, is only a few percent from all carbon dioxide sources.”¹²⁵ Space launch emissions

114 *Id.*

115 *See id.*

116 *Id.*

117 *Id.*

118 *See id.* While not an asteroid-mining vessel, SpaceX’s Falcon Heavy is the first of its kind, described as the world’s heaviest rocket. *See* <http://www.spacex.com/falcon-heavy> (Last visited Feb. 27, 2018); Loren Grush, *SpaceX launches its powerful Falcon Heavy rocket for the first time*, THE VERGE (Feb. 6, 2018), available at <https://www.theverge.com/2018/2/6/16971200/spacex-falcon-heavy-launch-success-roadster-orbit-elon-musk>.

119 *Rocket Soot*, *supra* note 102.

120 Martin Ross et al., *Limits on the Space Launch Market Related to Stratospheric Ozone Depletion*, 7 *ASTROPOLITICS* 50, 52–53 (2009) [hereinafter *Ozone Depletion*].

121 *Id.*

122 *Id.*

123 *Id.*

124 *Id.*

125 *Id.* at 51–52.

are not a significant contributor to greenhouse gases currently.¹²⁶ However, a future filled with extraterrestrial mineral excavation may yield a different result. It is true that policy and media severely overemphasize the effect of propulsion emissions on the natural environment.¹²⁷ Still, if rockets are a minuscule contributor to climate change, “they do have a significant potential to become a significant contributor to the problem of stratospheric ozone depletion.”¹²⁸ This follows from three unique characteristics of rocket emissions:

First, rocket combustion products are the only human-produced source of ozone-destroying compounds injected directly into the middle- and upper- stratosphere. The stratosphere is relatively isolated from the troposphere so that emissions from individual launches accumulate in the stratosphere. Ozone loss caused by rockets should be considered as the cumulative effect of several years of all launches, from all space organizations across the planet.

Second, stratospheric ozone levels are controlled by catalytic chemical reactions driven by only trace amounts of reactive gases and particles.¹²⁹ Stratospheric concentrations of these reactive compounds are typically about one-thousandth that of ozone.¹³⁰ Deposition of relatively small absolute amounts of these reactive compounds can significantly modify ozone levels.

Third, rocket engines are known to emit many of the reactive gases and particles that drive ozone destroying catalytic reactions.¹³¹

It is important to note that rocket engines cause a varying degree of ozone loss depending on the propellant type/propellant emissions.¹³² However, this is not to say a rocket engine exists that would not cause *some* ozone loss. No “rocket engine is perfectly ‘green’ in this sense.”¹³³

Federal environmental law, such as the CAA, is insufficient to deal with the possibility of a global movement toward near-Earth asteroid mining. In fact, the EPA’s air quality guidelines only apply to space launches and reentries in nonattainment regions, and there is no reason to assume the activity in those areas would meet the *de minimis* levels the EPA specifies before it regulates.¹³⁴ The Department of Transportation’s Office of Commercial Space Transportation (AST) is responsible for regulating the private-sector launch of rockets and conforming with NEPA. Unfortunately, the environmental concerns associated with licensing and launching private spacecraft do not play a major hand in the AST’s decision-making process because the AST concluded that rocket emissions would be negligible compared to emissions worldwide.¹³⁵

126 *Id.* at 52; Rastogi, *supra* note 101.

127 *Ozone Depletion*, *supra* note 120, at 52.

128 *Id.*

129 *Id.*

130 *Id.*

131 *Id.*

132 *Id.*

133 *Id.* at 52 (internal quotation omitted).

134 Jon Krois, *Onwards and Upwards: Space Tourism’s Climate Costs and Solutions*, *Field Reports*, COLUM. J. OF ENVTL. L. (Apr. 22, 2016, 5:19 PM), <http://www.columbiaenvironmentallaw.org/onwards-and-upwards-space-tourisms-climate-costs-and-solutions-2/>.

135 *Id.*

The CAA faces a similar issue, in that because it is national, not international, the CAA is “unsuitable to tackle the threat of worldwide climate change” caused by near-Earth asteroid mining.¹³⁶ Currently, mobile source protections in the CAA are insufficient to dismantle the international threat posed by climate change.¹³⁷ Title II, Part B of the CAA provides for the regulation of aircraft emissions standards.¹³⁸ In the CAA, Congress defined “aircraft” as “any contrivance invented, used, or designed to navigate, or fly in, the air.”¹³⁹ The EPA Administrator is charged with regulating emissions of aircrafts, which it does; however, this section of the CAA has not been interpreted to permit the regulation of rocket emissions, and the Administrator does not do so.¹⁴⁰

As national environmental laws can only remotely address environmental concerns stemming from a future devoted to extraterrestrial mining, it seems pertinent to change two factors surrounding the CAA. First, the CAA should be construed to permit the regulations of rocket emissions. Second, the CAA should be amended to: (a) require the EPA Administrator to permit the regulation of rocket emissions; and (b) encompass international standards for rocket fuel emissions. This latter proposal would drastically assist with ensuring rocket emissions from spacecrafts and rockets used for asteroid mining are controlled and monitored world-wide, as opposed to nationally. Accordingly, this amendment would significantly decrease any negative environmental impacts stemming from space-based exploration. International environmental clean air legislation would be one major, favorable step toward a clean asteroid-mining future.

D. U.S. COMMERCIAL SPACE LAUNCH COMPETITIVENESS ACT

The U.S. Commercial Space Launch Competitiveness Act (CSLCA) prohibits private—or public—sector ownership of an asteroid.¹⁴¹ However, a private or public entity may now legally extract minerals from outer space should it develop the necessary tools to do so.¹⁴² The potential voids in domestic legislation were recognized in the recently passed CSLCA. The CSLCA directs a report identifying “appropriate authorization and supervision authorities” for “current and proposed near-term, commercial non-governmental activities conducted in space.”¹⁴³ Additionally, it recommends “an authorization and supervision approach that would prioritize safety, use existing authorities, minimize burdens to the industry, promote the U.S. commercial space sector, and meet the United States obligations under international treaties.”¹⁴⁴

Following some preliminary definitions, Title IV of the CSLCA directs the President to “facilitate commercial exploration for and commercial recovery of space resources by United States citizens;” “discourage government barriers” for commercial space explora-

136 *Id.*

137 *Id.*

138 *Id.*

139 49 U.S.C. § 40102(a)(6) (2012).

140 Krois, *supra* note 134.

141 See 51 U.S.C. § 51303 (2015) (stating that any U.S. citizen engaged in the commercial recovery of an asteroid or space resource is entitled to the *resources* obtained).

142 See *id.*

143 U.S. Commercial Space Launch Competitiveness Act, Pub. L. No. 114-90 §§ 108(a)(1)–(2), 129 Stat. 704, 708 (2015).

144 *Id.* § 109(a)(3).

tion “consistent with the international obligations of the United States;” and “promote the right of United States citizens to engage in commercial exploration for and commercial recovery of space resources free from harmful interference, in accordance with the international obligations of the United States”¹⁴⁵ While corporations, such as Planetary Resources, were established in the mid-to-late 2000s, the CSLCA specifically gives them the green light to pursue their research more vigorously.¹⁴⁶

In 2015, Planetary Resources successfully launched the Arkyd 3 Reflight spacecraft.¹⁴⁷ This spacecraft is a small satellite that was launched from the International Space Station on July 16, 2015.¹⁴⁸ Planetary Resources first tried to launch the commercial Antares rocket—a version of the satellite—into orbit the previous October.¹⁴⁹ Unfortunately, that spacecraft was lost when it exploded upon liftoff.¹⁵⁰ Arkyd 3 Reflight, an incarnation of the original rocket, made it to the space station earlier in 2016 and began testing the technology that will be needed on future mining spacecrafts.¹⁵¹ The mission of the first spacecraft—later the mission of the Arkyd 3 Reflight—included the testing of the avionics, control systems, and software needed to make asteroid mining possible.¹⁵² “Our philosophy is to test often, and if possible, to test in space,” said Chris Lewicki, president and chief engineer at Planetary Resources, in a statement.¹⁵³ He continued, “[t]he Arkyd 3 Reflight is the most sophisticated, yet cost-effective, test-demonstration spacecraft ever built. We are innovating on every level from design to launch.”¹⁵⁴

Title IV’s true legal effect, however, emerges in two key substantive provisions: one aimed at domestic law, the other at international law. The first, captioned “Asteroid resource and space resource rights,” establishes a property right in asteroid resources:

A United States citizen engaged in commercial recovery of an asteroid resource or a space resource under this chapter shall be entitled to any asteroid resource or space resource obtained, including to possess, own, transport, use, and sell the asteroid resource or space resource obtained in accordance with applicable law, including the international obligations of the United States.¹⁵⁵

The second qualifies the right: “It is the sense of Congress that by the enactment of this Act, the United States does not thereby assert sovereignty or sovereign or exclusive rights or jurisdiction over, or the ownership of, any celestial body.”¹⁵⁶

145 51 U.S.C. §§ 51302(a)(1)–(3) (2016).

146 *See id.*

147 Sarah Lewin, *Asteroid Mining Company’s 1st Satellite Launches from Space Station*, SPACE.COM (July 17, 2015), <http://www.space.com/29975-asteroid-mining-planetary-resources-satellite-launch.html>.

148 *Id.*

149 *Id.*

150 *Id.*

151 *Id.*

152 *Id.*

153 *Id.*

154 *Id.*

155 51 U.S.C. § 51303 (2015).

156 U.S. Commercial Space Launch Competitiveness Act, Pub. L. No. 114-90 § 403, 129 Stat. 704 (2015).

This law, again, gives entities, private and public alike, the opportunity to engage in near-Earth asteroid mining.¹⁵⁷ Moreover, it promotes the soon-to-be practice of extracting precious minerals that scientists are finding to be near depletion on Earth. Exactly where space mining could lead us is impossible to predict, but CSLCA helps pave a more foreseeable future. Near-Earth asteroid mining has its advocates: scientists and scholars “believe that their early efforts are an investment in the long-term future of our species.”¹⁵⁸ While current generations may not live to reap the benefits, they will live to see the first mining launch. Descendants of the current generations will be the ones to reap the benefits of the astronomical mining ventures.¹⁵⁹

IV. CONCLUSION

In sum, new laws and regulations affecting near-Earth asteroid mining may be unnecessary. As explained above, the existing laws can be applied to near-Earth mining with the help of a few addendums and amendments.

The Outer Space Treaty became the first international, space-oriented treaty. This Treaty is extremely relevant to the future of near-Earth asteroid mining, since it contains provisions that assign liability to states should they contaminate a celestial body during an expedition. While the Treaty should maintain said provisions regarding harmful contamination and liability for damage, it should be amended to expressly allow near-Earth asteroid mining. This new amendment should contain a permitting program that would allow for the monitoring of space mining to ensure that there is not an excess of harmful substances being released into space. The amendment would protect the celestial bodies within the solar system, including Earth and its atmosphere.

The Convention on International Liability for Damage Caused by Space Objects is an expansion of the Outer Space Treaty. While this Treaty primarily affects the lives of those deployed in space, it is a peculiar treaty in that it protects the property of international, intergovernmental organizations. This Treaty should be amended to allow for a definition of what specific property is owned by international, intergovernmental organizations. Once this definition is available, the signatories should supplement the definition with an addendum excluding near-Earth asteroids as international, intergovernmental property. This would be necessary because, without an addendum, any near-Earth asteroid-mining voyage may be considered a breach of the Treaty.

The Moon Treaty is also a continuation of the Outer Space Treaty. The Moon Treaty prohibits any country from using celestial bodies, particularly the moon, for military purposes. In relevant part, the Moon Treaty treats the alteration of any celestial body as illegal and requires states to take preventative action when engaging in space exploration. While the Moon Treaty could be amended, there is almost no point in doing so, as few countries signed the Moon Treaty, and only 17 states have ratified it. Unless more countries, including the United States, see the Moon Treaty as legitimate legislation, it will continue to remain a stagnant treaty.

157 *Id.*

158 Cruddas, *supra* note 16.

159 *Id.*

Focusing on United States laws, NEPA, the foundation for much of our current environmental law framework,¹⁶⁰ already contains many of the components that are needed for adequately assessing the environmental impacts of near-Earth asteroid mining. Given NASA's authority over space launches, NASA's NEPA regulations could be amended to dictate an EIS be prepared for any near-Earth asteroid mining venture to ensure humans understand the environmental impacts of said ventures before partaking in them.¹⁶¹

The CAA also has an effect on near-Earth asteroid mining. With the introduction of near-Earth asteroid mining as a way to obtain precious minerals that have become scarce on Earth, it is important to understand how the CAA could regulate the activity. Because the use of certain types of rocket fuels increases the speed of ozone depletion,¹⁶² it is vital that the CAA be amended to take into account the types of rocket fuels being used for space launches. Currently, the CAA does not contain a provision regarding rocket fuel, and, if the future of mining is space-oriented, then this environmental statute dedicated to providing Americans with livable air quality standards should be amended to reflect this new focus.¹⁶³

With near-Earth asteroid mining on the cusp of being a mining industry norm, the environmental impacts of such a venture are real and, if not considered, can have detrimental effects on mankind. With mankind's health and the natural environment in mind, the future of mining is stellar.

Erin C. Bennett is a third-year law student at Vermont Law School and the Senior Managing Editor of the VERMONT LAW REVIEW. While her studies concentrate in Energy and Environmental law, Erin is an avid space enthusiast. Before law school, Erin earned a B.S. in Physics and Astronomy from Ursinus College. She would like to thank the VERMONT LAW REVIEW for providing a positive and collaborative platform in which to express her thoughts and ideas. She would also like to thank Joe Brennan for his invaluable guidance and input during the research, writing, and re-writing processes. Finally, she wishes to express a big THANK YOU to Paul III, Laura, Paul IV, Shaun, and Arline for the lifetime of love, support, and encouragement they have afforded her. Because you continue to be her loudest cheerleaders—She loves you to the moon and back.

160 Alvin L. Alm, *NEPA: Past, Present, and Future*, *Envtl. Prot. Agency J.*, U.S. ENVTL. PROT. AGENCY (Jan. 1988), <https://archive.epa.gov/epa/aboutepa/1988-article-nepa-past-present-and-future.html>.

161 42 U.S.C. 7401–7671 (1963).

162 *Ozone Depletion*, *supra* note 120.

163 42 U.S.C. 7401–7671 (1963).

WIND IN THE WILD WEST TO WIND IN THE MIDWEST: HOW IOWA AND NEBRASKA COULD IMPLEMENT TEXAS STRATEGIES TO INCREASE INSTALLED WIND CAPACITY

BY LISA N. GARRETT

I.	Introduction	101
II.	Status of Wind Energy and Law in Texas	102
	A. Texas’s Renewable Portfolio Standard	102
	B. Competitive Renewable Energy Zones	103
	C. General Lack of Regulations in Texas	104
III.	Status of Wind Energy and Law in Iowa and Nebraska	106
IV.	Applying Texas Strategies to Iowa and Nebraska	109
	A. Iowa Implementing a CREZ Process	109
	B. Various Strategies Nebraska Should Adopt	112
	1. Nebraska Adopting an RPS	113
	2. Nebraska Cutting Back on Regulations	114
	3. Nebraska Implementing a CREZ Process	116
V.	Conclusion	117

I. INTRODUCTION

For those who hail from outside the Lone Star State, the word “Texas” brings to mind images of cowboys and ranches, the Alamo, the Wild West, and of course, oil. While these things continue to define what Texas was and is, the state will likely be known and remembered for something else—wind energy. While non-Texans joke that everything is bigger in Texas, the state lives up to the challenge regarding this renewable energy source; Texas leads the United States in wind energy with 20,321 megawatts (MW) of installed wind power capacity.¹ Iowa comes in a far second with 6,917 MW, followed by Oklahoma’s 6,645 MW.² However, other states with high wind potential fall far short of meeting that potential.³ While the land of oil and gas may not strike people

1 AM. WIND ENERGY ASS’N, U.S. WIND INDUSTRY FOURTH QUARTER 2016 MARKET REPORT 6 (2017), <http://awea.files.cms-plus.com/FileDownloads/pdfs/4Q2016%20AWEA%20Market%20Report%20Public%20Version.pdf>.

2 *Id.*

3 For example, Nebraska ranked only seventeenth in the nation for installed wind capacity (1,328 MW at the end of 2016), despite ranking fourth in the nation for wind energy

as a leader in renewable energy, Texas provides an example of how other states can increase their wind energy production.

In this paper, I first examine the main factors that enabled Texas to become the leading state in wind energy production. I then describe the current wind energy status of two Midwestern states, Iowa and Nebraska. I selected these neighboring states for my analysis due to the extreme differences in the amount of wind energy produced; Iowa ranks second in the nation for wind energy production, while Nebraska—despite having the fourth greatest wind potential—comes in seventeenth.⁴ I analyze the feasibility and effect of applying some of Texas's strategies to wind energy in Iowa and Nebraska.⁵ By using Texas as a model, Iowa will hopefully continue its success in wind energy, and Nebraska may be able to use its currently untapped excellent wind resources. Nebraska has recently taken steps toward tapping its full wind potential⁶ and could possibly join Texas and Iowa in the top five wind states in the United States.

II. STATUS OF WIND ENERGY AND LAW IN TEXAS

A variety of factors have contributed to Texas's success as the leader in wind energy. These factors include the state's early creation of a renewable portfolio standard (RPS), the establishment of competitive renewable energy zones (CREZ) to ensure that Texas had an adequate transmission infrastructure, and the state's general lack of regulations. While some of these factors may be unique to Texas, it is worth examining their mechanics and results to determine how some version of the strategies may be applied to facilitate wind energy development in other states such as Iowa and Nebraska.

A. TEXAS'S RENEWABLE PORTFOLIO STANDARD

Texas established an RPS in 1999 during the restructuring of the state's electric industry, making it among the first states to create such a standard.⁷ The original RPS set a goal of installing "an additional 2,000 megawatts of generating capacity from renewable energy technologies" in the state by January 1, 2009.⁸ The state met the goal in 2005, so the Public Utility Regulatory Act increased the RPS to 5,880 MW of renewable en-

resources. *Id.* at 6–8; see also *Wind Energy Generation in Nebraska*, NEB. ENERGY OFFICE, <http://www.neo.ne.gov/statshtml/89.htm> (last visited May 28, 2017).

4 Am. Wind Energy Ass'n, *supra* note 1, at 6–8; see also *U.S. Wind Energy State Facts*, AM. WIND ENERGY ASS'N, <http://www.awea.org/resources/statefactsheets.aspx> (last visited Jan. 29, 2018).

5 While this article focuses on Iowa and Nebraska, the analysis may pertain to other states with similar regulatory schemes.

6 See Brent Martin, *Lawmakers Approve Bill Boosting Wind Energy in Nebraska*, NEB. PUB. RADIO (Apr. 13, 2016), <http://nebraskaradionetwork.com/2016/04/13/lawmakers-approve-bill-boosting-wind-energy-in-nebraska>.

7 David A. King, *Interregional Coordination of Electric Transmission and Its Impact on Texas Wind*, 8 TEX. J. OIL GAS & ENERGY L. 309, 313 (2012–2013).

8 Act of June 18, 1999, 76th Leg., R.S., ch. 405, § 39, 1999 Tex. Gen. Laws 2543, 2598 (amended 2005 & 2007) (current version at TEX. UTIL. CODE § 39.904).

ergy by 2015.⁹ The act set a target of 10,000 MW by 2025;¹⁰ this goal has already been surpassed by wind energy alone.¹¹ The RPS undoubtedly facilitated the growth of wind energy in the state.¹²

B. COMPETITIVE RENEWABLE ENERGY ZONES

In 2005, the Texas Senate passed Senate Bill 20 to improve transmission infrastructure and encourage wind energy production in Texas.¹³ The bill amended the Texas Utilities Code, mandating the start of the CREZ process.¹⁴ The amended code required the Public Utility Commission of Texas (PUCT) to consult with the Electric Reliability Council of Texas (ERCOT), “designate competitive renewable energy zones throughout [Texas] in areas in which renewable energy resources and suitable land areas [were] sufficient to develop generating capacity from renewable energy technologies,” and “develop a plan to construct transmission capacity necessary to deliver to electric customers . . . the electric output from renewable energy technologies in the competitive renewable energy zones.”¹⁵ The first step after passage of Senate Bill 20 was for the PUCT to adopt rules to implement the CREZ process.¹⁶

As a result, PUCT Substantive Rule 25.174 (“CREZ rule”) was adopted in December 2006.¹⁷ Under the CREZ rule, ERCOT was required to provide the PUCT with a study of both wind energy production potential across the state and transmission constraints that would most likely “limit the deliverability of electricity from wind energy resources.”¹⁸ Once it received this information, the PUCT was required to initiate contested-case proceedings in which any interested entity could nominate a region for

9 Ernest E. Smith & Becky H. Diffen, *Winds of Change: The Creation of Wind Law*, 5 TEX. J. OIL GAS & ENERGY L. 165, 172 (2010).

10 *Id.*

11 AM. WIND ENERGY ASS’N, U.S. WIND INDUSTRY FOURTH QUARTER 2015 MARKET REPORT 5 (2015), <http://awea.files.cms-plus.com/FileDownloads/pdfs/4Q2015%20AWEA%20Market%20Report%20Public%20Version.pdf>.

12 See Smith & Diffen, *supra* note 9, at 172 (citing GÜRCAN GÜLEN ET AL., RPS IN TEXAS – LESSONS LEARNED & WAY FORWARD 13 (2009), <http://usae.org/usae2009/submissions/onlineproceedings/gulen%20et%20al.pdf>) (“There is no doubt that the combination of an excellent wind resource and a well thought out and implemented RPS/REC system are largely responsible for the rapid growth the Texas wind industry has experienced.”). Relevant to this paper, Smith and Diffen also discussed Iowa as an example of how “[a] strong RPS can . . . take a state with an average wind resource and help it become a leader in wind development” and suggested that Iowa’s early adopting of an RPS helped Iowa succeed in the wind industry. *Id.* at 172–73.

13 R. Ryan Staine, Note, *CREZ II, Coming Soon to a Windy Texas Plain Near You: Encouraging the Texas Renewable Energy Industry through Transmission Investment*, 93 TEX. L. REV. 521, 522 (2014).

14 *Id.* at 529; see TEX. UTIL. CODE ANN. § 39.904 (West 2016).

15 TEX. UTIL. CODE § 39.904(g).

16 Becky H. Diffen, *Competitive Renewable Energy Zones: How the Texas Wind Industry is Cracking the Chicken & Egg Problem*, 46 ROCKY MOUNTAIN MINERAL L. FOUND. J. 47, 69 (2009).

17 *Id.*; 16 TEX. ADMIN. CODE § 25.174 (2016) (Pub. Util. Comm’n of Tex., Competitive Renewable Energy Zones).

18 See ADMIN. § 25.174(a)(2) (setting out minimum requirements for ERCOT’s study).

CREZ designation.¹⁹ Relevant information for the PUCT's determination whether to designate an area as a CREZ included sufficiency of the production capability of the region, the financial commitment of the generators, the cost of constructing transmission capacity, and the benefits of production of renewable energy in the area.²⁰ The CREZ rule also required the PUCT to issue a final order within six months of the initiation of the CREZ proceeding, in which the PUCT had to specify: "(A) the geographic area of each CREZ, (B) the transmission improvements needed to deliver the renewable energy in a cost-effective manner, (C) an estimate of the maximum generating capacity expected for CREZ transmission to accommodate, and (D) other requirements considered appropriate."²¹ However, the process hit multiple road bumps along the way, and the final order was not issued until March 30, 2009.²² The process, which was completed in 2014, opened remote, windy areas to wind power expansion and allowed power from wind farms in these areas to be transferred to big metropolitan load centers.²³

Stakeholder participation in the process played a large role in shaping the project's outcome. For example, when the first docket was initiated in January 2007, over 65 parties intervened, filing over 1,400 documents that included "financial commitment testimony to support over 24,000 MW of CREZ projects across 16 zones."²⁴ The CREZ process resulted in a visionary transmission expansion over a relatively short time, increasing the capacity of Texas to build additional projects.²⁵ In 2016, the PUCT approved plans to construct a second circuit in the Texas Panhandle as part of the original CREZ process and amended the CREZ rule "to reflect that no further CREZ projects are authorized."²⁶

C. GENERAL LACK OF REGULATIONS IN TEXAS

In addition to the CREZ process and the RPS, the general lack of regulation in Texas also helped the wind industry thrive. Texas has no state- or county-wide regula-

19 *Id.* § 25.174(a)(1).

20 *Id.* § 25.174(a)(4); Diffen, *supra* note 16, at 69–70.

21 Diffen, *supra* note 16, at 70 (citing 16 TEX. ADMIN. § 25.174(a)(5)).

22 *See id.* at 85, 96 (explaining that the final order was issued on March 30, 2009, and emphasizing that the order was "just the beginning").

23 *See* Eric Wolff, *Last Line Energized, \$5.8B Texas CREZ Project Is Complete*, SNL FIN. (Feb. 3, 2014, 7:15 AM), <https://www.snl.com/Interactivex/article.aspx?CdId=26708514-11569> (recognizing the need to deliver wind energy from the "vast, wind-rich stretches of land in the Panhandle and central parts of" Texas to the state's major metropolitan areas).

24 Diffen, *supra* note 16, at 72. Other parts of the process similarly relied on stakeholder participation, such as provisions of the CREZ rule that required selected Transmission Service Providers to apply for a Certificate and Convenience and Necessity (CCN) within one year of the PUCT designating CREZs and post security within 45 days of the CCN filing and provided that failure to post security could result in "replacement by another developer, reconsideration of the CREZ designation, or dismissal of the CCN application." *Id.* at 83.

25 *See id.* at 83 (acknowledging that CREZ added new transmission construction capacity).

26 ERNEST E. SMITH, RODERICK E. WETSEL, BECKY H. DIFFEN, & MELISSA POWERS, WIND LAW § 7.03 (LexisNexis Matthew Bender 2017) (citing Pub. Util. Comm'n of Tex., Order Adopting Amendments to §§ 25.101, 25.174, and 25.192 as Approved at the June 9, 2016 Open Meeting, Project No. 45124 (June 15, 2016)).

tory system that applies to wind farms.²⁷ This may be, in part, due to the state's long history of supporting the development of its natural resources.²⁸ As a result, there are comparatively few regulatory hurdles to wind development in Texas, which has naturally attracted wind developers to the state. In fact, the state's permissive siting standards are "[p]erhaps the most decisive factor in Texas'[s] wind development boom."²⁹ In Texas, wind developers do not have to obtain environmental certification, address impacts of a proposed wind farm on wildlife, or conduct a local permitting review.³⁰ Siting of turbines on private land outside of municipalities is essentially unregulated in Texas.³¹ Additionally, Texas has no state regulations for the decommissioning of wind turbines.³²

This approach is not without its downside: some critics have expressed frustration with the absence of environmental considerations in wind turbine siting decisions.³³ Others have argued that the lack of permitting requirements eliminates the chance for the public to weigh in on siting decisions.³⁴ However, bills filed in 2007 and 2009 that attempted to create a statewide siting permit process failed to pass, perhaps underscoring

27 TEX. COMPTROLLER OF PUB. ACCOUNTS, THE ENERGY REPORT 174 (2008) (recognizing that Texas "does not regulate wind farm siting and decommissioning"); Smith & Diffen, *supra* note 9, at 189.

28 See Lorne Matalon, *Texas Wind: Too Much of a Good Thing?*, INSIDE ENERGY (June 19, 2015), <http://insideenergy.org/2015/06/19/texas-wind-too-much-of-a-good-thing/> (noting that the "fiercely pro-business regulatory environment [in Texas] has embraced energy development since the arrival of oil and gas"). The state's familiarity with tapping into its natural resources suggest that the non-regulation of wind energy development in Texas may end; after all, Texas eventually chose to regulate the production of oil through the Texas Railroad Commission. See TEX. NAT. RES. CODE ANN. § 81.051 (West 2011) (setting out the jurisdiction of the Commission).

29 Alexa Burt Engelman, *Against the Wind: Conflict over Wind Energy Siting*, 41 *Envtl. L. Rep.* (Envtl. Law Inst.) 10,549, 10,563 (2011).

30 *Id.* Additionally, because Texas has relatively little federal land, the National Environmental Policy Act and other federal statutes have less hold in Texas.

31 Smith & Diffen, *supra* note 9, at 190. Siting may be regulated within municipalities; for example, in 2008, the City of Lamesa passed an ordinance placing restrictions upon the installation of wind energy facilities within city limits. Lamesa, Tex., Ordinance No. 0-08-09 (Aug. 5, 2008).

32 TEX. COMPTROLLER OF PUB. ACCOUNTS, *supra* note 27, at 174 (explaining that Texas, like many other states, does not regulate the decommissioning of wind farms).

33 See, e.g., Melanie McCammon, Note, *Environmental Perspectives on Siting Wind Farms: Is Greater Federal Control Warranted?*, 17 *N.Y.U. ENVTL. L.J.* 1243, 1289 (2009) (positing that, "given the successful growth of the wind industry in Texas, where there are no specific wildlife protections, other states may be tempted to loosen their protections to attract industry to their jurisdiction").

34 Engelman, *supra* note 29; see also McCammon, *supra* note 33, at 1264 (recognizing that because Texas lacks a formal process for public review of siting decisions, "local and national concerns about the harmful effects of wind power are left out of consideration in what are purely private decisions"). McCammon has also suggested that the "only outlet for public opposition to developments" is the ability of Texas counties to decide to withhold a tax abatement. *Id.* at 1264.

the state's historical support of energy development.³⁵ Similarly, a 2011 bill that attempted to regulate the construction or expansion of wind facilities within 25 miles of a federally-owned or operated radar or military installation failed to get out of the Senate Committee.³⁶

III. STATUS OF WIND ENERGY AND LAW IN IOWA AND NEBRASKA

In the Midwest, the neighboring states of Iowa and Nebraska provide a stark contrast to each other in terms of wind energy. As noted previously, Iowa ranks second in installed wind energy capacity, while Nebraska comes in seventeenth despite having the fourth largest wind energy potential.³⁷

Unlike its neighbor to the west, Iowa has long been a leader in wind energy. With the enactment of a state law requiring investor-owned utilities to purchase a total of 105 MW of power from wind-generated electricity, Iowa became the first state to implement a renewable electricity portfolio standard.³⁸ Additionally, as of the end of 2016, Iowa ranked first in the nation for percentage of electricity generated from wind.³⁹ Iowa continues to promote wind energy, and with good reason: multiple wind energy companies, including manufacturers of wind turbine blades, have offices or plants in Iowa.⁴⁰

In Iowa, local authorities are charged with siting wind turbines, so siting guidelines and application procedures vary across the state.⁴¹ While some counties have no zoning ordinances, other county ordinances—especially those of counties with newer wind

35 See Engelman, *supra* note 29 (discussing Tex. H.B. 2794, 80th Leg., R.S. (2007)); Smith & Diffen, *supra* note 9, at 189–90. Texas House Bill 1794, which would have established a permitting process for wind farms to be administered by the Texas Commission on Environmental Quality (TCEQ), failed to get out of committee. Smith & Diffen, *supra* note 9, at 189–90. Texas Senate Bill 1226, introduced in 2009, would have enabled specific counties in Texas to regulate the construction of wind facilities in certain areas by prohibiting or restricting the location of wind facilities in the county. Tex. S.B. 1226, 81st Leg., R.S. (2009). Under Texas Senate Bill 1227, counties could file a resolution stating that they are opposed to the construction of wind facilities, and construction would be prohibited in such counties unless certain requirements were met. Tex. S.B. 1227, 81st Leg., R.S. (2009). However, both of these bills failed to gain traction as well. Smith & Diffen, *supra* note 9, at 190.

36 See Tex. S.B. 1053, 82nd Leg., R.S. (2011); Bill Stages of S.B. 1053, TEX. LEGISLATURE ONLINE, <http://www.legis.state.tx.us/BillLookup/BillStages.aspx?LegSess=82R&Bill=SB1053> (last visited May 10, 2016).

37 See *supra* Part I.

38 *Renewable Portfolio Standards*, AM. WIND ENERGY ASS'N, <http://www.awea.org/Advocacy/Content.aspx?ItemNumber=5217> (last visited May 28, 2017).

39 AM. WIND ENERGY ASS'N, IOWA WIND ENERGY 1 (2016), <http://awea.files.cms-plus.com/FileDownloads/pdfs/iowa.pdf>.

40 See ENVTL. LAW & POLICY CTR., THE WIND ENERGY SUPPLY CHAIN IN IOWA 4 (2010), <http://elpc.org/wp-content/uploads/2010/11/IowaWindSupplyChainReportDownload.pdf>.

41 Patricia E. Salkin & Ashira Pelman Ostrow, *Cooperative Federalism and Wind: A New Framework for Achieving Sustainability*, 37 HOFSTRA L. REV. 1049, 1065 (2009) (internal quotations omitted).

farms—contain noise restrictions, turbine setbacks, and rules governing the decommissioning of turbines.⁴² While wind developers may be concerned about the lack of uniformity, the growing wind industry in Iowa suggests that these varying ordinances will do little to slow wind development in the state.⁴³ Instead, as wind energy in Iowa continues to thrive, the state’s ability to add wind power is more likely to be constrained by limited transmission capacity.⁴⁴

However, just across the Missouri River, Nebraska has a less inspiring wind energy story to tell. With an installed capacity of only 1,328 MW at the end of 2016, Nebraska ranks seventeenth in installed wind capacity.⁴⁵ This low installed wind energy capacity is especially surprising in light of the estimates that approximately nine-tenths of Nebraska is suitable for utility-scale wind development.⁴⁶ Nebraska’s publicly-owned power system—aimed at providing consumers with electric services at the lowest possible cost—is largely to blame for the state’s comparatively low installed wind energy capacity.⁴⁷

While publicly-owned power systems were created by Nebraska’s Enabling Act in 1933, the requirements of President Roosevelt’s Public Utility Holding Company Act of 1935 eventually led to the state’s complete conversion to public power in 1946.⁴⁸ The publicly-owned power systems have kept Nebraska’s electricity rates lower than most of the Midwest, but they have also hindered Nebraska’s wind energy development.⁴⁹ In short, private investors are worried about the condemnation power of the Public Power Districts, which are public corporations and political subdivisions of the state.⁵⁰ Additionally, private investors have to receive approval from Nebraska’s Power Review Board

42 See Erin Jordan, *Without State Regulation, Iowa Counties Get Tougher on Wind Projects*, GAZETTE (Jul. 13, 2014, 12:01 AM), <http://www.thegazette.com/subject/news/without-state-regulation-iowa-counties-get-tougher-on-wind-projects-20140713> (recognizing that Adair County has no zoning ordinance, which means that wind farms can be constructed anywhere in the countryside as long as the wind developer has a contract with the landowner). Some counties require developers to identify nearby bats and birds that could be harmed by wind turbines. *Id.*

43 See *id.* (acknowledging that county siting restrictions do affect where wind farms are built, but explaining that MidAmerican Energy’s vice president of wind development and generation does not “think [the wind industry in Iowa will] reach a saturation point any time soon”).

44 Dan Turner & Thomas A. Wind, *Iowa’s Wind Potential for Addressing 111(d) Goals: The Potential for Tapping Iowa’s Wind Resource to Reduce CO2 Emissions* 8 (Aug. 17, 2015) (draft), http://www.iaenvironment.org/webres/File/News%20%26%20Resources/Publications/Full_Report_Iowa_Wind_Potential.pdf [<https://perma.cc/45ZC-KM92>].

45 *U.S. Wind Energy State Facts*, *supra* note 4.

46 *Nebraska State Profile and Energy Estimates*, U.S. ENERGY INFO. ADMIN. (Feb. 18, 2016), <https://www.eia.gov/state/analysis.cfm?sid=NE#62>.

47 Allan M. Williams, *The Winds of Change: How Nebraska Law Has Stalled the Development of Wind Energy and What Can Be Done to Spur Growth*, 47 CREIGHTON L. REV. 477, 477 (2014). For a general overview of the development of Nebraska’s unique power system, see *id.* at 479–86.

48 *Id.* at 477–78, 485–86.

49 *Id.* at 478.

50 *Id.* at 484–85, 489.

before beginning construction of an electric generation facility.⁵¹ Because the Power Review Board is required to find that a project is the most economical and feasible alternative before approving it, the relatively high cost of wind energy has prevented the Power Review Board from approving large wind projects in the state.⁵² More recently, however, the enactment of Legislative Bill 65 in 2003 enabled “the Power Review Board to allow publicly-owned power systems to construct small renewable energy facilities without needing approval or to construct larger facilities without first showing the facility is the most economical alternative,” encouraging additional wind development in the state.⁵³ Additionally, in 2016, the Nebraska Legislature passed a law that will “essentially . . . deregulate development of private wind energy” in Nebraska.⁵⁴

While lawmakers have acted to make Nebraska more attractive to wind developers,⁵⁵ various limiting factors have kept the state from reaching its potential and being competitive with neighboring states. One such factor is its burdensome regulations.⁵⁶ A wind energy project must be approved at the state level then meet all local zoning ordinances.⁵⁷ As a result, a wind farm that spreads across multiple counties can be subject to different—and potentially inconsistent—requirements.⁵⁸ While this similar situation has not seemed to slow down wind development in Iowa, the problem may present unique challenges to wind energy development in Nebraska due to the lack of incentives in the state. For example, unlike Iowa, Nebraska does not have an RPS,⁵⁹ which can incentivize wind development in various ways.

It is not surprising that another limiting factor is the lack of transmission capabilities throughout Nebraska.⁶⁰ Additional transmission lines will be needed to link “potential wind facilities to existing interconnected transmission lines connected to the electrical

51 *Id.* at 489.

52 *Id.*

53 *Id.* at 490.

54 Don Walton, *Wind Energy Bill Compromise Reached*, WINDACTION (Jan. 28, 2016), <http://www.windaction.org/posts/44218-wind-energy-bill-compromise-reached/>. The proposal of the bill has sparked debate within the state, with opponents pointing to potential economic risks and quality-of-life issues for Nebraskans who live near the turbines. *Id.* However, some Nebraskans recognize that Nebraska is missing out on opportunities for wind energy development—and that states like Iowa have already taken advantage of such opportunities. *Id.*

55 *See infra* Part IV.B.2.

56 *See Study: Patchwork of State, County Laws Holding Back Wind Development*, MIDWEST ENERGY NEWS (Aug. 5, 2015), <http://midwestenergynews.com/2015/08/05/study-patchwork-of-state-county-laws-holding-back-wind-development/> (acknowledging the regulatory burdens facing wind developers in Nebraska).

57 *Id.*

58 *See id.* (denouncing Nebraska’s approach as creating “93 shades of ‘unpredictability’” for wind developers who could face different siting requirements across Nebraska’s 93 counties).

59 *See* Jocelyn Durkay, *State Renewable Portfolio Standards and Goals*, NAT’L CONF. OF STATE LEGISLATURES (Apr. 26 2017), <http://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx> (recognizing that while 29 states plus Washington, D.C. have adopted an RPS, Nebraska has not).

60 *See* Williams, *supra* note 47, at 495 (recognizing that the lack of transmission lines in the parts of the state where wind development is ideal poses a hurdle for investors).

grid.”⁶¹ Nebraska’s transmission problem is two-fold: rural areas in western and north-central Nebraska have very little transmission resources that can be used to connect wind facilities to established infrastructure, and the current electric system in the state has limited excess transmission capacity to support additional wind energy.⁶² While one author has suggested that Nebraska should create an agency like Kansas’s Electric Transmission Authority to handle the expansion of Nebraska’s electric transmission infrastructure,⁶³ I recommend instead that Nebraska adopt a CREZ-like process to facilitate such expansion.

IV. APPLYING TEXAS STRATEGIES TO IOWA AND NEBRASKA

Despite the extreme differences in the wind energy landscape of Iowa and Nebraska, both states could benefit from using Texas’s wind energy success as a model for future wind energy development. As explained below, Iowa can use parts of Texas’s CREZ process to improve the effectiveness of Iowa’s efforts to identify wind-rich areas, and Nebraska can come closer to reaching its potential by implementing Texas’s strategies.

Unlike Texas, both Iowa and Nebraska have to consider the interstate aspect of energy transmission. In states other than Texas in the contiguous United States, “power is provided through either the Eastern Interconnection or Western Interconnection.”⁶⁴ Thus, “any electricity that enters the grid immediately becomes a part of a vast pool of energy that is constantly moving in interstate commerce.”⁶⁵ As a result, nearly every electric grid except for the ERCOT grid in Texas is regulated by the Federal Energy Regulatory Commission (FERC).⁶⁶ While this may prevent Iowa and Nebraska from implementing a full-blown CREZ process or require them to include other state and federal actors in the decision-making process, these states can still use Texas’s CREZ process as a model for increasing transmission capacity.

A. IOWA IMPLEMENTING A CREZ PROCESS

With the current status of wind energy in Iowa, the state may not benefit directly from a purely intrastate CREZ process. Upgrades to the system may do more for neighboring states than for Iowa. For example, due to the large amount of installed wind capacity in Iowa, many out-of-state companies are interested “in developing greater transmission capability to bring wind from Iowa to larger population centers.”⁶⁷ However, Iowa has a strong history of promoting wind energy and may therefore be interested in pursuing a small-scale CREZ-like process entirely within the state.

61 *Id.*

62 *Id.*

63 *Id.* at 495–96.

64 Staine, *supra* note 13, at 525.

65 *Id.* at 525–26 (quoting *New York v. Fed. Energy Regulatory Comm’n*, 535 U.S. 1, 7 (2002)).

66 *Id.* at 526.

67 Alexandra B. Klass & Elizabeth J. Wilson, *Interstate Transmission Challenges for Renewable Energy: A Federalism Mismatch*, 65 VAND. L. REV. 1801, 1835 (2012).

However, a CREZ-like process does not appear to be necessary to facilitate wind development in Iowa, and any energy lines that extend across state lines will result in additional challenges, including the need to work with FERC.⁶⁸ Additionally, Iowa is covered by the Midcontinent Independent System Operator (MISO), a regional transmission organization (RTO) whose reliability coordination area covers all or part of 15 states.⁶⁹ Therefore, MISO may better implement a CREZ process.

In fact, Iowa, along with North Dakota, South Dakota, Minnesota, and Wisconsin, has already experimented with renewable energy zones like those established in Texas. These states identified renewable energy zones through the Upper Midwest Transmission Development Initiative (UMTDI), which was formed by the state governors “to identify and resolve regional transmission planning and cost allocation issues associated with the delivery of renewable energy from wind rich areas within the five-state footprint to the region’s customers.”⁷⁰ The UMTDI’s two main goals included: (1) creating a plan to encourage and guide construction of interstate transmission lines to facilitate renewable-energy development; and (2) developing a fair approach for allocating the costs of new transmission facilities.⁷¹ The UMTDI approach—designating geographic zones for wind energy development then modeling a transmission expansion plan—mirrored Texas’s approach.⁷² The UMTDI modeled 12 scenarios, integrating stakeholder comments into the final selection of two scenarios.⁷³

While the UMTDI does not appear to have progressed beyond this selection of two scenarios, it led to a larger MISO-coordinated effort to identify and integrate projects targeted specifically at fulfilling state RPS requirements. The UMTDI study provided information for MISO’s Regional Generation Outlet Study (RGOS),⁷⁴ and Phase II of RGOS later “led to the region-wide transmission planning effort by the Midwest Governors’ Association and MISO which mapped, planned, and eventually approved the seventeen high-voltage lines across the system.”⁷⁵ The plan determined that the costs of these Multi-Value Project (MVP) lines—estimated at \$5.2 billion—were to be shared

68 See Staine, *supra* note 13, at 526.

69 See MIDCONTINENT INDEP. SYS. OPERATOR, CORPORATE INFORMATION 1 (2017), https://cdn.misoenergy.org/Corporate%20Fact%20Sheet_20171290524.pdf (providing a general overview of the scope of MISO’s operations).

70 UPPER MIDWEST TRANSMISSION DEV. INITIATIVE, EXECUTIVE COMMITTEE FINAL REPORT 1 (2010), <https://legalelectric.org/f/2010/09/umtdisummaryreportfinal-9-30-10.pdf>.

71 NAT’L WIND COORDINATING COLLABORATIVE, TRANSMISSION UPDATE 1 (2008), <https://nationalwind.org/wp-content/uploads/2013/05/NWCCTransmissionUpdateDec08.pdf>. The overall goals additionally included improving grid reliability, reducing transmission congestion, and connecting renewable energy sources to the grid. *Id.* at 2.

72 See Tara Benedetti, Recent Development, *Running Roughshod? Extending Federal Siting Authority over Interstate Electric Transmission Lines*, 47 HARV. J. ON LEGIS. 253, 272 (2010) (briefly describing UMTDI’s approach).

73 JENNIE C. STEPHENS, ELIZABETH J. WILSON, & TARLA RAI PETERSON, SMART GRID (R)EVOLUTION: ELECTRIC POWER STRUGGLES 130 (2015).

74 Klass & Wilson, *supra* note 67, at 1851.

75 STEPHENS, WILSON, & PETERSON, *supra* note 73, at 130. RGOS II identified transmission expansion scenarios that would meet each state’s RPS requirements. Klass & Wilson, *supra* note 67, at 1851.

across the entire region.⁷⁶ After MISO submitted the MVP plan to FERC, FERC approved most parts of the plan.⁷⁷ However, various states and utilities that were unhappy with the plan sued FERC.⁷⁸ In 2013, the Seventh Circuit upheld the plan, and some MVP lines have been built, while others are still under construction.⁷⁹

Because of their interstate nature, both the UMTDI and MISO's MVP process encountered challenges unlike those Texas faced. The UMTDI executive team had to grapple with determining, among other things, whether the lines should be sized for future large-scale export to regions beyond the states involved, and MISO had the enormous task of coordinating multiple stakeholders in multiple states.⁸⁰ However, Iowa could implement Texas's strategies (or use them to supplement Iowa's current practices) to further wind development either for use within the state or to export to neighboring states with less wind capacity.⁸¹

While construction on the four MVP projects that encompass Iowa is still underway or pending,⁸² Iowa and other UMTDI states should repeat the process of identifying renewable energy zones, but with a focus on the "competitive" part of the CREZ process.⁸³ The identification of renewable energy zones was completed before the UMTDI Final Report was released in September 2010, so Round 2 may now be appropriate. While the UMTDI solicited and received comments from stakeholders,⁸⁴ the UMTDI

76 STEPHENS, WILSON, & PETERSON, *supra* note 73, at 130.

77 *See id.* at 131.

78 *See id.* (observing that the state RPS of certain states—namely Illinois and Michigan—made those states more likely to sue).

79 *See id.* (recognizing that the Seventh Circuit's decision to uphold the MVP process allowed MISO to move forward with the initial MVP lines); Herman K. Trabish, *How New Transmission Is Unlocking Wind Power's Potential in Michigan's Thumb*, UTIL. DIVE (May 26, 2015), <http://www.utilitydive.com/news/how-new-transmission-is-unlocking-wind-powers-potential-in-michigans-thumb/399707> (noting that Thumb Loop was one of three MVP lines completed by May 26, 2015); MIDCONTINENT INDEP. SYS. OPERATOR, MVP PROJECT STATUS DECEMBER 2017, at 1 (2017), <https://cdn.misoenergy.org/2011%20MVP%20Dashboard117055.pdf>.

80 *See* STEPHENS, WILSON, & PETERSON, *supra* note 73, at 130–31 (describing the challenges faced by the UMTDI and MISO).

81 *See* Turner & Wind, *supra* note 44, at 12–13 (recognizing that Iowa could export the wind energy it produces to help other Midwestern states reach renewable-energy goals set by the EPA).

82 *See* MIDCONTINENT INDEP. SYS. OPERATOR, *supra* note 79 (designating the "State Regulatory Status" of each project in Iowa as either "Pending" or "Regulatory process complete or no regulatory process [r]equirements").

83 For this section, when I mention Iowa, I am referring to the state in conjunction with neighboring states covered by the MISO. The interstate nature of such a process is inevitable. Even in the past, out-of-state companies were interested in developing larger transmission capacity to bring wind energy from Iowa to larger out-of-state population centers, such as Chicago. Klass & Wilson, *supra* note 67, at 1835.

84 *See* Letter from UMTDI Executive Committee to Transmission Stakeholders (Dec. 31, 2008), <http://legalectric.org/f/2009/02/umtdi-stakeholder-letter123108-doc.doc> (explaining how the Executive Committee was responding to stakeholder comments on the UMTDI).

Commissioners selected the wind zones for the analysis.⁸⁵ Instead, Iowa should engage stakeholders by drawing on Texas's practice of allowing "any interested party [to] nominate a region for consideration as a CREZ."⁸⁶ Texas's experience shows that stakeholders want to be involved. When the first docket was opened, over 65 parties intervened.⁸⁷ Additionally, MISO has recognized that a little competition—especially in the thriving field of wind energy—could lead to more cost-effective results; MISO's upcoming Duff-Rockport-Coleman line could be "MISO's first competitively bid project."⁸⁸ Iowa should take heed. Following Texas's approach, one way Iowa could engage stakeholders would be to ask developers to nominate zones to be CREZs and to demonstrate "the financial commitment the developer had thus far made to projects in that zone."⁸⁹

This approach may be most effective if Iowa and other states treat themselves as one giant state for purposes of identifying the CREZs. The aim of such a study would not be to help each of the states meet their individual RPS goals (which was part of the approach taken in the UMTDI/MVP process), but instead to focus on creating transmission lines from the places with the best wind resources to the heavy load centers. Again, this is where the "competitive" focus could come in. By eliciting input from developers with the ability and desire to construct wind facilities in the area and requiring a demonstration of financial commitment, the states could mitigate issues of competition among themselves by focusing on where developers are willing to go. This may also reduce the overall cost of such an undertaking.

However, ignoring the interests of the specific states covered by MISO fails to solve the contentious debate of who should pay for upgrades to transmission lines that existed even with MISO's MVP plan. The question of "who should pay"⁹⁰ will likely need to be answered before the interested states are willing to view themselves as one mega-state for purposes of a CREZ process. As a result, Iowa and other states in the study must grapple with the daunting task of devising a cost allocation system that is acceptable to stakeholders who would be required to help pay for the new transmission lines to solve one of the major problems with the interstate nature of the plan.

B. VARIOUS STRATEGIES NEBRASKA SHOULD ADOPT

As further illustrated below, Nebraska is in a very different position from Iowa and Texas in terms of wind energy development and could benefit from applying multiple strategies used by Texas. Nebraska recently recognized that it was lagging behind neigh-

85 See UPPER MIDWEST TRANSMISSION DEV. INITIATIVE, *supra* note 70, at 7 (noting that the UMTDI "Executive Committee decided on the probable realistic wind zones" for the project).

86 Diffen, *supra* note 16, at 69 (citing 16 TEX. ADMIN. CODE § 25.174(a) (Pub. Util. Comm'n of Tex., Competitive Renewable Energy Zones)).

87 *Id.* at 72.

88 Herman K. Trabish, *How Utilities Are Getting in on the Transmission Building Boom*, UTIL. DIVE (Oct. 29, 2015), <http://www.utilitydive.com/news/how-utilities-are-getting-in-on-the-transmission-building-boom/407918/>.

89 See Diffen, *supra* note 16, at 72.

90 In Texas, electric ratepayers will bear the burden of the 6.8-billion-dollar cost of CREZ through increases in their monthly bills. Jim Malewitz, *\$7 Billion CREZ Project Nears Finish, Aiding Wind Power*, TEX. TRIB. (Oct. 14, 2013), <https://www.texastribune.org/2013/10/14/7-billion-crez-project-nears-finish-aiding-wind-po/>.

boring states and has been adopting measures to encourage development in the state.⁹¹ However, Nebraska could follow Texas's lead and continue to encourage wind development by adopting a renewable portfolio standard (RPS), continuing to move toward less regulation of the wind industry, and implementing its own CREZ process.

1. NEBRASKA ADOPTING AN RPS

Nebraska is in the minority of states that do not currently have an RPS.⁹² While not necessary for increasing wind energy development in the state, adoption of an RPS could help Nebraska tap into its potential by motivating the state to reach a set amount of installed capacity by a set date.⁹³ As Texas has shown, even lofty RPS goals can be surpassed; Nebraska should therefore set ambitious goals to increase the amount of wind energy capacity in the state. Additionally, Nebraska's adoption last year of Legislative Bill 824 (LB 824)⁹⁴ to "deregulate" private wind energy development suggests that now is the ideal time to adopt an RPS.

Nebraska has multiple options regarding what type of RPS to implement. Nebraska could model its RPS after Texas's and Iowa's RPSs, which set a specific amount of energy that must be generated by renewable resources.⁹⁵ However, Texas and Iowa are the only two states whose RPS is structured in this way. In most other states, the standards are expressed in percentages of kilowatt hours of retail electric sales.⁹⁶ Nebraska could follow this model as well.⁹⁷ Additionally, Nebraska could choose to set a voluntary renewable-energy goal, as opposed to a renewable portfolio standard.⁹⁸ This would potentially be a good way to introduce such a policy, but it may be instructive that Texas and Iowa—the leaders in wind energy—adopted mandatory standards.⁹⁹

91 See Martin, *supra* note 6.

92 Durkay, *supra* note 59. The interstate nature of the transmission lines within the MISO coverage area present additional challenges to cost allocation of a CREZ-like process. For example, some state commissions and MISO have argued that the MVP cost-allocation model approved by FERC should allow costs to be passed on to neighboring RTOs who could use MISO's wind energy to meet member states' RPSs. Klass & Wilson, *supra* note 67, at 1853.

93 A Renewable Portfolio Standard encompasses multiple forms of renewable energy sources. Some states, like Texas, carve out a certain goal for non-wind energy resources. See TEX. UTIL. CODE ANN. § 39.904(a) (West 2016) (requiring that the Public Utilities Commission of Texas "establish a target of having at least 500 megawatts of capacity from a renewable energy technology other than a source using wind energy"). Nebraska's RPS could be generic to encourage development of multiple renewable resources within the states; however, the state's wind potential would make wind energy an attractive renewable source to use to meet an RPS.

94 See *infra* Part IV.B.2.

95 See TEX. UTIL. CODE § 39.904(a).

96 Durkay, *supra* note 59.

97 Nebraska could also model its RPS after that of Kansas, whose RPS requires that a percentage of peak demand be met by renewable energy sources. *Id.*

98 See *id.* (identifying states which have adopted voluntary targets).

99 See *id.* (identifying states which have adopted mandatory standards).

Nebraska could borrow the language of the Texas Utilities Code that sets forth the state's goal for renewable energy.¹⁰⁰ Using this language, Nebraska could delineate discrete and incremental megawatt requirements until a set future date. For example, Texas set a megawatt target for January 1st of every other year from 2007 to 2015, with a final target of 10,000 MW of installed renewable capacity by January 1, 2025.¹⁰¹ This approach would enable Nebraska to evaluate progress on an appropriate timescale.

Texas's statute also required the PUCT to adopt rules establishing a minimum annual renewable-energy requirement for the various electricity providers in the state "in a manner reasonably calculated by the [PUCT] to produce, on a statewide basis, compliance with the requirement[s] setting forth the capacity targets]" and specifying reasonable performance standards that must be met to qualify as renewable capacity under the RPS.¹⁰² The Nebraska Power Review Board is likely the most analogous agency to the PUCT and is probably the right agency to adopt rules to effectuate an RPS.¹⁰³ However, the duties and responsibilities of the Power Review Board are set out in Chapter 70, article 10 of the Nebraska Revised Statutes, which do not appear to confer any general rulemaking power on the Board.¹⁰⁴ As a result, the amendment to the Revised Statutes that establishes Nebraska's RPS should also grant the Board power to promulgate the rules necessary to effectively carry out the RPS requirements.

2. NEBRASKA CUTTING BACK ON REGULATIONS

Nebraska can address the problem of its burdensome regulations by looking to Texas's lack of regulations to see which Nebraska regulations can be either reduced or eliminated to encourage wind energy development. Nebraska seems to be moving in this direction: LB 824, a bill that will lessen "regulations often considered an obstacle to the development of the wind industry in Nebraska," was passed by the legislature in April 2016 after legislators voted to end a filibuster mounted against the bill.¹⁰⁵

LB 824 aims to attract private renewable-energy development to the state by streamlining the regulation process.¹⁰⁶ This includes exempting privately-developed wind energy generation facilities from the requirements of sections 70-1012 to 70-1014.01, which set forth extensive application and hearing procedures that must be completed

100 See TEX. UTIL. CODE § 39.904. It may be worth noting that this section of the Texas Utilities Code also provided for the beginning of the CREZ process in Texas.

101 *Id.* § 39.904(a).

102 *Id.* § 39.904(c).

103 See *About the PUCT*, PUB. UTIL. COMMISSION OF TEX., <http://www.puc.texas.gov/agency/about/mission.aspx> (last visited May 10, 2016) ("The Public Utility Commission of Texas regulates the state's electric . . . utilit[y] . . ."); *About the Board*, NEB. POWER REV. BOARD, <http://www.powerreviewboard.nebraska.gov/abouttheboard.html> (last visited May 10, 2016) ("The Nebraska Power Review Board is a state agency created in 1963 to regulate Nebraska's publicly owned electrical utility industry").

104 *About the Board*, *supra* note 103; NEB. REV. STAT. §§ 70-1001 to -1027 (2017).

105 Martin, *supra* note 6.

106 See Anna Gronewold, *Wind Developers Urge Nebraska Senators to Streamline Process*, WASH. TIMES (Jan. 27, 2016), <http://www.washingtontimes.com/news/2016/jan/27/wind-developers-urge-nebraska-senators-to-streamli/> (describing how the bill would speed up Nebraska's approval process for wind turbine installation).

before commencing construction of an electric generation facility.¹⁰⁷ Under the new law, the owner of a privately developed renewable-energy facility must notify the Nebraska Power Review Board of its intent to begin construction and certify that: (1) the facility will meet the requirements of the definition of “privately developed renewable energy generation facility”; (2) the supplier will comply with any local decommissioning requirements (and submit a decommissioning plan to the board); (3) the supplier has entered into—or will enter into—a joint transmission development agreement with the supplier owning transmission facilities to which the wind generation facility will interconnect; and (4) the supplier has consulted with the Game and Parks Commission to identify measures to avoid and mitigate possible effects the facility could have on endangered species.¹⁰⁸ If the notice complies with these requirements, the Power Review Board must “issue a written acknowledgment that the privately developed renewable energy generation facility is exempt from the requirements of sections 70-1012 to 70-1014.01.”¹⁰⁹ The law also ensures that property used for such facilities will not be acquired by another electric supplier through eminent domain.¹¹⁰

These provisions of the bill took effect in July 2016, and while the amount of installed wind capacity in Nebraska has increased, the long-term effect of the “deregulation” remains to be seen.¹¹¹ Nebraskans are optimistic that the change will help “place Nebraska developers on a level-playing field with developers in other states” and that the change “will result in substantial economic development and property tax benefits within the state.”¹¹² Nebraska is therefore moving towards an approach like that in Texas. However, its approach also addresses some concerns regarding Texas’s lax regulation, like the lack of consideration of impacts on wildlife when making siting determinations.¹¹³

While this “deregulation” will likely encourage wind development in the state, Nebraska could do more to ensure that private wind energy development is not subject to burdensome regulations.¹¹⁴ One such change could be to specify a statewide decommissioning requirement rather than requiring the private electric supplier to comply with

107 Legis. B. 824, 104th Leg., 2nd Sess. (Neb. 2016); *see also* NEB. REV. STAT. §§ 70-1012 to -1014.01 (2017) (setting forth requirements for the construction of electric generation facilities and transmission lines).

108 *See* Legis. B. 824.

109 *Id.*

110 *Id.*

111 David C. Levy & Garner R. Girthoffer, *Landmark Legislation Deregulates Development of Private Renewable Energy Facilities*, BAIRD HOLM: DIRT ALERT (Apr. 21, 2016), <http://bairdholm.com/publications/entry/landmark-legislation-deregulates-development-of-private-renewable-energy-facilities.html>; *see* AM. WIND ENERGY ASS’N, NEBRASKA WIND ENERGY 1 (2016), <http://awea.files.cms-plus.com/FileDownloads/pdfs/Nebraska.pdf> (recognizing Nebraska as “the 18th state to join the ‘Gigawatt Club’” upon reaching 1,328 MW of installed wind capacity).

112 Levy & Girthoffer, *supra* note 111.

113 *See supra* text accompanying note 108.

114 Although Texas does not require wind developers to consider the impacts of wind turbine installation on wildlife, Nebraska has taken the more palatable approach—evidenced by criticisms of Texas’s lack of requirements regarding wildlife and windfarms—of at least ensuring that wind developers consider wildlife that will be affected. *See* Legis. B. 824; NEB.

requirements set by local governmental agencies. This would address a developer's potential concern regarding compliance with the requirements of multiple counties across which its wind farm might extend. However, based on some of the opposition against LB 824, it may be difficult for Nebraska to further reduce or eliminate regulations on private development of wind energy in the state.¹¹⁵

3. NEBRASKA IMPLEMENTING A CREZ PROCESS

Moreover, Nebraska should undertake a CREZ-like process, either with neighboring states or as a purely intrastate project. Most of Nebraska is covered by the Southwest Power Pool (SPP).¹¹⁶ While the SPP was involved in Texas's CREZ process because part of the Texas Panhandle is covered by the SPP,¹¹⁷ other states in the RTO—unlike states in MISO—have not engaged in a process resembling CREZ. Nebraska and other SPP states could use MISO's experience to identify renewable energy zones within the SPP. It is likely, however, that they would encounter many of the same challenges faced by MISO, such as the difficulty in coordinating the interests of various stakeholders across multiple states.

Yet Nebraska's current middle-of-the-pack status in terms of installed wind capacity suggests that Nebraska could benefit from a CREZ process of its own. This recommendation relates to the other possible changes Nebraska could make. The adoption of an RPS would give electric utilities in the state a renewable capacity target, and the decreased regulation will likely bring more wind developers into the state. As a result, a CREZ-like process would be beneficial in helping the state increase its wind energy capacity in an efficient manner. In fact, a CREZ-like process may even be *essential* for overcoming the "chicken and egg" problem—where developers are hesitant to build wind energy facilities because the existing transmission capacities are insufficient, but the state is unwilling to spend the money to increase the transmission capacity without assurance that there will be new renewable-energy facilities to connect to the grid—that has haunted states like Texas and Iowa.¹¹⁸

Because much of the CREZ process in Texas was spurred by the PUCT, Nebraska should designate an agency to take on similar responsibilities. As noted previously, the

REV. STAT. § 70-1014.02 (2017). However, there are other ways Nebraska could alter or eliminate regulations to facilitate wind energy development.

115 See Walton, *supra* note 54 (explaining how opponents of the bill "pointed to the possible economic risks of deregulation and quality-of-life issues for Nebraskans who live close to the wind turbines" and the possibility that "ratepayers may be asked to bear the cost of increased transmission needs"). However, some Nebraskans recognized that Nebraska was missing out on opportunities for wind energy development—and that states like Iowa have already taken advantage of such opportunities. *Id.*

116 See *About 60% of the U.S. Electric Power Supply Is Managed by RTOS*, U.S. ENERGY INFO. ADMIN.: TODAY IN ENERGY (Apr. 4, 2011), <https://www.eia.gov/todayinenergy/detail.cfm?id=790> (providing a map that shows which states and Canadian provinces are covered by which RTOs).

117 See generally SW. POWER POOL, SPP TRANSMISSION EXPANSION TO SUPPORT DEVELOPMENT OF TEXAS PANHANDLE COMPETITIVE RENEWABLE ENERGY ZONES (CREZs) (2006), <http://sppoasis.spp.org/documents/swpp/transmission/SPP%20CREZ%20Study%20FINAL%20122906.pdf> (describing SPP's CREZ studies).

118 See Diffen, *supra* note 16, at 49.

Nebraska Power Review Board is likely the most analogous agency to the PUCT and would therefore be the ideal choice. One of the Board's primary functions is "to approve . . . the construction or acquisition of transmission lines or related facilities carrying more than 700 volts,"¹¹⁹ which further suggests that the Board would be the best choice as the agency to identify and designate CREZs within Nebraska based on its experience with transmission in the state. Once this choice has been made, the task would fall on the state legislature to enact a bill like Texas's Senate Bill 20.¹²⁰

Texas's success with CREZ was due in part to the collaboration between the PUCT and ERCOT.¹²¹ This suggests that Nebraska may need to work with the SPP during the process. As a result, Nebraska could benefit from the SPP's previous experience of working through the CREZ process with Texas. Furthermore, the SPP has already recognized how the approach to transmission expansion differs between ERCOT and the SPP, including the recognition that Texas has the advantage of having essentially no FERC jurisdiction.¹²² The SPP's knowledge therefore could prove invaluable to Nebraska if the state were to undertake its own CREZ process.

Additionally, because much of the CREZ debate in Texas focused on where transmission lines would be sited,¹²³ and the authority to site transmission lines falls entirely to the states,¹²⁴ no federalism concern is presented with regard to Nebraska siting new transmission lines based on locations identified through an entirely *intrastate* CREZ process. As a result, Nebraska could avoid many of interstate concerns that arise when transmission lines cross state lines.

V. CONCLUSION

While Iowa has long been a leader in wind energy development, and Nebraska has recently started taking steps toward tapping its wind energy potential, these Midwestern states should emulate Texas strategies to increase their installed wind energy capacity. While many unique aspects of Texas suggest that the strategies may not be directly transferrable, the strategies can still be effective when altered for states wishing to learn from the Lone Star State.

Despite having to deal with additional problems due to the interstate nature of a CREZ-like process in the Midwest, Iowa should look to Texas's exploitation of competition within the wind industry to identify renewable energy zones for future transmission line development. By learning from Texas and from its own UMTDI experience, Iowa should be well-positioned to identify ways to increase transmission capacity and facilitate additional wind development in the state, as long as it can work with FERC and other states to reach an acceptable cost-allocation method.

119 *About the Board*, *supra* note 103.

120 *See supra* Part II.B.

121 *See* Diffen, *supra* note 16, at 71 (describing how ERCOT and the PUCT worked simultaneously in order to ensure that the transmission lines could be built as quickly as possible).

122 *Sw. POWER POOL*, *supra* note 117, at 14.

123 *See* Malewitz, *supra* note 90 (acknowledging the controversy surrounding some of the CREZ routes).

124 *Klass & Wilson*, *supra* note 67, at 1815.

While Iowa is already in good shape in terms of wind energy, Nebraska is lagging behind and therefore stands to benefit greatly from implementing multiple “Texas strategies.” Additionally, with the passage of LB 824 last year, Nebraska is in a great position to embrace such changes.¹²⁵ Consequently, Nebraska should adopt an RPS with incremental targets to monitor progress and should continue to reduce the regulatory burdens imposed on wind developers to further attract them to the state. Nebraska should also consider a CREZ-like process to increase transmission capacity throughout the state.

Deep in the heart of the Texas, wind energy developers, utilities, and legislators have worked together to harness the state’s wind energy potential. Iowa and Nebraska, as well as other states in the Midwest and the rest of the country, should take notice.

Lisa Garrett is a 2017 graduate of The University of Texas School of Law, where she served as an Articles and Notes Editor of the TEXAS ENVIRONMENTAL LAW JOURNAL. Lisa is a native Iowan and obtained a B.S. in mechanical engineering from Iowa State University before moving to Texas for law school. She would like to thank Professor Rod Wetsel for providing guidance and sharing his enthusiasm for wind law; her family for all their support; and the staff members of the TEXAS ENVIRONMENTAL LAW JOURNAL for their hard work in getting this note publication-ready.

125 See *supra* Part IV.B.2.

RESOURCES FOR RELOCATION: IN SEARCH OF A COHERENT FEDERAL POLICY ON RESETTLING CLIMATE- VULNERABLE COMMUNITIES

BY ELI KEENE

I.	Introduction	119
II.	Introducing Community Relocation	121
	A. Community Relocation	122
	B. Legal and Financial Obstacles to Community Relocation.....	125
	C. Alternative Policies	127
III.	The Missing Question: An Institutional Rationale for Relocation.....	129
IV.	The Possible Rationales for Prioritizing Communities for Relocation.....	134
	A. Federal Indian Law	134
	B. U.S. Constitution and Statutory Mandates	136
	C. International Law	138
	D. Environmental Justice and Climate Justice	141
	E. Direct Moral Culpability	142
	F. Values-Based Cultural Considerations	145
V.	Following Guideposts to a Coherent Policy on Relocation	146
	A. The General Need to Move Away from Ad Hoc Funding.....	147
	B. The Centrality of American Indian and Alaska Native Communities .	148
	C. A Single, Centralized Relocation Fund	150
VI.	Conclusion	151

I. INTRODUCTION

In 2016, the Isle de Jean Charles Band of Biloxi-Chitimacha-Choctaw Indians made national headlines in which its members were declared the United States' first "climate refugees."¹ The media reaction was spurred by an announcement that the Isle de Jean Charles community would receive large-scale federal assistance to wholesale relocate

1 Coral Davenport & Campbell Robertson, *Resettling the First American 'Climate Refugees'*, N.Y. TIMES (May 3, 2016), <https://www.nytimes.com/2016/05/03/us/resettling-the-first-american-climate-refugees.html>; Carolyn Van Houten, *The First Official Climate Refugees in the U.S. Race Against Time*, NAT'L GEOGRAPHIC (May 25, 2015), <http://news.nationalgeographic.com/2016/05/160525-isle-de-jean-charles-louisiana-sinking-climate-change-refugees/>; Madison Margolin, *First US Climate Refugees Get \$48 Million to Move*, CHRISTIAN SCI. MONITOR (May 3, 2016), <http://www.csmonitor.com/Environment/2016/0503/First-US-climate-refugees-get-48-million-to-move/>.

away from its eroding island.² The state of Louisiana designated \$48 million to the resettlement project, about half of a \$92 million block grant the state received from the U.S. Department of Housing and Urban Development (HUD) as part of HUD's National Disaster Resilience Competition.³ The Isle de Jean Charles project was proposed not only as an individual adaptation measure, but also as a means to develop a model for "resettling coastal communities while maintaining their cultural integrity."⁴

With global sea levels projected to rise by one to over eight feet by 2100,⁵ such a model for relocating vulnerable communities is undoubtedly necessary. But what does it mean to maintain the "cultural integrity" of a "coastal community"? The coastlines of the United States are culturally and economically diverse areas. Coastal floodplains boast large populations of both the country's wealthiest and poorest residents.⁶ Any relocation model that is developed will have to account for that economic, cultural, and demographic diversity, primarily by deciding to whom the model will apply.

With the country's first major climate change-related relocation project coming to almost \$50 million in initial costs and some proposed relocations estimated to cost up to \$1 million per resident, it is clear that even under a climate-conscious administration, the United States will have neither the resources nor the political will to relocate every threatened coastal community to higher ground.⁷ Indeed, it goes without saying that taxpayer dollars should not support the wholesale relocation of affluent neighborhoods of non-primary homes. But there are many U.S. communities that could, or already do, desire relocation assistance, which pose harder questions. Should Alaska Native communities, who have been the American face of climate change for over a decade, receive priority? Where does a non-federally-recognized tribe, such as Isle de Jean Charles, fit in? Should Gullah communities of historically-rooted Creole populations living interspersed with affluent beachfront towns in the Sea Islands off the East Coast qualify for the same assistance if they request it? And should we be considering the many small, culturally unique fishing and crabbing communities on the Chesapeake Bay? Understanding the

2 Press Release, La. Hous. Corp., Louisiana Receives \$92 Million from U.S. Dept. of Housing and Urban Development for Coastal Communities, Disaster Resilience (Jan. 26, 2016), <http://www.lhc.la.gov/index.cfm/newsroom/detail/46>.

3 *Id.*

4 LA. DISASTER RECOVERY UNIT, DIV. OF ADMIN., RESETTLEMENT AS A RESILIENCE STRATEGY AND THE CASE OF ISLE DE JEAN CHARLES 12 (2015).

5 In January 2017, NOAA revised its "extreme" upper-bound sea level rise projections to an updated projection of 2.5 meters (8.2 feet) of rise by 2100, reflecting recent publications on the effects of the Antarctic ice sheet on global sea levels. See NAT'L OCEANIC & ATMOSPHERIC ADMIN., NOS CO-OPS 083, TECHNICAL REPORT: GLOBAL AND REGIONAL SEA LEVEL RISE SCENARIOS FOR THE UNITED STATES vi (2017); see also Robert M. DeConto & David Pollard, *Contribution of Antarctica to Past and Future Sea-Level Rise*, 531 NATURE 591 (Mar. 31, 2016).

6 Camilo Sarmiento & Ted E. Miller, *Inequities in Flood Management Protection Outcomes* (May 2006) (unpublished Selected Paper, American Agricultural Economic Association Meetings), <http://ageconsearch.umn.edu/bitstream/21042/1/sp06sa08.pdf>.

7 Estimates for relocating Kivalina, an Alaska Native village of 400 residents, range from \$100 to \$400 million. MICHAEL BRUBAKER ET AL., ALASKA NATIVE TRIBAL HEALTH CONSORTIUM, CLIMATE CHANGE IN KIVALINA, ALASKA: STRATEGIES FOR COMMUNITY HEALTH 14 (2011).

role of relocation in U.S. climate change adaptation means understanding what roles, if any, culture, poverty, history, race, human rights, and environmental vulnerability play in the decision to fund wholesale community resettlements.

Literature on climate-related community relocation to date has correctly identified several administrative and financial obstacles to supporting relocation as an adaptation measure.⁸ But the question of what role relocation will play in the broader U.S. adaptation response to climate change has gone largely undiscussed. This Article aims to fill that gap by presenting the various potential rationales that could form the backbone of a federal policy on assisting relocating communities. In particular, the Article aims to shift discussion onto the neglected topic of how, in a world of limited resources, the federal government may properly allocate funds among multiple communities seeking to be relocated.

Section II of this Article introduces the concept of community relocation and includes a summary of scholarship regarding the potential benefits of community relocation as a response to the threat of environmental displacement. Section III discusses an important knowledge gap in formulating relocation policy—namely, the question of how public funds should be prioritized in assisting relocating communities. Section IV explores a range of legal and normative rationales for providing federal support for relocation. And Section V proposes basic guidelines for moving toward a coherent federal policy for allocating funds to communities seeking to be relocated.

II. INTRODUCING COMMUNITY RELOCATION

The effects of climate change are already threatening the habitability of communities across the world, including those in the United States. Sea level rise, combined with severe weather events, has increased flooding and inundation in the Pacific.⁹ These changes have contributed to a mass emigration from the island nation of Tuvalu, where fifteen percent of the population emigrated between 2005 and 2015.¹⁰ From 2006 to 2010, Annapolis, Maryland, observed an average of 34.4 days of nuisance flooding a year, up from 2.8 in the late 1950s.¹¹ And in Alaska, coastal erosion rates are rapidly acceler-

8 See, e.g., Robin Bronen, *Climate-Induced Community Relocations: Creating an Adaptive Governance Framework Based in Human Rights Doctrine*, 35 N.Y.U. REV. L. & SOC. CHANGE 357, 361 (2011). This literature, which often focuses on Alaska Native communities, frequently refers to “climate-induced” community relocation. See, e.g., *id.* at 372. This Article employs the term “climate-related” relocation, in recognition that many American communities, particularly those outside of Alaska, face erosion issues that are caused only partly by global temperature increase, sea level rise, and other effects associated with an increased atmospheric concentration of greenhouse gases.

9 Leonard A. Nurse et al., *Small Islands*, in CLIMATE CHANGE 2014: IMPACTS, ADAPTATION, AND VULNERABILITY 1613, 1616 (Vicente R Barros & Kazuya Yashura eds, 2014).

10 Samisoni Pareti, *More Pacific People Opt to Migrate Due to Climate Change*, SECRETARIAT PAC. REGIONAL ENV'T'L. PROGRAMME (Dec. 3, 2015), <https://www.sprep.org/climate-change/more-pacific-people-opt-to-migrate-due-to-climate-change/>.

11 William V. Sweet & Joseph Park, *From the Extreme to the Mean: Acceleration and Tipping Points of Coastal Inundation from Sea Level Rise*, 2 EARTH'S FUTURE 579, 584 tbl.1 (2014).

ating to the point where the U.S. government describes at least 31 Alaskan villages as “imminently threatened.”¹² In all, if sea levels rise by 1.8 meters by 2100, 13.1 million Americans could be displaced from their homes.¹³

Community relocation is one tool in a toolbox of policies for assisting the many Americans who are facing or will face an imminent threat of displacement. This section examines what community relocation is and how its advantages and disadvantages have been considered by scholars and environmentally-threatened communities. In addition to examining relocation, this section provides a brief overview of alternative policies that have been pursued to assist populations facing displacement in the United States.

A. COMMUNITY RELOCATION

Community relocation can be defined as the “process whereby a community’s housing, assets, and public infrastructure are rebuilt in another location.”¹⁴ While the term “relocation” has been used in different ways by different researchers,¹⁵ for the purpose of this Article, the term encompasses not only the moving of people away from a vulnerable site but also their resettlement as an intact community at a new site. Successful relocation and resettlement generally involve significant participation of the community and are therefore viewed as, and designed to be, “voluntary.”¹⁶ In the United States, a number of communities have initiated the planning process for relocation only after conducting a community-wide referendum, while others have left the decision to local leadership.¹⁷

12 B.M. Jones et al., *Increase in the Rate and Uniformity of Coastline Erosion in Arctic Alaska*, GEOPHYSICAL RES. LETTERS, Feb. 2009, at 1, 2–4; U.S. GOV’T ACCOUNTABILITY OFF., ALASKAN NATIVE VILLAGES: LIMITED PROGRESS HAS BEEN MADE ON RELOCATING VILLAGES THREATENED BY FLOODING AND EROSION 12 (2009) [hereinafter GAO 2009].

13 See Mathew E. Hauer et al., *Millions Projected to Be at Risk from Sea-Level Rise in the Continental United States*, 6 NATURE CLIMATE CHANGE 691 (2016).

14 ABHAS K. JHA ET AL., WORLD BANK, SAFER HOMES, STRONGER COMMUNITIES: A HANDBOOK FOR RECONSTRUCTING AFTER NATURAL DISASTERS 77 (2010).

15 See Elizabeth Ferris, *Climate-Induced Resettlement: Environmental Change and the Planned Relocation of Communities*, SAIS REV. INT’L AFF., Winter–Spring 2015, at 109, 111–13.

16 JHA ET AL., *supra* note 14, at 82, 184.

17 In Alaska, several communities have voted on whether to relocate. The Native Village of Shishmaref voted to move in August 2016. Lisa Demer, *Shishmaref Votes to Relocate from Eroding Barrier Island to Mainland*, ALASKA DISPATCH NEWS (Aug. 19, 2016), <https://www.adn.com/alaska-news/2016/08/18/eroding-village-of-shishmaref-votes-in-favor-of-relocating-to-mainland-a-key-step/>. The Native Villages of Newtok and Kivalina have also held votes on relocating. Robin Bronen & F. Stuart Chapin III, *Adaptive Governance and Institutional Strategies for Climate-Induced Community Relocations in Alaska*, 110 PROC. NAT’L ACAD. SCI. 9320, 9320 (2013) (describing the voting process that Alaskan communities put into practice when deciding to move from their current site to a new site). Other decisions to relocate have been made by tribal governments without a full community vote. See U.S. Climate Resilience Toolkit, *Quinault Indian Nation Plans for Village Relocation*, NAT’L OCEANIC & ATMOSPHERIC ADMIN. (Mar. 1, 2016), <https://www.climate.gov/news-features/climate-case-studies/quinault-indian-nation-plans-village-relocation> (describing the decision to relocate Taholah village on the Quinault Indian Reservation in Washington).

But what benefits does community relocation provide over simply providing financial assistance for individuals to move themselves? Answering this question requires first looking at the risks involved in displacement. This topic has been studied in depth in the context of existing major causes of displacement, namely displacement induced by development projects, urban renewal, and various other socio-economic factors.¹⁸

Evidence from the study of development-induced displacement and resettlement (DIDR) has demonstrated that the overwhelming majority of communities displaced by development projects face worse social and economic conditions following resettlement.¹⁹ In the context of development projects, resettlement is seen as a measure of last resort. DIDR studies show that uprooting communities exposes affected residents to serious risks including, *inter alia*, risks of joblessness, increased morbidity and mortality, and marginalization.²⁰

More recent qualitative studies of populations displaced by urban redevelopment and gentrification have confirmed that displaced persons suffer not only from the physical stresses of displacement, but also from loss of community itself. Residents relocated from public housing as part of the U.S. Department of Housing and Urban Development's HOPE VI revitalization program, for example, demonstrated a precipitous drop in social connections after relocation.²¹ This destruction of social networks is particularly problematic for low-income communities, where pooled social resources play an important role in supporting vulnerable residents.²² For example, communities may develop informal networks of checking on elderly neighbors or sharing rides to doctors' appointments. These networks can be disrupted if the community is forced to disperse.²³ Further, once community members are displaced, they are unlikely to establish the same networks within their new location.²⁴ Thus, in one study of former Chicago public housing residents who had moved to eastern Iowa in pursuit of affordable housing, relocatees were stigmatized as "outsiders" and reported feeling as though they were living in "someone else's city."²⁵

18 Michael M. Cernea, *Understanding and Preventing Impoverishment from Displacement: Reflections on the State of Knowledge*, 8 J. REFUGEE STUD. 245, 247–48 (1995).

19 Elizabeth Ferris, *Planned Relocation and Climate Change*, in CHANGING CLIMATE, MOVING PEOPLE: FRAMING MIGRATION, DISPLACEMENT AND PLANNED RELOCATION 31, 33 (2013).

20 Michael Cernea introduced the Impoverishment Risks and Reconstruction model in examining development-displaced communities and postulated that affected communities shared eight common risk factors: landlessness, joblessness, homelessness, marginalization, food insecurity, increased morbidity, loss of access to common property and services, and social disarticulation. Cernea, *supra* note 18, at 245.

21 Susan Greenbaum et al., *Deconcentration and Social Capital: Contradictions of a Poverty Alleviation Policy*, 12 J. POVERTY 201, 212 (2008).

22 Danya E. Keene & Arline T. Geronimus, "Weathering" HOPE VI: *The Importance of Evaluating the Population Health Impact of Public Housing Demolition and Displacement*, 88 J. URB. HEALTH 417, 423 (2011).

23 *See id.* at 424.

24 Danya E. Keene et al., *Leaving Chicago for Iowa's "Fields of Opportunity": Community Dispossession, Rootlessness, and the Quest for Somewhere to "Be OK"*, 69 HUM. ORG. 277, 279 (2010).

25 *Id.* at 276.

Finally, case studies of American Indian and, in particular, Alaska Native communities suggest that displacement has the potential to destroy culture and identity. As the U.S. Army Corps of Engineers (Corps) considered variants for addressing the severe erosion problem in the Native Village of Shishmaref, Alaska, a cultural impact study identified potential risks to the community's cultural identity, including loss of traditional carving practices and its local dialect of Inupiaq.²⁶ Additionally, Alaska Native communities have long practiced subsistence hunting, which is both a cultural practice and a major contributor to local economies and food security.²⁷ Residents in the Shishmaref study expressed repeated concern that if the community were to move to existing population centers such as Nome (some 125 miles away), the move would impair their "subsistence way of life."²⁸ These conclusions demonstrate the complex interactions between community identity and physical spaces. In Shishmaref, residents perceived multiple risks to their identity, emanating both from decreased access to other members of their community *and* decreased access to physical places and the resources they provide.²⁹

These studies underline that displaced populations face a multitude of simultaneous stressors. DIDR studies suggest that resettled populations face worse economic and health outcomes due, in large part, to changes in physical circumstances.³⁰ Studies of urban revitalization show that, when communities disperse, displaced community members suffer from severed social ties and a feeling of placelessness.³¹ And studies of Alaska Native communities demonstrate that communities fear that moving into existing cities or villages could threaten their identity and culture.³² No matter what the context of displacement, displaced populations experience distinct challenges related to the loss of community ties and inaccessibility of their formerly occupied land.

Community relocation has received attention in the context of climate change as a means to decrease the impact of some of these losses. By relocating together, communities can help preserve many of the social ties and informal support networks that they have developed over the years.³³ And if communities move to new sites on safer, but similarly-situated land (to the extent such land may be obtained), they may be able to

26 PETER SCHWEITZER & ELIZABETH MARINO, U.S. ARMY CORPS OF ENG'RS, COASTAL EROSION PROTECTION AND COMMUNITY RELOCATION, SHISHMAREF, ALASKA: COLLOCATION CULTURAL IMPACT ASSESSMENT 141-43 (2005) [hereinafter COLLOCATION CULTURAL IMPACT ASSESSMENT].

27 *See id.* at 142.

28 *Id.* at 81.

29 *See id.* at 143-44.

30 *See* Cernea, *supra* note 18, at 252.

31 *Id.* at 251. *See generally* W. Courtland Robinson, Brookings-SAIS Project on Internal Displacement, Risks and Rights: The Causes, Consequences, and Challenges of Development-Induced Displacement (2003), <https://www.brookings.edu/wp-content/uploads/2016/06/didreport.pdf>.

32 *See generally* COLLOCATION CULTURAL IMPACT ASSESSMENT, *supra* note 26.

33 Maria Nelson & Renia Ehrenfeucht, *Moving to Safety? Opportunities to Reduce Vulnerability Through Relocation and Resettlement Policy*, in *HOW CITIES WILL SAVE THE WORLD: URBAN INNOVATION IN THE FACE OF POPULATION FLOWS, CLIMATE CHANGE AND ECONOMIC INEQUALITY* 114-15 (Ray Brescia & John Travis Marshall eds., 2016).

preserve more aspects of traditional culture and practices.³⁴ This is particularly true in Alaska, where cultural practices like subsistence hunting are closely tied to land, and establishing a new site can prevent the need to move residents to the nearest existing settlement, which may be hundreds of miles away.³⁵ Thus, while studies of displacement suggest relocating populations should be considered an option of last resort, communities facing climate-related risks have often viewed being displaced as a community, rather than as individuals, as the lesser of two evils.

B. LEGAL AND FINANCIAL OBSTACLES TO COMMUNITY RELOCATION

While relocating communities together may prove to be a beneficial approach to managing displacement, there are a number of obstacles to implementing community relocation plans. First and foremost is the cost. Relocating communities to a new site is expensive in part because it means constructing all communal infrastructure—including electricity and sewer systems—afew. These high costs are reflected in current relocation efforts. For example, for Isle de Jean Charles, the initial outlay of \$48 million in HUD funding is less than half the expected \$100 million cost of the total project.³⁶ In Alaska, where isolation and difficult weather conditions greatly increase the cost of building, the cost problem is even more severe. The estimated costs of relocating the Native Village of Kivalina reach \$400 million, or about \$1 million per resident.³⁷

Congress has passed a number of laws guiding how displaced Americans are to be relocated and how relocation should be funded. These laws, however, target assistance to individuals, not communities.³⁸ In the case of fast-onset natural disasters, for example, the Stafford Act provides for temporary federal housing assistance to individuals for up to 18 months after a disaster declaration.³⁹ Data from the aftermath of Hurricane Katrina, however, suggests that individuals requesting this assistance had already dispersed across the country by the time requests were made.⁴⁰ The Stafford Act thus provides relief to individuals affected by disasters, but does not target that relief at communities, which are likely to disperse in the aftermath of a severe natural disaster.

34 See John Campbell, *Climate Induced Community Relocation in the Pacific: The Meaning and Importance of Land*, in CLIMATE CHANGE AND DISPLACEMENT: MULTIDISCIPLINARY PERSPECTIVES 57, 59 (Jane McAdam ed., 2010).

35 See COLLOCATION CULTURAL IMPACT ASSESSMENT, *supra* note 26, at 86.

36 See *About the Project*, ISLE DE JEAN CHARLES: RESETTLEMENT & SURVIVAL, <http://www.coastalresettlement.org/about-the-project.html> (last visited Feb. 17, 2017); Jacob Batte, *Questions Linger Over Cost of Moving Island Residents*, HOUMA TODAY (Mar. 26, 2016), <http://www.houmatoday.com/news/20160326/questions-linger-over-cost-of-moving-island-residents/>.

37 BRUBAKER ET AL., *supra* note 7, at 14.

38 See, e.g., discussion *infra* Section V.B (the case of Allenville, Arizona).

39 See 42 U.S.C. §§ 5170(b), 5174(c) (2012). The term “fast-onset natural disaster” includes events such as hurricanes and tsunamis and contrasts with slow-onset disasters such as erosion, drought, or the cumulative impact of sea level rise and intensified storms. See DEP’T FOR INT’L DEV., ADAPTATION TO CLIMATE CHANGE: MAKING DEVELOPMENT DISASTER-PROOF 1 (2004).

40 See *From the Graphics Archive: Mapping Katrina and its Aftermath*, N.Y. TIMES (Aug. 25, 2015), <http://www.nytimes.com/interactive/2015/08/25/us/mapping-katrina-and-aftermath.html>.

Other sources of federal assistance have proven more likely to be used in relocating communities, even while their assistance provisions remain targeted at individual households. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) includes permanent relocation of persons residing in declared Superfund sites as a possible remedial action.⁴¹ CERCLA has been used to relocate entire neighborhoods away from environmental contamination (with mixed results)⁴² and funds such actions through the Superfund trust⁴³ and a complex system of polluter liability.⁴⁴ Likewise, the Uniform Relocation Assistance Act provides uniform standards for assisting households displaced as a direct result of the federal government's use of eminent domain or other displacing activity undertaken by a federal agency or using federal funds.⁴⁵ While the Uniform Relocation Assistance Act is also targeted at individual households, it has been used to support the relocation of entire communities, such as in the 1986 relocation of the Crest Street community in Durham, North Carolina.⁴⁶

None of these statutorily-created funds or processes are available to communities displaced by the gradual effects of climate change. Climate change and erosion-threatened communities that are currently seeking funding assistance for relocation must do so through block grants, as in the case of Isle de Jean Charles, or by cobbling together grants from multiple government agencies or programs.⁴⁷ To further complicate this process, no federal or state agency has authority to implement the relocation of a community.⁴⁸ This has not only made accessing funding more difficult for these communities, but has also led to difficulty in coordinating the diverse set of priorities necessary to plan and implement a community relocation.⁴⁹

Thus, while some communities have turned to community relocation as a promising approach to reduce some of the burdens of displacement, relocation is an approach that

41 42 U.S.C. § 9601(24) (2012). CERCLA also allows specifically the relocation of Indian tribes, as a community. *Id.* at § 9626(b).

42 See generally U.S. ENVTL. PROT. AGENCY, ESCAMBIA WOOD TREATING COMPANY (ETC) SUPERFUND SITE PERMANENT RELOCATION (2002). A 2002 EPA assessment of several neighborhoods relocated from the Escambia Wood Treating Company Superfund site in Pensacola, Florida, found that relocated residents did not feel they had received the support they needed in relocating. In particular, focus group members complained that EPA and U.S. Army Corps of Engineers (Corps) officials directed them to inferior quality homes and were unresponsive to individual needs. Many affected residents in Pensacola turned down government relocation services and many more were unaware that certain relocation-related expenses should have been reimbursed. See *id.*

43 The Trust Fund was, itself, initially financed through taxes on various pollution-linked industries. However, this tax expired in 1995 and has not since been reauthorized. Currently the Trust is largely financed by general appropriations. See U.S. GOV'T ACCOUNTABILITY OFF., SUPERFUND: TRENDS IN FEDERAL FUNDING AND CLEANUP OF EPA'S NONFEDERAL NATIONAL PRIORITIES LIST SITES 7 (2015).

44 See 42 U.S.C. § 9607; see also *id.* § 9611(j).

45 See *id.* § 4601(6).

46 See William M. Rohe & Scott Mouw, *The Politics of Relocation: The Moving of the Crest Street Community*, 57 J. AM. PLAN. ASS'N 57, 64–66 (1991).

47 See, e.g., Davenport & Robertson, *supra* note 1.

48 Bronen, *supra* note 8, at 361.

49 See, e.g., *id.* at 380–81.

will inevitably remain out of reach for many of the communities that need it most. This is already evident today. The Native Village of Shishmaref has held two votes opting to relocate—most recently in 2016.⁵⁰ Yet it has still not been able to obtain funding for the move.⁵¹ A 2009 U.S. government report found that 12 of the 31 imminently threatened villages in Alaska had already voted to relocate.⁵² This is in addition to communities on the Gulf Coast and in the Pacific Northwest that have also expressed their desire to relocate away from rising seas. To the extent that relocation is made available to even more coastal communities in the future, it is important to recognize the political impossibility of mobilizing the massive quantity of resources that would be needed to relocate every U.S. community that requests relocation assistance. Many, perhaps even the majority of climate-threatened communities, will need to find other solutions.

C. ALTERNATIVE POLICIES

The United States has not generally dealt with environmental disasters by moving people away from vulnerable areas. Indeed, the structure of the Stafford Act promotes the long-term goal of rebuilding communities in place after a disaster.⁵³ Today, a variety of federal funding opportunities exist under the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Assistance programs to help communities protect in place after a disaster by elevating homes, constructing sea walls, and even stabilizing soil at risk of erosion.⁵⁴ These protect-in-place policies have led communities like Dauphin Island, Alabama, a beachfront town of some 1,300 permanent residents, to receive over \$80 million in non-insurance, post-hurricane reconstruction funds since 1979.⁵⁵ Other communities have repeatedly constructed sea walls, only to find that the walls themselves had relatively short lifespans.⁵⁶ As climate change increases the environmental vulnerability of coastal communities, many of these policies have been roundly criticized.⁵⁷ Given the increasing likelihood that rebuilding in place will become either physically or economically infeasible, state and federal agencies have designed and implemented a range of alternatives for managing permanent displacement following disasters.

50 Demer, *supra* note 17.

51 *Update: Shishmaref Votes to Relocate Erosion-Plagued Village*, KTUU (Aug. 17, 2016, 3:48 PM), <http://www.ktuu.com/content/news/Shishmaref-to-vote-on-Tuesday-about-whether-to-relocate-erosion-plagued-village—389999922.html>.

52 GAO 2009, *supra* note 12, at 12.

53 Bronen, *supra* note 8, at 368.

54 FED. EMERGENCY MGMT. AGENCY, HAZARD MITIGATION ASSISTANCE GUIDANCE 36–37 (2015).

55 Justin Gillis & Felicity Barringer, *As Coasts Rebuild and U.S. Pays, Repeatedly, the Critics Ask Why*, N.Y. TIMES (Nov. 18, 2012), <http://www.nytimes.com/2012/11/19/science/earth/as-coasts-rebuild-and-us-pays-again-critics-stop-to-ask-why.html>.

56 See Victoria Herrmann & Eli Keene, *When The Seawall Breaks: Climate Change In Teller, Alaska*, NAT'L TRUST FOR HISTORIC PRES. (Mar. 20, 2017), <https://savingplaces.org/stories/when-the-seawall-breaks-climate-change-in-teller-alaska>.

57 See, e.g., *id.*; Klaus Jacob, *Opinion, Time for a Tough Question: Why Rebuild?*, WASH. POST (Sept. 6, 2005), <http://www.washingtonpost.com/wp-dyn/content/article/2005/09/05/AR2005090501034.html>; ANNE SIDERS, *MANAGED COASTAL RETREAT: A LEGAL HANDBOOK ON SHIFTING DEVELOPMENT AWAY FROM VULNERABLE AREAS* 77–78 (2013).

One of the most commonly-used tools for moving residents from areas that have become too vulnerable to protect is the buyout program.⁵⁸ Buyouts are typically funded by the federal government and implemented by state or local agencies.⁵⁹ The purpose of these programs is to purchase most or all of the land in a vulnerable flood zone and convert the land to open space, allowing it to revert to its natural floodplain function.⁶⁰ The most successful programs have purchased real estate from homeowners at pre-disaster rates, often with an additional incentive to participate.⁶¹

Buyouts can effectively move populations out of functionally uninhabitable areas, but they also have their limitations. First, buyouts are not targeted at preserving community cohesion. While buyout programs often offer financial incentives for participants to relocate within the same general geographic area, these areas are often quite broad. For example, in New York State's buyout program following Superstorm Sandy, residents were provided a five percent relocation incentive if they resettled anywhere within New York City.⁶² But statistics on the program show significant community fracturing. In Oakwood Beach, Staten Island, for example, the state acquired 300 properties through the buyout program, and nearly 30% of participating homeowners did not claim the resettlement incentive.⁶³ Additional problems arise when applied to isolated communities facing significant environmental exposure, where property values are likely to be low. Though federally-funded buyout programs may offer additional relocation assistance of up to \$31,000 under the Uniform Relocation Act,⁶⁴ buyouts are nevertheless of little value in communities where housing outside the flood zone would grossly exceed buyout proceeds.

Another option that has been considered, particularly in Alaska, is "collocating" displaced communities to existing cities or other nearby villages. Collocation would allow a community to move together, but would place that population within the physical space of an already existing community. The hard infrastructure costs of collocation have been estimated to be significantly less than community relocation to a new site.⁶⁵ While collocation would help preserve community bonds, the few studies that have been

58 See, e.g., ROBERT FREUDENBERG ET AL., LINCOLN INST. OF LAND POLICY, BUY-IN FOR BUYOUTS: THE CASE FOR MANAGED RETREAT FROM FLOOD ZONES 23 (2016).

59 *Id.*

60 *Id.* at 8.

61 *Id.* at 31.

62 N.Y. GOVERNOR'S OFF. OF STORM RECOVERY, COMMUNITY DEVELOPMENT BLOCK GRANT DISASTER RECOVERY (CDBG-DR) PROGRAM SUBSTANTIAL AMENDMENT NO. 10, at 4 (2010), https://stormrecovery.ny.gov/sites/default/files/crp/community/documents/20161025_APA_10_web.pdf.

63 According to the N.Y. Governor's Office of Storm Recovery, these property owners likely either moved into rentals, moved in with relatives, or resettled outside of the region. E-mail from Rachel Wieder, Dir., Buyout & Acquisition Programs, N.Y. Governor's Off. of Storm Recovery, to Eli Keene (Nov. 16, 2016, 12:12 PM EST) (on file with author).

64 FREUDENBERG ET AL., *supra* note 58, at 24.

65 For example, a 2004 Corps Study found that the cost of collocating the Native Village of Shishmaref with Nome, AK would cost about \$93 million, compared to a projected \$179 million to relocate Shishmaref to a new site. TETRA TECH, U.S. ARMY CORPS OF ENG'RS, SHISHMAREF PARTNERSHIP: SHISHMAREF RELOCATION AND COLLOCATION STUDY app.1 at 7, 10 (2004).

conducted on the process have suggested that a great deal of community identity would be lost in the process.⁶⁶ This loss of identity has been suggested to have a number of roots, including, *inter alia*, the distance between the new community and traditional lands,⁶⁷ loss of location-dependent traditional knowledge,⁶⁸ destruction of local language,⁶⁹ and the ultimate failure of collocation to keep community members in the same place.⁷⁰

Finally, it is worth questioning the role government agencies and funding should play in moving people in general. As discussed above, the Stafford Act provides temporary housing aid for individuals displaced by disaster. Some, though not all, coastal residents maintain flood insurance through the National Flood Insurance Program.⁷¹ Given these general safeguards, the federal government could adopt a policy of not funding any form of group relocation in reaction to environmental threats, instead leaving the decisions to individuals. In a narrow sense, this would be the path of least resistance, given that it relies exclusively on existing laws and policies. However, this ultimately means ignoring the insistence of many communities that the government's failure to help realize wholesale community relocation will result in cultural destruction, increased socioeconomic vulnerability for individuals, and possibly even a rise in mortality.

Thus, for communities that can no longer adapt in place, the options are limited. Of the options for retreating from climate-vulnerable areas, only community relocation is structured to account for the effects of displacement on community cohesion. But given the slow progress and tremendous expense associated with moving communities together, this is likely to be a limited option, particularly as the country begins to confront more severe sea level rise, thus threatening more developed and larger communities in coming years. Indeed, the longer a vulnerable community waits to relocate, the more likely it is that it will be displaced by a natural disaster, triggering the individual-focused responses provided for under the Stafford Act.

III. THE MISSING QUESTION: AN INSTITUTIONAL RATIONALE FOR RELOCATION

If community relocation is to be a limited resource, the next logical question is, "When should it be funded?" This is, in essence, a specific application of V.O. Key's basic budgeting problem: "On what basis shall it be decided to allocate x dollars to activity A instead of activity B?"⁷² In the case of community relocation, there are two differ-

66 See, e.g., U.S. ARMY CORPS OF ENG'RS, SECTION 117 PROJECT FACT SHEET 16 (2008) [hereinafter USACE Newtok Factsheet].

67 COLLOCATION CULTURAL IMPACT ASSESSMENT, *supra* note 26, at 93.

68 *Id.*

69 *Id.*

70 *Id.*

71 As of 2012, for example, only 37 out of 566 federally-recognized Indian tribes participated in the National Flood Insurance Program. U.S. GOV'T. ACCOUNTABILITY OFF., FLOOD INSURANCE, PARTICIPATION OF INDIAN TRIBES IN FEDERAL AND PRIVATE PROGRAMS 13 (2013).

72 V.O. Key, *The Lack of a Budgetary Theory*, 34 AM. POL. SCI. R. 1137, 1138 (1940).

ent ways this question can be framed. Primarily, the question may be framed as, “On what basis shall it be decided to allocate x dollars to *relocation* instead of collocation, buyouts, or any other disaster avoiding or mitigating activity?” That is, why should relocation be considered as a desirable solution, for certain communities? Secondly, the question could be framed as, “On what basis shall it be decided to allocate x dollars to relocating Community A instead of Community B?” In other words, which communities should be prioritized for relocation assistance and which communities should invest their resources elsewhere?

Institutionalizing community relocation as a tool for climate change adaptation requires an answer to both of these questions. Without answering the primary level inquiry, there is no justification for spending public funds on the generally more costly alternative of relocating a community. Without answering the secondary level inquiry, there can be no coherent policy that conveys to communities when they might reasonably consider relocation as an adaptation measure.

While answering both of these questions is essential to formulating a coherent policy on relocation support, the U.S. federal government’s efforts on relocation have skipped from answering the primary inquiry to focusing on the ad hoc funding of community relocation projects. As detailed in the Introduction to this Article, the primary inquiry into community relocation has received attention from federal agencies,⁷³ lawmakers,⁷⁴ and legal scholars.⁷⁵ These community relocation analyses have typically assumed community relocation would apply to one specific type of community—most prominently, Alaska Native Villages. But this assumption does not do justice to reality. It answers neither the question of how other communities of federally-recognized tribes that are currently seeking public assistance for relocation should be measured against these villages, nor the question of how to prioritize funding among the 12 Alaska Native Villages that are currently seeking relocation or the 31 “imminently threatened” villages that could seek it in the future.

This problem becomes immediately clear when formed as a small thought experiment. Suppose the president of the United States is swayed by the analysis on the importance of relocation summarized in Section II of this Article and submits a budget request to Congress including \$200 million to relocate threatened coastal communities. Suppose also that Congress includes this appropriation in its budget. Then, the three communities reflected in Table 1 below apply to the federal agency designated to award the block grant. To whom should the agency award the funding?

73 See generally USACE NEWTOK FACTSHEET, *supra* note 66; TETRA TECH, *supra* note 65.

74 See *Alaska Native Village Erosion: Special Hearings in Anchorage, Alaska, Before S. Comm. on Appropriations*, 108th Cong. (2004).

75 See Bronen & Chapin III, *supra* note 17 (identifying the need for a governance structure to implement community relocations).

TABLE 1

	A	B	C
Population	200	300	300
Cost	\$200 million	\$200 million	\$200 million
Timeline	10 years	10 years	10 years
Race/Ethnicity	American Indian	African American	Caucasian
Economy	Subsistence hunting and fishing	Subsistence fishing and local factory production	Commercial fishing
History	Settled on site after placement of Bureau of Indian Affairs school, 100 years ago	Continually occupied site since emancipation	Settled on site in the colonial era
Cultural Background	Federally-recognized tribe. Religious sites and cemeteries are close by to settlement	Last remaining historic black community in the region. Local oral history traditions date back to the founding of the community	Historically insular community with unique dialect and fishing businesses passed down generationally

The federal agency cannot make this decision unless it knows which factors it is meant to be analyzing. Additionally, none of these communities can reasonably plan for their likelihood of success without knowing what factors the agency is weighing. Furthermore, it is possible that the agency could select factors that would make it more likely to fund the relocation of Communities D or E, neither of which applied because they did not view a federally-funded relocation as an option that would be open to them. Given the complexity of this decision-making process, it is puzzling that no government agency, policymaking body, or scholar has yet to define a clear rationale for when a community should be prioritized for relocation support.

Thus, public financial support for relocation has been offered up in arbitrary fashion. Isle de Jean Charles, described in the introduction to this Article, won its funding for relocation through a competitive HUD grant process, by an application made by the state of Louisiana.⁷⁶ Notably, Isle de Jean Charles was not the only community seeking relocation funding in that competition. At the same time, Alaska also applied for HUD funds to relocate Newtok, a Native Village recognized by the federal government as being imminently threatened since at least 2009.⁷⁷ HUD elected not to fund the Newtok

76 The HUD National Disaster Resilience Competition, which provided funds to the State of Louisiana to fund the Isle de Jean Charles relocation project was a \$1 billion block grant program partnering HUD with the Rockefeller Foundation. The focus of the program was not relocation, but assisting communities in “recover[ing] from prior disasters and improv[ing] their ability to withstand and recover more quickly from future disasters, hazards, and shocks.” U.S. DEP’T HOUS. & URB. DEV., NATIONAL DISASTER RESILIENCE COMPETITION: PHASE 2 FACT SHEET (2015), <https://portal.hud.gov/hudportal/documents/huddoc?id=NDRCFactSheetFINAL.pdf>.

77 See STATE OF ALASKA, CDBG-NDR PHASE 1 APPLICATION ex. D at 10 (2015), <https://www.ready.alaska.gov/Plans/Documents/Phase1/ExhibitDNeed.pdf>.

project.⁷⁸ Tellingly, Alaska's rejection appeared to have little to do with the substantive policies behind funding community relocation. A *Bloomberg* report suggests instead that Alaska failed to receive funding because it scored no points on HUD's evaluation metric judging whether federal funds could be used to "leverage" funds from the state.⁷⁹

Other efforts by the federal government have offered similarly limited insight into how relocation support could be prioritized. President Obama included in his FY2017 budget request a \$2 billion allocation for a 10-year Coastal Climate Resilience Program. \$400 million of that request was to be designated specifically to "cover the unique circumstances confronting vulnerable Alaskan communities, including relocation expenses for Alaska Native villages threatened by rising seas, coastal erosion, and storm surges."⁸⁰

But why specifically the focus on Alaska Native Villages when, by the time the budget request was made, their circumstances were by no means "unique"? In part, the president's decision was likely motivated by his 2016 visit to Alaska, which included a flyover of the erosion-threatened Native Village of Kivalina.⁸¹ But by early 2016, Kivalina was far from the only community facing the prospect of climate-related relocation.⁸² By that time, Isle de Jean Charles was already in the second phase of consideration in the HUD National Disaster Resilience Contest.⁸³ What's more, other communities from across the country's coastlines had also either requested or received funds for coastal retreat. These included a range of different communities, from the Quinault Indian Nation in Washington, whose representatives made direct appeals to Congress in 2015 for funds to relocate the village of Taholah,⁸⁴ to communities in the New York metropolitan area, who participated in federally-funded buyout programs after Hurricane Irene in 2011.⁸⁵

78 Christopher Flavelle, Opinion, *The Toughest Question in Climate Change: Who Gets Saved?*, BLOOMBERG (Aug. 29, 2016), <https://www.bloomberg.com/view/articles/2016-08-29/the-toughest-question-in-climate-change-who-gets-saved/>.

79 *Id.*

80 Press Release, Off. of the Press Sec'y, The White House, Fact Sheet: President Obama Proposes New Funding to Build Resilience of Alaska's Communities and Combat Climate Change (Feb. 9, 2016), <https://obamawhitehouse.archives.gov/the-press-office/2016/02/09/fact-sheet-president-obama-proposes-new-funding-build-resilience-alaskas/>.

81 Chris Mooney, *Behind Obama's \$400 million Budget Request to Relocate Entire Alaska Villages*, ALASKA DISPATCH NEWS, <https://www.adn.com/rural-alaska/article/behind-obamas-400-million-budget-request-relocate-entire-alaska-villages/2016/02/10/> (last updated May 31, 2016).

82 *Id.*

83 Press Release, Shantae Goodloe, U.S. Dep't Hous. & Urb. Dev., HUD Selects Finalists for National Disaster Resilience Competition (Jun. 22, 2015), <https://archives.hud.gov/news/2015/pr15-079.cfm>.

84 *Interior, Environment, and Related Agencies Appropriations for 2016: Public Witness Hearing for American Indian and Alaskan Native Public and Outside Witnesses Before the Subcomm. on Interior, Environment, and Related Agencies, H. Comm. on Appropriations, 114th Cong. 507-16 (2015)* (statement of Fawn Sharp, President of Quinault Indian Nation) [hereinafter Fawn Sharp Testimony].

85 N.Y. STATE HOMES & CMTY. RENEWAL, ACTION PLAN FOR COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM DISASTER RECOVERY (2012).

Scholars of climate migration, often working alongside activists from environmentally-threatened communities, have likewise made limited inroads on the question of how to prioritize relocation assistance. In considering community relocation, legal scholars and anthropologists have often arrived at the conclusion that climate-related relocation should be viewed through a human rights framework.⁸⁶ Given the lessons from the study of DIDR, it is undoubtedly true that human rights must be a central concern in governmental dealings with any community facing displacement. But concluding that communities displaced by climate change hold collective rights that cannot be violated obscures the reality and scale of the problem.⁸⁷ Barring radical changes in federal or state budgeting, some communities seeking relocation will ultimately be displaced before they can either raise the necessary funds on their own or obtain government assistance. This leads to the question, “What is the nature of these rights such that the government may elect to protect the rights of some communities while neglecting the rights of others?”

Ultimately, the failure to answer the prioritization question has real-world consequences for communities seeking to relocate. A federal policy that clearly articulates the rationale for financing relocation efforts allows communities currently requesting assistance to understand their place in line for limited funds and to plan accordingly. That is, if a community currently seeking to relocate understands it is unlikely to receive adequate funding, it can shift its lobbying efforts elsewhere—perhaps to seeking support for additional protective infrastructure or for a buyout. Allowing communities to understand their place in line can be particularly important to small, remote communities, such as those in Alaska, whose capacity to apply for and manage a diversity of federal grants is limited by staffing resources.⁸⁸

Further, an articulation of government policy may substantively alter the communities currently seeking assistance. It may be that public funds can be “better spent” in terms of these specific priorities, relocating vulnerable communities that have not yet thought to consider community relocation as a viable adaptation measure. Or, as is equally likely, a coherent policy rationale could confirm that the communities who have come to the forefront in advocating for relocation should, indeed, be prioritized. Thus, to the extent that community relocation is going to play a coherent role in national adaptation efforts, we must begin to think about an answer to the secondary question of rationale and prioritization.

86 See Julie Koppel Maldonado et al., *The Impact of Climate Change on Tribal Communities in the US: Displacement, Relocation, and Human Rights*, 120 CLIMATIC CHANGE 601, 602 (Oct. 2013); see also, e.g., Mariya Gromilova, *Revisiting Planned Relocation as a Climate Change Adaptation Strategy: The Added Value of a Human Rights-Based Approach*, 10 UTRECHT L. REV. 76, 76-8 (2014).

87 See Maldonado et al., *supra* note 86, at 611.

88 Interview with Leona Grishkowsky, Mayor, Native Village of Unalakleet, in Unalakleet, Alaska (Sept. 2, 2016) (describing how a lack of an adequate number of full-time staff in the local government limits the village’s ability to fulfill the reporting requirements attendant to most grants).

IV. THE POSSIBLE RATIONALES FOR PRIORITIZING COMMUNITIES FOR RELOCATION

As described in the previous section, the question of how public funds should be prioritized in relocating climate-vulnerable communities bears significant impact on which communities might reasonably seek to relocate and which should plan for alternative methods of retreat. This section turns its attention to why the federal government might choose to prioritize funding for one community seeking relocation over another. In seeking a policy purpose for relocation, this section examines a number of existing legal and normative policy structures. These structures offer guideposts on what the role for community relocation in the United States' broader adaptation strategy might be.

A. FEDERAL INDIAN LAW

Within the United States, climate-related community relocation has been discussed exclusively within the context of American Indian and Alaska Native communities.⁸⁹ These communities include a number of Alaska Native villages,⁹⁰ Indian tribes in the Pacific Northwest,⁹¹ and state-recognized tribes in southern Louisiana.⁹² This raises the question of whether federal financial support for relocation should be considered a function of federal Indian law.

Federal Indian policy is, in many respects, framed by the federal government's trust responsibility to tribes.⁹³ The trust doctrine was first articulated in the country's earliest Indian law cases, when Chief Justice John Marshall described the Indian tribes as having a relationship to the United States resembling "that of a ward to his guardian."⁹⁴ While the understanding of the trust responsibility has gone through a number of iterations, it

89 One non-tribal community that has been discussed in the context of community relocation is the historic black community of Princeville, NC, located on the Tar River, about 50 miles west of the Albemarle Sound. However, the question of retreat in Princeville has centered not around *community* relocation, but around federal buyouts. Jess Bidgood, *A Wrenching Decision Where Black History and Floods Intertwine*, N.Y. TIMES (Dec. 9, 2016), <https://www.nytimes.com/2016/12/09/us/princeville-north-carolina-hurricane-matthew-floods-black-history.html>; see Tim Pulliam, *Historic or Not, Some in Princeville Welcome a Buyout*, ABC11 (Dec. 20, 2016), <http://abc11.com/news/historic-or-not-some-in-princeville-welcome-a-buyout/1665782/>.

90 See, e.g., GAO 2009, *supra* note 12, at 18–19 (describing at least 12 Alaska Native villages that had decided to relocate as of 2009).

91 See, e.g., *Taholah Village Relocation Master Plan Project*, QUINAULT INDIAN NATION, <http://www.quinaltindiannation.com/planning/projectinfo.html> (last updated May 16, 2017) [hereinafter *Taholah Village Relocation*].

92 See, e.g., COASTAL LA. TRIBAL CMTYS., WORKSHOP REPORT INPUT INTO THE NATIONAL CLIMATE ASSESSMENT (2012) (describing relocation decisions made by the Isle de Jean Charles band of Biloxi-Chitimacha Choctaw Indians and discussions of relocation by Grand Caillou/Dulac and Grand Bayou Village) [hereinafter *WORKSHOP REPORT*].

93 See *Seminole Nation v. United States*, 316 U.S. 286, 297–98 (1942).

94 *Cherokee Nation v. Georgia*, 30 U.S. 1, 13 (1831).

is best understood today to require the United States to act as a general fiduciary to Indian tribes.⁹⁵

The trust responsibility is a uniquely situated doctrine in the context of community relocation because of its focus on the rights of tribes as nations. Professor Mary Christina Wood notes that the trust responsibility has roots that extend to early Indian land cessions under treaties that expressly recognized the continued sovereignty of tribes.⁹⁶ These treaties, she argues, contain a clear duty of the U.S. federal government to protect that “separatism” of tribes.⁹⁷ That is, the federal government’s duty to protect native sovereignty means protecting tribes against actions that threaten the existence of tribes as groups culturally distinct from the majority society. “When Indian society loses its defining cultural characteristics,” Wood notes, “it risks losing its political autonomy as well.”⁹⁸

In recent years, both Indian tribes and the federal government have pushed the trust responsibility as a source of federal obligation to assist tribes in adapting to the effects of climate change. In her 2015 testimony to the House Interior Appropriations Subcommittee, Quinault Indian Nation President Fawn Sharp leaned on both trust and treaty obligations in seeking financial support to relocate the Quinault village of Taholah.⁹⁹ As a broader matter of policy, President Obama established the White House Council on Native American Affairs by executive order in 2013, aiming to reorient the federal government to “better carry[] out its trust responsibilities.”¹⁰⁰ Signaling an understanding that assistance with climate change adaptation efforts fell within the Obama administration’s conception of these responsibilities, the Council included the Environment, Climate Change, and Natural Resources Subgroup as one of its five areas of focus.¹⁰¹

If relocation assistance is conceived of as an extension of the federal government’s trust responsibility, then resources should be made available solely to American Indian communities. More specifically, it is primarily *federally-recognized* Indian tribes that benefit from the general federal trust responsibility.¹⁰² This, however, should raise questions

95 See WILLIAM H. RODGERS, JR. & ELIZABETH BURLESON, ENVIRONMENTAL LAW IN INDIAN COUNTRY § 1:9(3) (2016). The federal government’s fiduciary duties were limited in cases brought for money damages under the Tucker Act to instances when federal action breached a specific statutory duty. See *United States v. Mitchell (Mitchell I)*, 445 U.S. 535, 542–43 (1980); *United States v. Mitchell (Mitchell II)*, 463 U.S. 206, 224 (1983). However, commentators have noted that this limitation should not alter the general scope of the trust responsibility outside of the context of Tucker Act claims. See Mary Christina Wood, *Indian Land and the Promise of Native Sovereignty: The Trust Doctrine Revisited*, 1994 UTAH L. REV. 1471, 1522 (1994).

96 Wood, *supra* note 95, at 1496.

97 *Id.* at 1497.

98 Mary Christina Wood, *Protecting the Attributes of Native Sovereignty: A New Trust Paradigm for Federal Actions Affecting Tribal Lands and Resources*, 1995 UTAH L. REV. 109, 193 (1995).

99 Fawn Sharp Testimony, *supra* note 84, at 507–16.

100 Exec. Order No. 13,647, 78 Fed. Reg. 39,539 (July 1, 2013).

101 Press Release, Off. of the Press Sec’y, The White House, Fact Sheet: The 8th Annual White House Tribal Nations Conference (Sept. 26, 2016), <https://www.whitehouse.gov/the-press-office/2016/09/26/fact-sheet-8th-annual-white-house-tribal-nations-conference>.

102 H.R. Res. 4180, 103d Cong., 108 Stat. 4791, 4791 (“[T]he United States has a trust responsibility to recognized Indian tribes, maintains a government-to-government relationship

as to the direction of federal support for relocation to date. In particular, it should raise questions as to why the federal government has elected to fund the Isle de Jean Charles relocation, albeit through a competitive grant, for a tribe that lacks federal recognition,¹⁰³ over the relocation of Newtok, which is federally-recognized.¹⁰⁴ If relocation is a component of the trust responsibility, should the federal government be spending money on non-federally recognized tribes while it fails to fund tribes that do have federal recognition? Whatever the role of the trust responsibility in an eventual federal climate adaptation policy, it is clear that by the end of the Obama administration, it was not the central driver for supporting relocation.

B. U.S. CONSTITUTION AND STATUTORY MANDATES

At the other end of the spectrum from framing community relocation support as rooted in federal Indian law, we might look to the much broader mandates enshrined in the U.S. Constitution or federal statutes. Article I, Section 8 of the Constitution provides, “The Congress shall have Power To lay and collect Taxes . . . [to] provide for the common Defense and general Welfare of the United States.”¹⁰⁵ Prior to the mid-20th Century creation of today’s administrative state, Congress routinely invoked the General Welfare Clause to support its power to appropriate funds for specific instances of disaster relief.¹⁰⁶ But this broad Constitution principle does little specifically to support the idea of funding relocation. Indeed, given the current structure of U.S. disaster law, it may well be the view of Congress that the general welfare is best served by building sea walls or offering buyouts, rather than moving communities out of the way.¹⁰⁷

Greater justification may be found in individual federal statutes and the missions of various federal agencies. In particular, the Department of Housing and Urban Development (HUD) explicitly states that its “mission is to create strong, sustainable, inclusive *communities*” (emphasis added).¹⁰⁸ The goal of community, rather than just individual, well-being has been embodied in federal housing policy for decades. The Housing Act of 1949 established the goal of creating “a decent home and a suitable living environment for every American family, thus contributing to the development and redevelopment of

with those tribes, and recognizes the sovereignty of those tribes.”). Courts have recognized that a limited form of trust obligation may apply to tribes not recognized by the federal government, in particular an obligation to act as a fiduciary to non-recognized tribes in land disputes involving lands governed by the Indian Nonintercourse Act. See *Joint Tribal Council of the Passamaquoddy Tribe v. Morton*, 528 F.2d 370, 379 (1st Cir. 1975).

103 Lex Talamo, *The Fight for Federal Recognition*, SHREVEPORT TIMES (Feb. 19, 2016, 12:51 PM), <http://www.shreveporttimes.com/story/news/2016/02/19/fight-federal-recognition/79643970/>.

104 Indian Entities Recognized and Eligible to Receive Services, 58 Fed. Reg. 54,364, 54,369 (Bureau of Indian Affairs, Oct. 21, 1993) (notice).

105 U.S. CONST. art. I, § 8, cl. 1.

106 Michele Landis Dauber, *The Sympathetic State*, 23 LAW & HIST. REV. 387, 391 (2005).

107 See Bronen, *supra* note 8, at 365–66 (describing federal support for disaster response and hazard mitigation that fails to provide for community relocation away from disaster-prone locations).

108 This mission statement remains unchanged following the change in presidential administration on January 20, 2017. *Mission*, DEP’T HOUS. & URB. DEV., <http://portal.hud.gov/hudportal/HUD?src=about/mission> (last visited Feb. 25, 2017).

communities.”¹⁰⁹ Ironically, it was this Act that paved the way for urban renewal projects that displaced hundreds of thousands of urban poor.¹¹⁰ Nevertheless, in recent years, HUD has continued a focus on building community resilience in a way that extends beyond the individual-focused relief efforts coordinated by FEMA under the Stafford Act.¹¹¹

Conceptualizing relocation assistance as a natural extension of HUD’s community-focused mission statement makes sense to a point. The Community Development Block Grants (CDBG) that were awarded under HUD’s National Disaster Resilience Competition were, for example, particularly suited for funding the diverse needs of a relocation project.¹¹² But such conceptualization also has its limitations. Most significant of these is that one of HUD’s primary functions, as defined in its organic statute, is the improvement of urban communities, not the small, culturally distinct communities that have been the focus of relocation efforts.¹¹³ Furthermore, HUD’s limited disaster recovery funds (CDBG-DR), such as those available through the National Disaster Resilience Competition, are only available as stop-gap funding to address unmet fallout from a previous federally-declared natural disaster.¹¹⁴ This, in turn, has two consequences. First, it means that communities suffering from severe but gradual erosion do not fall within HUD’s current mandate because erosion does not constitute a major disaster under the Stafford Act.¹¹⁵ And second, it provides little guidance for evaluating which communities should be relocated outside measuring a community’s past exposure to natural disasters.

It is this last aspect that is most problematic for the purposes of this discussion. Couching community relocation as an aspect of HUD’s mission would establish a unitary set of standards for evaluating communities seeking relocation assistance. But those standards may well be arbitrary vis-à-vis the policy goals underlying community relocation. This was the case in the National Disaster Resilience Competition, when the funding

109 42 U.S.C. § 1441 (2012).

110 See Jon C. Teaford, *Urban Renewal and Its Aftermath*, 11 HOUSING POL’Y DEBATE 443, 446 (2000) (arguing that 1960s reformers saw urban renewal policies—especially slum removal—as benefiting the rich and powerful by displacing the poor).

111 See Justin Gundlach & Channing Jones, *Integrating Climate Change Resilience Into HUD’s Disaster Recovery Program*, 46 *Envtl. L. Rep.* (Envtl. Law Inst.) 10,282, 10,286–10,288 (citing references to building community resilience in HUD’s 2010-2015 Strategic Plan, Environmental Justice Strategy and 2012 Adaptation Plan, and National Disaster Resilience Competition).

112 Press Release, George I. Gonzalez, U.S. Dep’t of Hous. & Urb. Dev., HUD Awards \$1 Billion Through National Disaster Resilience Competition (Jan. 21, 2016), https://www.hud.gov/press/press_releases_media_advisories/2016/HUDNo_16-006.

113 See 42 U.S. Code § 5301(c) (“The primary objective of this chapter . . . is the development of viable urban communities”).

114 Gundlach & Jones, *supra* note 111, at 10,289.

115 42 U.S.C. § 5122(2) (defining “major disaster” as “any natural catastrophe (including any hurricane, tornado, storm, high water, winddriven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, or drought), or, regardless of cause, any fire, flood, or explosion, in any part of the United States, which in the determination of the President causes damage of sufficient severity and magnitude to warrant major disaster assistance under this chapter”); see also Bronen, *supra* note 8, at 366–67.

decision reportedly came down to a HUD standard emphasizing leverage of state funds, rather than aspects of the community itself.¹¹⁶

Establishing community relocation as part of a broader agency mandate, such as HUD's, might require the agency to generate standards that better reflect the policy goal of relocation to reconcile the criteria for awarding relocation grants with the agency's policy mission. In the case of HUD, such standards could direct communities seeking relocation assistance to emphasize how relocation could preserve specific aspects of community strength and resilience in the face of imminent displacement.

C. INTERNATIONAL LAW

Climate-related migration has received increasing attention in international agreements in recent years. In 2010, the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) recognized "climate change induced displacement, migration and planned relocation" as aspects of adaptation for the first time.¹¹⁷ It is conceivable, therefore, that the U.S. could look to its commitments under international agreements as a legal rationale for supporting domestic relocation. This legal rationale, in turn, could inform how communities should be prioritized for relocation assistance.

The most natural place to look for such a commitment may be the landmark Paris Agreement reached at the 21st Conference of the Parties (COP) to the UNFCCC, which entered into force on November 4, 2016.¹¹⁸ The role of the Paris Agreement in the future of U.S. climate policy, however, is unclear. The Trump Administration formally announced its intention to withdraw from the Agreement on August 4, 2017.¹¹⁹ Pursuant to the terms of the Agreement, no party may withdraw within the first three years of the Agreement entering into force, and only then after an additional year after submitting a withdrawal notification.¹²⁰ The U.S. will thus formally remain party to the Agreement until after the 2020 presidential elections.

Regardless of the United States' status under the Paris Agreement, the Agreement itself is silent on issues of migration and displacement.¹²¹ Beyond the text of the Agreement, displacement is mentioned in Decision 1/CP.21 adopted by the COP at the same time as the Paris Agreement.¹²² But the Decision merely assigns study of the issue to the

116 Flavelle, *supra* note 78.

117 U.N. Framework Convention on Climate Change, Conference of Parties, *The Cancun Agreements: Outcome of the Work of the Ad Hoc Working Group on Long-term Cooperative Action Under the Convention*, ¶14(f), U.N. Doc. FCCC/CP/2010/7/Add.1 (Mar. 15, 2011).

118 U.N. Secretary-General, Depository Notification of Entry into Force of the Paris Agreement, C.N.735.2016.Treaties-XXVII.7.d (Oct. 5, 2016).

119 U.N. Secretary-General, Depository Notification of United States of America Communication, C.N.464.2017.Treaties-XXVII.7.d (Aug. 4, 2017).

120 Paris Agreement art. 28, Apr. 22, 2016, T.I.A.S. 16-1104, 55 I.L.M. 4.

121 *See id.*

122 U.N. Framework Convention on Climate Change, Conference of Parties, Adoption of the Paris Agreement, ¶ 49, U.N. Doc. FCCC/CP/2015/10/Add.1 (Jan. 29, 2016).

Warsaw International Mechanism for Loss and Damage (WIM),¹²³ which intends to issue recommendations through a specialized task force in mid-2018.¹²⁴

More instructive sources of direction might be the United States' commitments under international human rights agreements. International human rights bodies have long recognized that climate-related displacement will implicate states' human rights commitments.¹²⁵ These commitments are found in a number of international human rights agreements, including the Universal Declaration of Human Rights (UDHR), the International Covenant on Civil and Political Rights (ICCPR), and the International Covenant on Economic, Social and Cultural Rights (ICESCR).¹²⁶ Similar to U.S. Constitutional guarantees, however, the rights enshrined in international rights declarations to which the United States is a party are generally framed as individual rights against a government. These individual rights are of little use to framing actions in support of communities.

One possible exception is the right to culture, embodied in Article 27 of both the UDHR and ICCPR, both of which the United States has ratified.¹²⁷ The two agreements express this right differently. The UDHR proclaims, "Everyone has the right freely to participate in the cultural life of the community,"¹²⁸ while the ICCPR focuses on the rights of minority populations "to enjoy their own culture."¹²⁹ Given the potential of displacement to destroy unique cultural assets, as described in Section II, *supra*, the United States could frame support for relocation as an aspect of its commitment to protect cultural rights. This, however, comes with two qualifications. First, as a practical matter, the United States has generally treated human rights obligations as a matter of

123 *Id.*

124 U.N. Framework Convention on Climate Change, Report of the Executive Committee of the Warsaw International Mechanism for Loss and Damage Associated with Climate Change Impacts, ¶ 23, U.N. Doc. FCCC/SB/2016/3 (Oct. 14, 2016).

125 See, e.g., Human Rights Council, Report of the Office of the United Nations High Commissioner for Human Rights on the Relationship Between Climate Change and Human Rights, U.N. Doc. A/HRC/10/61 (Jan. 15, 2009); STEPHEN HUMPHREYS, INT'L COUNCIL ON HUMAN RIGHTS POLICY, CLIMATE CHANGE AND HUMAN RIGHTS: A ROUGH GUIDE viii (Robert Archer & Stephen Humphreys eds., 2008) ("This report discusses a spectrum of human rights concerns raised by anthropogenic climate change and by the strategies devised to address it.").

126 Victoria Herrmann, *COP21 and the Arctic: What's at Stake?*, ARCTIC INST. (Nov. 30, 2015), <http://www.thearcticinstitute.org/cop21-and-the-arctic-whats-at-stake/>. The United States has signed but not ratified the ICESCR. U.N. Office of Legal Affairs, *Status of International Covenant on Economic, Social and Cultural Rights* U.N. TREATY COLLECTION (Mar. 12, 2017), https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtdsg_no=IV-3&chapter=4.

127 G.A. Res. 217 (III) A, Universal Declaration of Human Rights art. 27(1) (Dec. 10, 1948); G.A. Res. 2200A (XXI), International Covenant on Civil and Political Rights art. 27 (Dec. 16, 1966).

128 G.A. Res. 217 (III) A, *supra* note 127, art. 27(1).

129 G.A. Res. 2200A (XXI), *supra* note 127, art. 27; *accord* International Covenant on Civil and Political Rights art. 27, Dec. 16, 1966, 999 U.N.T.S. 171.

foreign, not domestic policy.¹³⁰ Second, the right to culture provided under international human rights agreements may not encapsulate the need to take affirmative actions to protect culture. This right remains vaguely defined, and it is unclear whether it includes a right to the “protection and preservation of cultural heritage.”¹³¹

More direct support for aiding community relocation may be drawn from the non-binding Guiding Principles on Internal Displacement, developed by a panel of experts under the auspices of the United Nations in 1998.¹³² The Guiding Principles are generally intended to safeguard rights of internally displaced persons (IDPs).¹³³ While the principles are of limited applicability to planned community relocation, aspects relating to the prevention of displacement itself are relevant.

Principle 7 underlines that displacement is an option of last resort and calls upon states to take all measures “to minimize displacement *and its adverse effects*.”¹³⁴ As such, in instances where communities will be inevitably displaced, community relocation could be implemented where it is most likely to minimize negative impacts of displacement.

Other conclusions could be drawn from Principle 9 of the Guiding Principles. Principle 9 reads:

States are under particular obligation to protect against the displacement of indigenous peoples, minorities, peasants, pastoralists and other groups with a special dependency on and attachment to their lands.¹³⁵

This Principle could inform community relocation assistance through the lens of land dependency. That is, community relocation could be viewed primarily as a means to prevent land-dependent communities from being isolated from their land-dependent culture or livelihoods.

The extent to which international law, and specifically international human rights law, can inform priorities on community relocation depends largely on which rights one is drawing on. International human rights law does much to support the idea that community relocation could reflect policies of protecting indigenous, land-dependent, and culturally distinct communities. But whether greater guidance on the international community’s viewpoint is forthcoming from the WIM remains to be seen.

130 See, e.g., Kathryn Libal & Shareen Hertel, *Paradoxes and Possibilities: Domestic Human Rights Policy in Context*, in HUMAN RIGHTS IN THE UNITED STATES: BEYOND EXCEPTIONALISM 1 (Shareen Hertel & Kathryn Libal eds., 2011) (asking why “human rights [are] not central to discussions of public policy and legal reform in the United States”).

131 Mehmet Komurcu, Cultural Heritage Endangered by Large Dams and its Protection Under International Law, 20 WIS. INT’L L.J. 233, 276 (2001).

132 See Francis M. Deng, Rep. of the Secretary-General, Guiding Principles on Internal Displacement, U.N. Doc. E/CN.4/1998/53/Add.2 (Feb. 11, 1998).

133 See *id.* ¶ 9.

134 *Id.* princ. 7.

135 *Id.* princ. 9.

D. ENVIRONMENTAL JUSTICE AND CLIMATE JUSTICE

The Environmental Justice Movement sprang up across the United States in part as an outgrowth of the Civil Rights Movement.¹³⁶ The concept of environmental justice emerged as a response to the disproportionate exposure of minority communities to hazardous waste facilities across the country.¹³⁷ The Environmental Justice Movement rose to a high-water mark in policy visibility in 1994, when President Clinton signed an executive order requiring each federal agency to make “achieving environmental justice” part of its mission, causing federal agencies to include environmental justice considerations as part of environmental impact review.¹³⁸

Over time, environmental justice has made its way into discussions of climate change. Some environmental justice groups have, for example, long objected to cap-and-trade policies aimed at reducing greenhouse gas emissions under the reasoning that these policies are likely to promote the continued operation of facilities emitting conventional pollutants primarily in poor and minority communities.¹³⁹ But the roots of the Environmental Justice Movement also gave rise to another movement entirely—the “Climate Justice Movement.”¹⁴⁰ Climate justice is an extension of environmental justice’s foundational concept—that poor and minority communities not only suffer disproportionately from conventional pollutants, but also from the global climate effects brought on by greenhouse gas emissions.¹⁴¹

But can climate justice help to prioritize which environmentally vulnerable communities should be eligible for relocation assistance? In particular, it is unclear if a climate justice framework should first direct resources to communities whose vulnerability is linked to race and impoverishment or if climate justice merely prioritizes the communities that are most vulnerable in general. A great deal of scholarship on climate justice at the subnational level has dropped explicit discussion of race in favor of a general emphasis on poverty and vulnerability.¹⁴² Nevertheless, anecdotal evidence suggests that dis-

136 LUKE W. COLE & SHEILA R. FOSTER, *FROM THE GROUND UP: ENVIRONMENTAL RACISM AND THE RISE OF THE ENVIRONMENTAL JUSTICE MOVEMENT* 20 (2000).

137 Sheila Foster, *Justice from the Ground Up: Distributive Inequities, Grassroots Resistance, and the Transformative Politics of the Environmental Justice Movement*, 86 CAL. L. REV. 775, 776 (1998).

138 Exec. Order No. 12,898, 59 Fed. Reg. 7,629 (Feb. 16, 1994).

139 See Press Release, We Act, Statement from Environmental Justice Forum on Climate Change (June 6, 2008), <http://www.weact.nyc/Portals/7/liebermanwarnerdraft6.pdf> (calling attention to flaws within environmental legislation that would ultimately harm communities of color).

140 David Monsma, *Equal Rights, Governance, and the Environment: Integrating Environmental Justice Principles in Corporate Social Responsibility*, 33 ECOLOGY L.Q. 443, 489–90 (2006).

141 See ENV’T’L JUSTICE & CLIMATE CHANGE INITIATIVE, 10 PRINCIPLES FOR JUST CLIMATE CHANGE POLICIES IN THE U.S. (2014), <http://blackmesawatercoalition.org/wp-content/uploads/2014/03/PRINCIPLES-EJCC-Ten-Principles-for-CJ.pdf>.

142 See, e.g., Jouni Paavola & W. Neil Adger, *Fair Adaptation to Climate Change*, 56 ECOLOGICAL ECON. 594, 595 (2006) (noting that the most vulnerable populations “have the least voice” when communicating their interests to governments); David Schlosberg & Lisette B. Collins, *From Environmental to Climate Justice: Climate Change and the Discourse of Environmental Justice*, 5 WILEY INTERDISC. REVS.: CLIMATE CHANGE 359, 359 (2014) (discussing the “inequitable vulnerabilities” that impact certain communities).

crimination has often forced racial minorities to settle in more flood-prone areas where they are more vulnerable to extreme weather events and sea level rise.¹⁴³ Empirical analysis of these connections bears mixed results. One analysis of cities in the American south showed that African Americans were significantly more likely to live in swampy low-lying areas, except for in coastal and riverine communities where property values were higher despite increased flood risk and did not correlate with a higher percentage minority population.¹⁴⁴

A climate justice framework might therefore guide assistance purely to communities that exhibit the greatest level of environmental vulnerability. Of course, definitions of vulnerability itself vary greatly and there have been no small number of attempts to quantify vulnerability in different ways.¹⁴⁵ However the metric is defined, this type of climate justice approach would prioritize funding for the “most vulnerable communities” as a function of the chosen inputs of vulnerability—potentially including poverty and race as correlates to environmental exposure.¹⁴⁶

E. DIRECT MORAL CULPABILITY

Many environmentally vulnerable communities in the United States are in vulnerable locations not merely due to general racial, social, or economic dynamics, but due to direct government action. In Alaska, several of today’s threatened Native villages became permanently settled only when the Bureau of Indian Affairs (BIA) constructed schools on land that was extremely vulnerable to erosion.¹⁴⁷ In some cases, the BIA chose school sites based primarily on the convenience of barge access.¹⁴⁸ This is true of Newtok and Shishmaref, both of which are currently seeking assistance to relocate.¹⁴⁹ In the case of Shishmaref, the permanent settlement established on Sarichef Island—a narrow barrier island on the Chukchi Sea—had previously been used only as a seasonal camp. According to local residents, the BIA school transformed Sarichef Island into a

143 See Maxine Burkett, *Just Solutions to Climate Change: A Climate Justice Proposal for A Domestic Clean Development Mechanism*, 56 BUFF. L. REV. 169, 185–88 (2008) (discussing housing discrimination and flood vulnerability in pre-Katrina New Orleans).

144 Jeff Ueland & Barney Warf, *Racialized Topographies: Altitude and Race in Southern Cities*, 96 GEOGRAPHICAL REV. 50, 56 (2006).

145 See, e.g., Karen O’Brien et al., *Why Different Interpretations of Vulnerability Matter in Climate Change Discourses*, 7 CLIMATE POL’Y 73, 74 (2007) (“Through this broad framework, the meaning of vulnerability has expanded to engulf notions of risk, impacts and adaptability.”).

146 For a high-level overview of the development and application of vulnerability indicators, as well as a critique of their use in adaptation policy, see Jochen Hinkel, “*Indicators of Vulnerability and Adaptive Capacity*”: *Towards a Clarification of the Science-Policy Interface*, 21 GLOBAL ENVTL. CHANGE 198 (2011).

147 See James H. Ducker, *Out of Harm’s Way: Relocating Northwest Alaska Eskimos, 1907–1917*, 20 AM. INDIAN CULTURE & RES. J., no. 1, 1996, at 43, 50.

148 E.g., *Newtok Village Relocation History*, ALASKA DEP’T OF COM., COMMUNITY, & ECON. AFFAIRS, <https://www.commerce.alaska.gov/web/dcra/PlanningLandManagement/Newtok-PlanningGroup/NewtokVillageRelocationHistory/NewtokHistoryPartOne.aspx> (last visited Nov. 18, 2017).

149 See ELIZABETH MARINO, *FIERCE CLIMATE SACRED GROUND* 67 (2015); *Newtok Village Relocation History*, *supra* note 148.

permanently settled site due in part to federal policies mandating that Alaska Native children be enrolled as full-time students.¹⁵⁰

A similar vein of history can be seen in the Louisiana Bayou, which loses about 75 square kilometers of land per year, even prior to any significant rise in sea levels.¹⁵¹ The beginnings of this story of land loss stretch back nearly a century, to the passage of the Flood Control Act of 1928. In response to the Great Flood of 1927, the Act authorized and funded the construction of an extensive levee system along the Mississippi River.¹⁵² Constructed by the Corps, the levees starved the Bayou of sediment.¹⁵³ Following the construction of the levees, the natural process of subsidence in the Louisiana Bayou was no longer offset by the deposition of new sediments, and land loss accelerated.¹⁵⁴

Around the same time, oil companies operating in the Gulf region began to dredge canals through the wetlands for transporting rigs.¹⁵⁵ These canals allowed for the intrusion of salt water from the Gulf of Mexico into the Bayou wetlands.¹⁵⁶ This rapid salinization contributed to vegetation death, exposing the marsh soil and further accelerating the land loss.¹⁵⁷ Following the passage of the Clean Water Act in 1972, continued dredging was conducted in accordance with over two hundred Section 404¹⁵⁸ dredge and fill permits, issued by the Corps.¹⁵⁹

Should the federal government's role in manufacturing (or permitting) vulnerability for these communities influence government priorities in funding their relocation? From the standpoint of legal liability, this proposition is clearly unsupportable. A common law negligence theory based on BIA school site selection, for example, would quickly run into fatal hurdles in establishing duty, breach, and causation.¹⁶⁰ Establishing legal liabil-

150 MARINO, *supra* note 149, at 45 (“In Shishmaref, residents point out that permanent settlement in the village is linked to the construction of the school and legislation that mandated school-age children to attend.”).

151 *Louisiana Coastal Wetlands: A Resource At Risk*, U.S. GEOLOGICAL SURVEY, <https://pubs.usgs.gov/fs/la-wetlands/> (last visited Nov. 19, 2017).

152 Flood Control Act of 1928, 33 U.S.C. § 702a (2012).

153 Bob Marshall, *Losing Ground: Southeast Louisiana Is Disappearing, Quickly*, SCI. AM. (Aug. 28, 2014), <https://www.scientificamerican.com/article/losing-ground-southeast-louisiana-is-disappearing-quickly/>.

154 See Donald F. Boesch et al., *Scientific Assessment of Coastal Wetland Loss, Restoration and Management in Louisiana*, 20 J. COASTAL RES. 1, 4 (1994).

155 *Id.* at 5.

156 See *id.* at 5–6.

157 See *id.* at 31–32 (“[S]ublethal episodic pulses of salinity can precipitously reduce the vigor of freshwater vegetation . . .”).

158 33 U.S.C. § 1344.

159 See Bd. of Comm'rs of Se. La. Flood Prot. Auth.—E. v. Tenn. Gas Pipeline LLC, 88 F. Supp. 3d 615, 625 (E.D. La. 2015) (“Under Section 404 of the Clean Water Act, the Corps has authority to issue permits—termed 404 permits—for the discharge of dredged or fill materials into navigable waters”).

160 See generally JENNIFER KLEIN, SABIN CTR. FOR CLIMATE CHANGE LAW, POTENTIAL LIABILITY OF GOVERNMENTS FOR FAILURE TO PREPARE FOR CLIMATE CHANGE (2015) (“Litigants seeking to establish a negligence claim against governments that refuse to prepare for climate change would need to show that 1) the official had a duty to prepare for extreme weather events; 2) the official breached that duty by failing to prepare or causing others to

ity for the government actions leading to increased vulnerability in the Louisiana Bayou is equally unlikely. In 2015, a federal district court rejected a number of common law claims brought by the Southeast Louisiana Flood Protection Authority against oil companies operating in the Gulf region, including a breach of contract claim alleging the companies breached a duty in their Corps-issued dredging permits to “maintain and restore” the environment.¹⁶¹ The court rejected this theory both on the grounds that plaintiffs had failed to establish the permits were contracts and that plaintiffs had not established that the public was an intended third-party beneficiary of the alleged contracts.¹⁶²

Any conceptualization of relocation assistance as righting a past government wrong, therefore, must instead look to moral culpability. In essence, government support for relocation could be seen as a form of reparations—a backwards-looking redress for moral, if not legal wrongs.¹⁶³ By judging the extent to which a community’s current vulnerability stems directly from moral wrongs inflicted by the U.S. government itself, a reparations-based rationale can guide how federal funds should be allocated today.

It should be noted that this is a fairly narrow reading of reparations in the context of climate change. In looking only to government actions in siting communities in now-vulnerable locations, this approach ignores the contention of some climate change scholars that the central role of industrialized countries in causing global climate change is itself a moral wrong worthy of reparations.¹⁶⁴ It is worth consideration that, under this rationale, communities that were not settled due to any particular government policy but *are* made vulnerable by the nation’s history of GHG emissions would not be eligible to receive assistance. Nevertheless, a narrower conception of reparations is attractive in that it establishes firm bounds to which communities might be eligible for this particular type of government assistance.

Another consideration in shaping a reparations-based rationale is the extent to which a model of reparations must be purely backwards-looking and to what extent it might look additionally to the future “results” of such reparations. The extent to which reparations should look solely to the past is a matter of scholarly debate. Eric Posner and Adrian Vermeule, in an influential article on reparations theory, suggest that reparations schemes must be entirely cued to past injustice and largely ignore considerations of the

fail to prepare; 3) the litigant suffered harm; and 4) this harm was caused or worsened by the government official’s breach of duty.”).

161 *Tenn. Gas Pipeline*, 88 F. Supp. 3d at 645.

162 *Id.* at 645–46.

163 See Eric A. Posner & Adrian Vermeule, *Reparations for Slavery and Other Historical Injustices*, 103 COLUM. L. REV. 689, 691 (2003) (describing reparations schemes as ones that typically: “(1) provide payment (in cash or in kind) to a large group of claimants, (2) on the basis of wrongs that were substantively permissible under the prevailing law when committed, (3) in which current law bars a compulsory remedy for the past wrong (by virtue of sovereign immunity, statutes of limitations, or similar rules), and (4) in which the payment is justified on backward-looking grounds of corrective justice, rather than forward-looking grounds such as the deterrence of future wrongdoing.”).

164 See generally Maxine Burkett, *Climate Reparations*, 10 MELB. J. INT’L L. 509, 509–11 (2009) (outlining a theory of reparations meant to mitigate the deleterious impacts of climate change on vulnerable populations perpetuated by industrialized economies).

future impacts of reparations payments.¹⁶⁵ This bright-line rule has been repeatedly criticized by other scholars, such as Alfred Brophy, who notes that modern reparations theory rests substantially on the premise that “by repairing past harm, our country can build something better for the future.”¹⁶⁶

The way in which this past-versus-future distinction is resolved in designing a reparations-based policy would have tremendous impact on which communities might be the targets for public relocation assistance. Posner and Vermeule’s strict backward-looking approach would mean communities would be prioritized for relocation assistance exclusively based on the magnitude of the government’s role in creating their environmental vulnerability. Conversely, Brophy’s understanding of reparations would prioritize communities who suffer present-day environmental vulnerability due to a past government wrong *and* who would be most likely to reap benefits from reparatory government assistance in relocating as a community.

Regardless of how this point is resolved, incorporating a reparations logic into relocation policy would significantly narrow the number of communities eligible to receive relocation assistance. Communities applying for funding would be prioritized based on their ability to show a causal link between government action and their current location or state of vulnerability. Likewise, such a policy would send a clear message to any community that was sited in a climate-vulnerable area due to U.S. government action that they might apply for funding to relocate.

F. VALUES-BASED CULTURAL CONSIDERATIONS

The extent to which relocation policy should be based on future results brings up a second question: what constitutes relocation success? There is no singular unitary reason why a given community might prefer community relocation over another form of retreat. The harms of displacement vary between communities and so do the opportunities to reduce those harms.

Different communities are likely to bring different values to questions of adaptation and loss.¹⁶⁷ Thus, some scholars have advocated for a values-based approach to adaptation, noting, “What is considered legitimate and successful adaptation depends on what people perceive to be worth preserving and achieving, including their culture and identity.”¹⁶⁸ This is a particularly salient point when it comes to community relocation, because the decision to relocate as a community inherently implicates a community’s intent to preserve something beyond the economic value associated with their land and property.

One way to define this “something” without stepping outside the bounds of a values-based approach to adaptation is to view relocation, broadly, as an attempt to preserve intangible cultural heritage. In this sense, intangible cultural heritage can be understood

165 Posner & Vermeule, *supra* note 163, at 692.

166 Alfred L. Brophy, *Reconsidering Reparations*, 81 IND. L.J. 811, 823 (2006); *see also* Eric K. Yamamoto et al., *American Reparations Theory and Practice at the Crossroads*, 44 CAL. W. L. REV. 1, 5 (2007).

167 Karen L. O’Brien & Johanna Wolf, *A Values-Based Approach to Vulnerability and Adaptation to Climate Change*, 1 WILEY INTERDISC. REVS.: CLIMATE CHANGE 232, 233 (2010).

168 Johanna Wolf et al., *Values, Climate Change, and Implications for Adaptation: Evidence from Two Communities in Labrador, Canada*, 23 GLOBAL ENVTL. CHANGE 548, 549 (2013).

as any value a community attaches to traditions, practices, rituals, or knowledge passed down through generations within that community.¹⁶⁹ Thus, while a relocating community might lose tangible cultural heritage such as sites and other place-based resources, communities would still be able to identify valued intangible heritage that could be preserved through relocating as a community.

Might governmental relocation assistance, then, be prioritized to communities that face the threat of climate-related loss of intangible cultural heritage? Community B in the thought experiment in Section IV, *supra*, has a strong tradition of oral history that is central to its values and will be lost if the community disperses. In contrast Community C has no such tradition. Both communities are the same size and can be relocated for the same cost, but relocating Community B preserves an additional “something.” This piece of intangible heritage could thus serve as justification for prioritizing the relocation of Community B.

The extent to which this heritage should matter in policy planning, however, is up for debate, in part because the interaction of cultural heritage and climate change policy is understudied. In 2015, a group of scientific and cultural organizations and community representatives drafted the *Pocantico Call to Action on Climate Impacts and Cultural Heritage*, which declared “that neither costs of addressing climate change impacts on cultural heritage, nor the knowledge we gain from understanding our cultural heritage, have been comprehensively addressed in climate policy responses at any level.”¹⁷⁰ To the extent that future-looking considerations of cultural heritage preservation should be included in formulating a relocation policy, stronger and deeper exploration is needed on how this heritage should be evaluated.

V. FOLLOWING GUIDEPOSTS TO A COHERENT POLICY ON RELOCATION

In December 2016, with just over a month remaining before President Obama left office, the White House quietly pieced together an interagency working group on “community-led managed retreat and voluntary relocation.”¹⁷¹ Despite the low profile kept by the working group,¹⁷² it was clear from the outset that its prospects were severely limited, as the Trump administration rapidly undertook to dismantle U.S. government involve-

169 *What is Intangible Cultural Heritage?*, U.N. EDUC., SCI. & CULTURAL ORG., <http://www.unesco.org/culture/ich/en/what-is-intangible-heritage-00003> (last visited Feb. 18, 2017).

170 Union of Concerned Scientists et al., *Pocantico Call to Action on Climate Impacts and Cultural Heritage* (2015), <http://www.ucsusa.org/sites/default/files/attach/2015/05/Pocantico-Call-to-Action-on-Climate-Impacts-Cultural-Heritage-4-29-2015.pdf>.

171 Christopher Flavelle, *Opinion, Obama’s Final Push to Adapt to Climate Change*, BLOOMBERG (Dec. 16, 2016), <https://www.bloomberg.com/view/articles/2016-12-16/obama-s-final-push-to-adapt-to-climate-change>.

172 Only a single major news outlet reported on the group’s formation during the final months of the Obama administration, and a spokesperson for the White House Council on Environmental Quality refused to comment. *Id.*

ment on climate change issues.¹⁷³ Indeed, by late 2017 reports surfaced that the group had gone dormant.¹⁷⁴

Despite the suspension of the interagency effort, the working group's formation was a step forward. The memorandum of understanding founding the group noted: "As more communities consider managed retreat and relocation as options of last resort. . . there is a critical need to better define the Federal role in these efforts and to coordinate Federal assistance for managed retreat and relocation at the national level."¹⁷⁵ The call for a working group thus contained two important recognitions. First, the number of communities seeking to relocate as the planet warms is only going to grow. And second, the federal government has not yet established a role for itself in determining how, when, and why it will support communities seeking to relocate.

It is not the intent of this Article to recommend a single rationale for allocating federal funds to relocating environmentally vulnerable communities. Indeed, there is no single right answer to this question. As the previous section details, the selection of one, or multiple, policy rationales for funding community relocation may result in a dramatically different set of communities seeking federal support than if a different rationale had been selected.

Rather, it is the intent of this section to lay down several guideposts for designing a federal role in community relocation. These guideposts stem from the discussion in the first three sections of this Article and identify immediate obstacles presented by the current *ad hoc* approach to community relocation in the United States.

A. THE GENERAL NEED TO MOVE AWAY FROM AD HOC FUNDING

There is currently no established administrative framework or funding source to support American communities seeking to relocate due environmental effects associated with climate change.¹⁷⁶ Communities seeking government financial assistance to relocate have therefore been forced to either cobble together grants from various federal programs or to apply for large block grants through a competitive system such as HUD's National Disaster Resilience Competition.¹⁷⁷ This *ad hoc* approach causes a number of problems for communities seeking to relocate, which have been detailed at length by the

173 See Steven Mufson & Brady Dennis, *References to Climate Change Disappear from White House Website*, WASH. POST (Jan. 20, 2017, 12:34 PM), <https://www.washingtonpost.com/local/2017/live-updates/politics/live-coverage-of-trumps-inauguration/references-to-climate-change-disappear-from-white-house-website/> (reporting that all reference to climate change were removed from White House website immediately following the inauguration of Donald Trump); see also Rachel Waldholz, *EPA Halves Staff Attending Environmental Conference In Alaska*, NAT'L PUB. RADIO: THE TWO WAY (Feb. 10, 2017, 8:07 AM), <http://www.npr.org/sections/thetwo-way/2017/02/10/514479451/epa-halves-staff-attending-alaska-environmental-conference> (reporting that the Trump administration ordered EPA to halve staff attending annual Alaska Forum on the Environment, which included panels on adaptation to climate change).

174 See, e.g., Kyla Mandel, *America's Climate Refugees Have Been Abandoned by Trump*, MOTHER JONES, <https://www.motherjones.com/environment/2017/10/climate-refugees-trump-hud/> (last visited Feb. 25, 2018).

175 *Id.* (quoting executive branch internal memorandum of understanding).

176 See Bronen, *supra* note 8, at 365–66.

177 See GAO 2009, *supra* note 12, at 35–39.

U.S. Government Accountability Office (GAO)¹⁷⁸ and by Robin Bronen's work in Alaska.¹⁷⁹ Most significantly, an *ad hoc* approach to supporting relocation means that communities currently seeking funds to relocate have no indication of when, or if, this funding will ever come through. This means that these communities are left planning for a solution that may never have been realistic in the first place.

This problem is already clearly visible in Alaska. The Alaska Native Village of Newtok first commissioned a report on severe erosion in the community in 1983.¹⁸⁰ The first study on relocating the village was published in 2004.¹⁸¹ While the village has since obtained land rights to its proposed relocation site,¹⁸² it has still not found a source for the majority of the funds needed. Following its rejection in the National Disaster Resilience Competition, Newtok made a last-ditch effort requesting the president declare the erosion problem a disaster and direct FEMA funds to relocate the village.¹⁸³ Now, thirteen years since relocation was first proposed, it is still unclear if Newtok will ever get the funds it needs, despite consistent federal engagement with the relocation planning process.

B. THE CENTRALITY OF AMERICAN INDIAN AND ALASKA NATIVE COMMUNITIES

To date, the only communities in the United States that have sought to relocate due to the effects of climate change have been Indian and Alaska Native communities. These communities include 31 "imminently threatened" Alaska Native communities identified by the GAO,¹⁸⁴ several federally-recognized tribes on the Olympic Peninsula,¹⁸⁵ and a handful of state-recognized tribes in the Louisiana Bayou.¹⁸⁶ A natural starting point for institutionalizing a government role in supporting community relocation, therefore, is deciding whether federal funds for community relocation should be available exclusively to Indian communities.

As detailed in the previous section, there would be a strong argument for linking relocation support to the federal Indian trust responsibility. This thread was picked up by Professor Randall Abate of Florida A&M, who argued in 2013 for the formation of an

178 *See id.*

179 *See generally* Bronen, *supra* note 8.

180 *See Newtok Village Relocation History Part Two: Early Efforts to Address Erosion*, ALASKA DEP'T OF COM., COMMUNITY, & ECON. AFFAIRS, <https://www.commerce.alaska.gov/web/dcra/PlanningLandManagement/NewtokPlanningGroup/NewtokVillageRelocationHistory/NewtokHistoryPartTwo.aspx> (last visited Nov. 19, 2017).

181 *Id.*; ASCG INC., NEWTOK: BACKGROUND FOR RELOCATION REPORT (2004), <https://www.commerce.alaska.gov/web/Portals/4/pub/NewtokBackgroundRelocation2004.pdf>.

182 Bronen, *supra* note 8, at 385.

183 Rachel Waldholz, *Alaskan Village, Citing Climate Change, Seeks Disaster Relief In Order To Relocate*, NAT'L PUB. RADIO (Jan. 10, 2017, 6:08 PM), <http://www.npr.org/2017/01/10/509176361/alaskan-village-citing-climate-change-seeks-disaster-relief-in-order-to-relocate/>.

184 *See* GAO 2009, *supra* note 12, at 12.

185 *See Taholah Village Relocation*, *supra* note 91; *see also* Chelsie Papiez, *Climate Change Implications for the Quileute and Hoh Tribes of Washington*, at 103 (Mar. 2009) (unpublished Master's thesis, Evergreen State College), http://academic.evergreen.edu/g/grossmaz/Papiez_MES_Thesis.pdf.

186 *See* WORKSHOP REPORT, *supra* note 92, at 6–8.

emitter-financed, government-administered “climate change relocation fund.”¹⁸⁷ In designing his proposed fund, Abate concluded that support “would be limited to federally-recognized tribes,” summarily citing the federal Indian trust responsibility as the rationale for this restriction.¹⁸⁸ But Abate also took care to moderate his conclusion, noting that his proposal “[did] not mean that a climate relocation fund cannot eventually be made available to other segments of the U.S. population.”¹⁸⁹

Abate’s ultimate difficulty in drawing a bright line between federally-recognized tribes and all other communities may well reflect a sense that there are weighty rationales for relocating communities that have nothing to do with the trust responsibility. The limited history of community relocation in the United States to date would certainly suggest this. The Isle de Jean Charles relocation, funded through a HUD grant, does not support a tribe with federal recognition.¹⁹⁰ This suggests that, for the federal government (and the State of Louisiana as the grant applicant), the trust responsibility is not the primary concern in community relocation. But Isle de Jean Charles is not alone in its lack of recognition. Even previous relocations of Alaska Native Villages, such as the relocation of the Native Village of Shaktoolik away from its eroding “old site” in 1974,¹⁹¹ occurred before Alaska Native villages first received federal recognition in 1993.¹⁹²

Indeed, the few examples of voluntary community relocation in U.S. history feature either non-Indian or non-federally-recognized Indian communities. One such example occurred in Allenville, Arizona, an African American farming community about 40 miles west of Phoenix.¹⁹³ In 1978, Allenville was all but wiped off the map by a major flooding event along the Gila River.¹⁹⁴ As residents were displaced into temporary housing, they began to work with federal and state authorities to relocate the community through a land exchange under the Uniform Relocation Act.¹⁹⁵ Notably, the community’s commitment to lobbying the federal government for the \$4.5 million in funding needed for the relocation had no apparent basis on any sort of special relationship with the federal government.¹⁹⁶ A study of the community suggested, instead, that the pri-

187 Randall S. Abate, *Corporate Responsibility and Climate Justice: A Proposal for a Polluter-Financed Relocation Fund for Federally Recognized Tribes Imperiled by Climate Change*, 25 FORDHAM ENVTL. L. REV. 10, 12–14 (2013).

188 *Id.* at 42.

189 *Id.*

190 Talamo, *supra* note 103.

191 The State and Federal Response to Storm Damage and Erosion in Alaska’s Coastal Villages: Hearing Before the Ad Hoc Subcomm. on Disaster Recovery of the S. Comm. on Homeland Security and Gov’t Aff., 110th Cong. 35 (2007) (testimony of the Village of Unalakleet presented by Steve Ivanoff).

192 Indian Entities Recognized and Eligible to Receive Services, *supra* note 104, at 54,365.

193 *Community of Hopeville Sprung from ’78 Flood Devastation*, TUCSON CITIZEN (Mar. 15, 2001), <http://tucsoncitizen.com/morgue2/2001/03/15/224217-community-of-hopeville-sprung-from-78-flood-devastation/>.

194 *See id.*

195 CHRISTOPHER DALBOM ET AL., TULANE INST. ON WATER RES. LAW & POL’Y, COMMUNITY RESETTLEMENT PROSPECTS IN SOUTHEAST LOUISIANA 8 (2014).

196 *See* TUCSON CITIZEN, *supra* note 193.

many motivating factors for relocating as a community were residents' desires to stay close to family, friends, and neighbors, and the desire to "preserve the community."¹⁹⁷

None of this, of course, is to say that drawing a link between federally-recognized tribes and community relocation assistance is wrongheaded. As outlined in the previous section, there is certainly a compelling case for extending government funds for relocation solely to federally-recognized tribes. However, this decision should be made on the basis of policy deliberations as to the ultimate goals of supporting community relocation, not based purely on which communities happen to be most actively advocating for themselves today.

C. A SINGLE, CENTRALIZED RELOCATION FUND

The idea of forming a single, centralized federal fund for community relocation, similar in nature to the Superfund, has garnered some popularity in law review articles addressing climate-vulnerable communities.¹⁹⁸ This is not unreasonable. The centralization of funding and administration, in theory, can help to communicate what funds are available and to whom they might be disbursed. But these proposals also present two additional problems. First, if the central fund has a broad mandate—such as disaster-relief through FEMA or the site-clearing provisions under CERCLA—then centralizing the funding source actually does nothing to convey which communities might realistically receive assistance. Second, if the central fund has a narrow mandate—such as relocating Alaska Native communities—this means selecting a single policy priority out of the many potentially valid rationales for supporting relocation.

Establishing a broadly mandated fund for relocation is simply institutionalizing the *ad hoc* approach, and should be avoided. Creating such a funding source, however funded, inevitably sets up more communities to apply for support than could possibly receive it. It also opens up the possibility of a black box federal grant making process in which individual funding decisions offer little guidance regarding what communities might be prioritized in the future.

A single fund with a narrow mandate, on the other hand, is problematic only to the extent that the federal government sees multiple policy priorities motivating public support for community relocation. For example, if the federal Indian trust responsibility is a primary motivating factor, but federal policymakers also see a need for preserving unique cultural heritage of certain non-Indian communities, then a single fund established within the BIA would fail to distribute funds in a way that best supports federal policy.

Thus, it is worth considering whether relocation should instead be conceptualized as a solution of last-resort to support multiple policy goals. If this were the case, then multi-

197 Ronald W. Perry & Michael K. Lindell, *Principles for Managing Community Relocation as a Hazard Mitigation Measure*, 5 J. CONTINGENCIES & CRISIS MGMT. 49, 52–53 (1997).

198 See, e.g., Abate, *supra* note 187; Jessica Scott, *Move, or Wait for the Flood and Die: Protection of Environmentally Displaced Populations Through a New Relocation Law*, 9 FLA. A&M U. L. REV. 369, 391 (2014) (proposing a new relocation law creating a single federal fund for environmentally displaced persons); Benjamin Reese, *Note, Too Many Cooks in the Climate Change Kitchen: The Case for an Administrative Remedy for Damages Caused by Increased Greenhouse Gas Concentrations*, 4 MICH. J. ENVTL. & ADMIN. L. 355, 377–80 (2015) (proposing an emitter-funded, EPA-administered fund for compensating climate change victims).

ple federal agencies might be allocated different sized funding pools to support relocating communities, perhaps within a singular federal framework to ensure basic protection of community rights.¹⁹⁹ This solution might be particularly attractive given the resource-intensive nature of relocating Alaska Native communities. These communities would fare poorly in a cost-benefit analysis that compared community relocation in Alaska to community relocation in the Lower 48 where building costs are lower and environmental conditions more predictable. Establishing a separate fund for Alaska Native communities under, say, the BIA, and for other relocating communities under another federal agency would insulate Alaska Native Villages from this disadvantage.

VI. CONCLUSION

In the course of composing this Article, United States policy on climate change has taken a dramatic turn. The new U.S. president has infamously attacked not only the science of anthropogenic climate change, but also the “concept of global warming” itself, which he has alleged was “created by and for the Chinese in order to make U.S. manufacturing non-competitive.”²⁰⁰ It is sensible, in today’s political climate, to question the value of discussing community relocation. Indeed, the likelihood that any community relocation will even be discussed by an executive branch that adamantly asserts the climate is not changing is not promising.

Nevertheless, there has never been a more important time to evaluate the role for community relocation in U.S. policy on climate change adaptation. The eventual displacement of American communities by rising seas is now a fact. Major urban and financial centers like New York are already beginning to prepare for one-to-six feet of sea level rise within the next three decades.²⁰¹ If there is ever a time for small, isolated, rural communities to formulate realistic plans for retreat, it is before the country’s attention turns to the needs of its coastal financial hubs.

Moreover, despite the current administration’s hostility to mitigating emissions, it has been completely silent on how it will approach adaptation. Donald Trump assumed the presidency, in part, on a promise to “rebuild [America’s] highways, bridges, tunnels, airports, schools, hospitals,” a cause to which he pledged at least \$550 billion.²⁰² A pledge to rebuild failing infrastructure should be promising to communities whose infrastructure is failing due to rising sea levels and erosion. Indeed, in the weeks following the 2016 elections, local government officials and adaptation scholars quickly picked up on

199 The need for a federal framework for community relocation that considers human rights aspects has been discussed at length by Robin Bronen. See, e.g., Bronen, *supra* note 8, at 401–02.

200 Donald J. Trump (@realDonaldTrump), TWITTER (Nov. 6, 2012, 11:15 AM), <https://twitter.com/realDonaldTrump/status/265895292191248385>.

201 N.Y. COMP. CODES R. & REGS. tit. 6, § 490.4 (2017).

202 Laurence Arnold & Sho Chandra, *How Trump Might Try to Fix Bridges and Highways: QuickTake Q&A*, BLOOMBERG (Nov. 14, 2016, 9:36 AM), <https://www.bloomberg.com/news/articles/2016-11-14/how-trump-might-try-to-fix-bridges-and-highways-quicktake-q-a/>.

this new rhetoric, urging the incoming president to “build the wall” not on the southern border, but on America’s coastlines.²⁰³

Congressional Republicans, too, the majority of whom do not profess belief in anthropogenic climate change,²⁰⁴ would seem to have little reason *not* to invest heavily in adaptation measures. In 2015, the Senate adopted an amendment by a vote of ninety-eight to one to “express the sense of the Senate that climate change is real and not a hoax.”²⁰⁵ The rationale behind the vote, of course, was that the amendment contained no mention of an anthropogenic cause. But this, too, is of little concern in the context of assisting communities that are already facing the imminent loss of their lands to climate-related factors. Even in a 2016 open letter to President Obama, where twenty-two Republican Senators objected to the commitment of funds to the Green Climate Fund, established under the Paris Agreement, the Senators lamented, “With . . . the difficulty finding resources to make critical investments here at home, we should not be sending taxpayer dollars overseas to international bureaucrats in the name of climate change.”²⁰⁶

With a commitment to rebuilding domestic infrastructure and even a near unanimous Senate admission that the climate is changing, the imperative to begin work on adaptation in earnest is clear. The United States is home to a number of communities already facing the question of whether and how to relocate. These communities will only grow in number as the seas rise. In this context, it is imperative that the United States articulate a policy for which of these communities it will help to relocate, and which communities will need to seek alternative solutions and resources. At a time when U.S. policy is focused almost exclusively inward, there is a unique opportunity to formulate such a coherent policy on relocation that will help these communities prepare for the future.

This Article has laid out several guideposts for the missing pieces that must be included in that policy. Central to those guideposts is the recognition that the roles that culture, poverty, history, race, human rights, and environmental vulnerability play in the federal government’s *ad hoc* support for relocation to date are poorly understood. Ultimately, the U.S. needs to take a closer look at the underlying policy rationale for why and when public funds should flow to the wholesale relocation of environmentally

203 Philip Levine, *Florida Needs a Trump Wall to Protect It—From Climate Change*, TIME (Dec. 12, 2016), <http://time.com/4595175/donald-trump-wall-florida/>; Victoria Herrmann, *Build the Wall in Alaska*, ARCTIC INST. (Sept. 26, 2016), <http://www.thearcticinstitute.org/build-wall-alaska/>.

204 Kristen Ellingboe & Ryan Koronowski, *Most Americans Disagree with Their Congressional Representative on Climate Change*, THINK PROGRESS (Mar 8, 2016, 2:56 PM), <https://think-progression.org/most-americans-disagree-with-their-congressional-representative-on-climate-change-95dc0eee7b8f/> (citing a report by the Center for American Progress).

205 S.Amend.29 to S.Amend.2 to Keystone XL Pipeline Approval Act, S. 1, 114th Cong. (2015) (bill vetoed by President Obama, Feb. 24, 2015); Roll Call Vote on JWhitehouse Amendment No. 29, U.S. SENATE, https://www.senate.gov/legislative/LIS/roll_call_lists/roll_call_vote_cfm.cfm?congress=114&session=1&vote=00010 (last visited Nov. 17, 2017).

206 Letter from John Barrasso et al., U.S. Senate, to Lindsey Graham & Patrick Leahy, U.S. Senate Subcomm. on State, Foreign Operations, & Related Programs of Senate Comm. on Appropriations (Mar. 18, 2016), http://www.barrasso.senate.gov/public/Files/LettertoSenateAppropriations_GCF.pdf.

threatened communities. This examination must recognize that there may well be multiple policy rationales and that creating one centralized source of funding is inappropriate. Finally, whatever the outcome of these policy discussions, they must be framed not just around which communities are actively seeking relocation today, but also around those that might seek relocation as sea levels continue to rise.

Eli Keene received his J.D. from Columbia Law School in 2017. From 2016 to 2017, he worked as a research associate for AMERICA'S ERODING EDGES, a research and storytelling project on adaptation to climate change in American coastal communities.

ALASKA OIL & GAS ASS'N V. PRITZKER, 840 F.3D 671 (9TH CIR. 2016)

INTRODUCTION

On October 24, 2016, the United States Court of Appeals for the Ninth Circuit extended the line of cases allowing the U.S. National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (FWS) to rely on climate modeling by the United Nations Intergovernmental Panel on Climate Change (IPCC) to sustain listing of species as threatened under section 4 of the federal Endangered Species Act (ESA).¹ The Court held that the NMFS could, in addition to short-term (through 2049) climate models, rely on long-term (2050–2100) climate models.² In doing so, the court squarely rejected the district court's demands for highly specific and non-volatile projections of effects from climate change on the species prior to listing.

BACKGROUND

In 2008, the Center for Biological Diversity (CBD) submitted a petition to the NMFS to list the *Pusa hispida* (“Ringed Seal”), *Erignathus barbatus* (“Bearded Seal”), and *Phoca largha* (“Spotted Seal”)—collectively referred to as “sea ice seals”³—under ESA section 4.⁴ The NMFS engaged in an extensive review process, including “two rounds of peer review, several rounds of public notice and comment, and public hearings.”⁵ In 2012, the NMFS issued a final decision on the petition, listing the Beringia and Okhotsk distinct population segments (DPS) of the *Erignathus barbatus nauticus* subspecies of

1 Alaska Oil & Gas Ass'n v. Pritzker, 840 F.3d 671, 674 (9th Cir. 2016).

2 *Id.*

3 *Id.*

4 Ctr. for Biological Diversity, Petition to List Three Seal Species Under the Endangered Species Act: Ringed Seal (*Pusa hispida*), Bearded Seal (*Erignathus barbatus*), and Spotted Seal (*Phoca largha*), at ii (May 28, 2008), https://www.biologicaldiversity.org/species/mammals/bearded_ringed_and_spotted_seals/pdfs/CBD_ringed_bearded_spotted_petition.pdf; Notice of 90-Day Finding on a Petition to List the Three Ice Seal Species as a Threatened or Endangered Species, 73 Fed. Reg. 51,615, 51,616 (Sept. 4, 2008); see 16 U.S.C. § 1533 (2012).

5 *Alaska Oil & Gas Ass'n*, 840 F.3d at 674; see also *Ringed, Ribbon, Spotted, and Bearded Ice Seals*, ALASKA REG'L OFFICE OF NAT'L OCEANIC & ATMOSPHERIC ADMIN. FISHERIES, <https://alaskafisheries.noaa.gov/pr/ice-seals> (last visited Oct. 12, 2017) (indexing documents from the listing process).

Bearded Seal as threatened.⁶ This appeal followed, challenging the listing of the Beringia DPS.⁷

LISTING RULE BACKGROUND

During the review process, the NMFS established two groups to consider listing the bearded seal—a Biological Review Team⁸ and independent peer reviewers.⁹ These groups' reports observed that there are two subspecies of bearded seal: *Erignathus barbatus barbatus* (Atlantic) and *Erignathus barbatus nauticus* (Pacific).¹⁰ There is significant uncertainty surrounding population estimates for both subspecies because the seals “are widespread, [across most of the Arctic Circle], have low population densities, and spend significant time underwater” and because there are some “‘regions of intergrading’ between the . . . subspecies.”¹¹ However, the reports indicated that, within the Pacific subspecies, there are two DPSs with relatively low population mixing—Beringia (living in the Bering and Chukchi Seas) and Okhotsk (living in the Sea of Okhotsk).¹²

These reports detailed the importance of non-contiguous, shallow-water sea ice to Bearded Seals for hunting, mating, whelping, nursing, rearing of pups, and molting.¹³ The reports stated that, if the sea ice were to disappear due to changes in Earth's climate, the Beringia DPS would have to “make significant adaptations to survive,” particularly during “periods of significant life functions (birthing, nursing, hunting/foraging, molting).”¹⁴ These adaptations would likely include “whelp[ing] and nurs[ing] on shore, increasing their risk of exposure to the primary predators,” and “forag[ing] in deeper waters that lack[] the ocean floor ‘productivity’ of shallow waters,” increasing the “risk of being unable to meet their subsistence needs.”¹⁵ Most of the reports agreed that these forced adaptations “would likely have a negative effect on the Beringia DPS.”¹⁶

Because “the availability of sea ice in shallow water was crucial to the Beringia DPS's viability,” the NMFS turned to climate models to “determine the magnitude and timing of climate change's impact on the availability of sea ice in areas inhabited by the Ber-

6 Threatened Status for the Beringia and Okhotsk Distinct Population Segments of the *Erignathus barbatus nauticus* subspecies of the Bearded Seal, 77 Fed. Reg. 76,740 (Dec. 28, 2012) (to be codified at 50 C.F.R. pt. 223); see also *Alaska Oil & Gas Ass'n*, 840 F.3d at 676 n.3 (discussing listing of a DPS).

7 The Okhotsk DPS listing was also challenged, but the District Court dismissed the challenge for lack of standing, and that decision was not appealed. *Alaska Oil & Gas Ass'n*, 840 F.3d at 676 n.2.

8 *Id.* This team was comprised of “eight marine mammal biologists, a fishery biologist, a marine chemist, and a climate scientist.” *Id.*

9 *Id.* The reviewers were four independent scientists who reviewed the report by the Biological Review Team. *Id.*

10 *Id.*

11 *Id.*

12 *Id.*

13 *Id.* at 676–77 (describing importance of the sea ice to protect the pups from predators, to provide breeding habitat, and to allow access to “shallow waters where the seals have access to ‘more productive’ sea floors with a higher availability of food”).

14 *Id.* at 677.

15 *Id.*

16 *Id.*

ingia DPS.”¹⁷ The NMFS applied “six climate models to determine when the Beringia DPS’s sea ice habitat would degrade to such an extent that it would render the Beringia DPS endangered.”¹⁸ Those models relied on “observational and predictive [climate] data” from the 2007 IPCC Fourth Assessment Report (“AR4”).¹⁹

In the IPCC AR4, “climate predictions through 2050 were based on already-collected data about present-day emissions.”²⁰ The FWS had previously based—and successfully defended in the D.C. Circuit—listing the polar bear as threatened under the ESA using the through-2050 IPCC AR4 climate projections.²¹ For the 2050–2100 climate predictions, the IPCC AR4 “used contemporary data to predict potential climate trends under multiple scenarios.”²² The NMFS acknowledged that the “models showed greater volatility, and thus less reliable predictive value, in the Arctic,” and “disclosed its methodology [in accounting for uncertainty in the 2050–2100 models], as well as the limits of the IPCC models [selected].”²³

The NMFS determined that, by 2095, the Beringia DPS would become endangered because the sea ice would “have disappeared entirely during the mating, nursing, and birthing season.”²⁴ The most significant area of disagreement between the reports—and the issue of greatest controversy underlying the listing decision—surrounded the “timing and magnitude of climate change effects on the availability of sea ice.”²⁵

LISTING RULE CHALLENGERS’ ARGUMENTS AND THE DISTRICT COURT’S SUMMARY JUDGMENT

Alaska Oil and Gas Association,²⁶ North Slope Borough,²⁷ and the State of Alaska (“Plaintiffs”) filed lawsuits in the District Court for the District of Alaska, challenging the NMFS’s final listing decision.²⁸ The Plaintiffs alleged that the NMFS’s decision to list the Beringia and Okhotsk DPS as threatened under the ESA was arbitrary and capricious.²⁹ The Plaintiffs argued that: (1) the listing was not grounded in the “best scientific and commercial data available”; (2) there is a large existing population of bearded seals;

17 *Id.*

18 *Id.* at 676–77.

19 *Id.*; see also INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, FOURTH ASSESSMENT REPORT (2007), <http://ipcc.ch/report/ar4/>.

20 *Alaska Oil & Gas Ass’n*, 840 F.3d at 678.

21 *In re Polar Bear Endangered Species Act Listing*, 709 F.3d 1, 14–16, 19 (D.C. Cir. 2013).

22 *Alaska Oil & Gas Ass’n*, 840 F.3d at 678.

23 *Id.*

24 *Id.* at 677.

25 *See id.*

26 Alaska Oil and Gas Association amended its complaint to add the American Petroleum Institute as a plaintiff. *Id.* at 675 n.1.

27 North Slope Borough amended its complaint to add Northwest Arctic Borough, Arctic Slope Regional Corporation, NANA Regional Corporation, and Inupiat Community of the Arctic Slope as plaintiffs. *Id.*

28 *See id.* at 673, 675 n.1; see generally *Alaska Oil & Gas Ass’n v. Pritzker*, No. 4:13-cv-00018-RRB, 2014 WL 3726121 (D. Alaska July 25, 2014) (mem. op.) (the district court’s opinion).

29 *See Alaska Oil & Gas Ass’n v. Pritzker*, 2014 WL 3726121, at *1; 5 U.S.C. § 706(2)(A) (2012) (“The reviewing court shall . . . hold unlawful and set aside agency action, findings,

(3) the “lack of reliable population data made it impossible to determine an extinction threshold”; (4) the NMFS failed to connect sea-ice losses and continuing population viability; (5) the NMFS’s use of the IPCC AR4 post-2050 climate projections was “speculative”; (6) the NMFS unreasonably reversed prior decisions regarding the meaning of “foreseeable future” with respect to climate change; and (7) the NMFS failed to properly respond to Alaska’s public comments.³⁰ The district court dismissed Plaintiffs’ complaint challenging the listing of the Okhotsk DPS for lack of standing, but continued regarding the Beringia DPS.³¹

As to the Beringia DPS, the district court granted the Plaintiffs’ motion for summary judgment, vacating this final listing decision because the NMFS’s decision to list the Beringia DPS as threatened was arbitrary and capricious. The court based its decision on: (1) the “volatility” of long-term (post-2050) climate models relied on by the NMFS; (2) the absence of sufficient data on “adaptability and population trends, including ‘a specified time’ at which the seal would reach an extinction threshold”; and (3) the NMFS’s failure to “provide Alaska with a separate written justification for rejecting the State’s comments.”³²

ANALYSIS

The Ninth Circuit reviewed the district court’s grant of summary judgment de novo “to determine whether the NMFS’s ESA listing decision was [arbitrary and capricious].”³³ That review was “‘deferential and narrow,’ requiring a ‘high threshold for setting aside agency action,’” presuming validity of agency action that “considered the relevant factors and articulated a rational connection between the facts found and the choices made.”³⁴ After review, the Ninth Circuit reversed the district court’s grant of summary judgment.³⁵

THE NMFS’S POLICY DECISION TO LIST THE BERINGIA DPS WAS NOT ARBITRARY AND CAPRICIOUS

1. “BEST AVAILABLE SCIENCE”: THE IPCC AR4 2050–2100 CLIMATE MODELS

The Plaintiffs’ first and primary contention was that the “NMFS used climate models that cannot reliably predict the degree of global warming beyond 2050 or the effect of that warming on a subregion, such as the Arctic,” and therefore the NMFS did not rely on the “best available science” as required by the ESA.³⁶ The court of appeals was per-

and conclusions found to be . . . arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law.”).

30 *Alaska Oil & Gas Ass’n*, 840 F.3d at 675.

31 *Id.*

32 *Id.*

33 *Id.*

34 *Id.*

35 *Id.* at 686.

36 *Id.* at 679 (indicating the Ninth Circuit’s suspicion that this argument is pretext for “undermin[ing] NMFS’s use of climate change projections as the basis for ESA listings”).

suaed, asserting that the Ninth Circuit had “adopted the D.C. Circuit’s holding that the IPCC climate models constitute[] the ‘best available science’ and reasonably support[] the determination that a species reliant on sea ice likely would become endangered in the foreseeable future.”³⁷

The court “‘must defer to the agency’s interpretation of complex scientific data’ so long as the agency provides a reasonable explanation for adopting its approach and discloses the limitations of that approach” when determining what constitutes the “best available science” under the ESA.³⁸ The court of appeals reiterated that the agency had sufficiently demonstrated a reasonable explanation for adopting the IPCC climate projections through 2050.³⁹ For the IPCC climate projections from 2050–2100, the court extended its prior decisions by finding the NMFS’s reasons for relying on the 2050–2100 climate projections reasonable.⁴⁰

The court emphasized that volatility of the climate projections was not fatal as the ESA does not require “listing decisions only if underlying research is ironclad and absolute.”⁴¹ The only debate regarding the 2050–2100 climate projections surrounded “the magnitude of warming, the speed with which warming will take place, and the severity of its effect,” rather than whether some warming will occur or sea ice will melt.⁴² Further, the “NMFS provided a reasonable and scientifically supported methodology for addressing volatility in its long-term climate projections.”⁴³ Accordingly, the court concluded that the NMFS had done all that the ESA requires in “provid[ing] a rational and reasonable basis for evaluating the bearded seal’s viability over 50 and 100 years . . . [and] candidly disclos[ing] the limitations of the available data and its analysis.”⁴⁴

“FORESEEABLE FUTURE”: DIVERGING FROM PRIOR USE OF THE IPCC CLIMATE MODELS

Plaintiffs argued that the “NMFS’s use of longer-term climate projections [impermissibly] diverges from its previous practice of setting the year 2050 as the outer boundary of its ‘foreseeable future’ analysis.”⁴⁵ The NMFS argued, in contrast, that “the agency may determine the timeframe for its ‘foreseeable future’ analysis based upon the best data available for a particular species and its habitat.”⁴⁶ The court observed that an agency can change its policy position, but it “must provide a reasoned explanation for adoption

37 *Id.* (citing *Alaska Oil & Gas Ass’n v. Jewell*, 815 F.3d 544, 558–59 (9th Cir. 2016), and *In re Polar Bear Endangered Species Act Listing*, 709 F.3d 1, 4–6, 9–11 (D.C. Cir. 2013)). These cases surrounded polar-bear listing and critical-habitat designation and relied upon the IPCC model projections through 2050.

38 *Alaska Oil & Gas Ass’n*, 840 F.3d at 679.

39 *Id.*

40 *Id.* at 679–81.

41 *Id.* at 680.

42 *Id.*

43 *Id.*

44 *Id.* at 681.

45 *Id.*

46 *Id.*

of its new policy—including an acknowledgement that it is changing its position and if appropriate, any new factual findings that may inform that change.”⁴⁷

The NMFS indicated that it had “changed its interpretation of ‘foreseeable future’ to a more dynamic, species-specific and evidence-based definition” following a 2009 memorandum from the Office of the Solicitor of the Department of the Interior to the FWS.⁴⁸ That memorandum provides a “thorough and reasoned explanation for its recommendation that [the FWS] adopt a data-driven threat analysis for future harm . . . [and] states explicitly that the policy change seeks to conform to federal appellate decisions requiring ESA analyses to adhere to the statute’s ‘best data available’ standard.”⁴⁹ Based on the support for the change in position in the record, the court found that the “NMFS’s changed approach was neither arbitrary nor capricious.”⁵⁰

NEXUS BETWEEN MELTING SEA ICE AND BERINGIA DPS’S VIABILITY

Plaintiffs next contended that the “NMFS should have adopted a ‘wait and see’ approach” to listing the Beringia DPS because there had not yet been a population decline of the seals and the “NMFS has not provided sufficient evidence to demonstrate a nexus between the loss of sea ice and the bearded seal’s risk of future extinction.”⁵¹ The district court agreed and took particular issue with the “NMFS’s disclosure that it could only provide a range for the Beringia DPS baseline population.”⁵² The district court reasoned that because the NMFS could not provide “predicted ‘population reduction,’ ‘extinction threshold,’ or ‘probability of reaching that threshold’ . . . there was no reasonable basis for listing the Beringia DPS as threatened.”⁵³

The Ninth Circuit found “the district court’s effort to impose requirements for which data is unavailable or does not exist . . . at odds with the ESA.”⁵⁴ The court reasoned that the ESA merely required the NMFS to show that it “considered the relevant factors and articulated a rational connection between the facts found and the choices made.”⁵⁵ The NMFS, despite lacking some specific population data, had established that “based on the best data available at the time of listing, a decrease in sea ice availability would likely have a significant adverse effect on the bearded seal population.”⁵⁶ The “[u]ncertainty regarding the speed and magnitude of that adverse impact . . . d[id] not invalidate data . . . that reasonably support[ed] the conclusion that loss of habitat at key life stages [would] likely jeopardize the Beringia DPS’s survival over the next 85 years.”⁵⁷

47 *Id.* at 682.

48 *Id.*

49 *Id.*

50 *Id.*

51 *Id.* at 682–83.

52 *Id.* at 683.

53 *Id.*

54 *Id.*

55 *Id.* at 683–84.

56 *Id.* at 683.

57 *Id.*

“LIKELY TO BECOME ENDANGERED”: MAGNITUDE OF
IMPACT FROM CLIMATE CHANGE

Plaintiffs finally argued that the requirement that the Beringia DPS be “likely to become endangered” required the NMFS “to demonstrate that the impact of climate change on the Beringia DPS ‘will be of a magnitude that places the species “in danger of extinction” by the year 2100.’”⁵⁸ However, the court quickly dismissed this argument—“neither the ESA nor our case law requires the agency to calculate or otherwise demonstrate the ‘magnitude’ of a threat to a species’ future survival before it may list a species as threatened.”⁵⁹ The court “agree[d] with the D.C. Circuit that the NMFS is not required to define ‘likely’ in terms that require specific quantitative targets.”⁶⁰

ESA SECTION 4(i) RESPONSE TO STATE COMMENTS

Alaska separately advanced the argument that the “NMFS failed to comply with its obligations under the ESA to provide the State with a written justification explaining why it ‘fail[ed] to adopt regulations consistent with the [state] agency’s comments.’”⁶¹ The court of appeals rejected this argument as “foreclosed in light of our holding in *Alaska Oil and Gas Association v. Jewell*.” Under that precedent, ESA section 4(i) requires “that the justification for rejecting a state agency’s comments be addressed in writing,” but “does not foreclose cross-referencing other publicly available documents” or forbid “respond[ing] with a single letter to the State” where “several state agencies submit a consolidated comment letter.”⁶² Because the NMFS responded in writing to the lead state agency and because the record indicates the NMFS responded to Alaska’s substantive comments, the court of appeals held that “[a]lthough Alaska may disagree with the NMFS’s resolution of the conflicting opinions and its final listing determination, the State received the notice, opportunity, and process required by [the ESA].”⁶³

CONCLUSION

The Ninth Circuit directly rejected the district court’s requirement that the NMFS produce highly specific and non-volatile projections of effects from climate change on the species prior to listing the species as threatened. In upholding the NMFS’s listing of the Beringia DPS as threatened, the court extended the line of cases accepting agency use of the IPCC climate modeling to sustain ESA listings.⁶⁴ In July 2017, the Plaintiffs

58 *Id.* at 684.

59 *Id.*

60 *Id.*

61 *Id.* at 685.

62 *Id.*

63 *Id.* at 685–86.

64 *Id.*; *Alaska Oil & Gas Ass’n v. Jewell*, 815 F.3d 544 (9th Cir. 2016); *In re Polar Bear Endangered Species Act Listing*, 709 F.3d 1 (D.C. Cir. 2013).

filed petitions for certiorari with the Supreme Court,⁶⁵ which were denied in late January 2018.⁶⁶

David J. Klein is a principle in Lloyd Gosselink Rochelle & Townsend, P.C.'s Water and Districts Practice Group in Austin, Texas, where he focuses on representing water utilities, municipalities, water districts, water authorities, and landowners with their water supply, water quality, and water and sewer utility service interests. Mr. Klein earned his J.D. from The John Marshall Law School in Chicago, Illinois.

Jori Reilly-Diakun is a third-year student at The University of Texas School of Law and the Editor-in-Chief of the TEXAS ENVIRONMENTAL LAW JOURNAL.

NATURAL RESOURCES

TOWN OF DISH V. ATMOS ENERGY CORP., 519 S.W.3D 605 (TEX. 2017)

INTRODUCTION

On May 19, 2017, the Texas Supreme Court reversed an earlier decision by the Amarillo Court of Appeals addressing the accrual of a cause of action for trespass.¹ Justice Brown wrote that the cause of action accrued when the town and residents began making complaints about noise and odor from the compressor stations.² Therefore, the court held that the two-year statute of limitations barred the Town of Dish (Dish) residents' trespass and nuisance claims.³

BACKGROUND

On the edge of Dish, several energy companies owned four natural-gas compressor stations and a metering station (together known as "Ponder Station").⁴ The first compressor station came online in February 2005, and the last one in May 2008; the metering station (owned by Enterprise) was completed in June 2009.⁵ As early as 2006, Dish

65 Petition for Writ of Certiorari, *Alaska Oil & Gas Ass'n v. Ross*, No. 17-133 (U.S. July 21, 2017); Petition for Writ of Certiorari, *Alaska Oil & Gas Ass'n v. Ross*, No. 17-118 (U.S. July 27, 2017).

66 *Ala. Oil & Gas Ass'n v. Ross*, 2018 WL 491542 (Jan. 22, 2018); *Alaska v. Ross*, 2018 WL 491541 (Jan. 22, 2018).

1 *Town of Dish v. Atmos Energy Corp.*, 519 S.W.3d 605, 605 (Tex. 2017).

2 *Id.*

3 *Id.* at 606.

4 *Id.*

5 *Id.* at 606–07.

residents began complaining about the noise and odor emanating from these facilities.⁶ In the fall of 2006, when the compressor station owned by Atmos Energy Corporation (“Atmos”) came online, Dish residents invited Atmos representatives to a town meeting to discuss noise and odor complaints.⁷ The meeting, the court noted, did not resolve residents’ concerns.⁸

In 2008 and 2009, with more compressor stations online, residents started to submit complaints to the Texas Commission on Environmental Quality (TCEQ) and the Texas Department of State Health Services (TDSHS).⁹ The subsequent investigations led by the TCEQ and TDSHS showed no evidence of violations or harmful effects to the residents from the stations.¹⁰ TCEQ determined that there were no “nuisance odor,” violations, or any chemicals “measured above levels of concern.”¹¹ Despite the results, residents’ complaints persisted.¹² Later, in September 2009, the residents commissioned another environmental study, called the “Wolf Eagle Report.”¹³ Its air analysis “confirmed the presence in high concentrations of carcinogenic and neurotoxin compounds in ambient air near and/or on residential properties.”¹⁴ Such compounds, the report claimed, exceeded what would “normally be anticipated in ambient air in an urban residential or rural residential area,” and were metabolites of “known human carcinogens and exceeded both Short-term and Long-term effective screening levels (ESL) according to TCEQ regulations.”¹⁵

RESIDENTS’ CLAIMS

Despite the claims in the Wolf Eagle Report, the residents did not take any legal action until early 2011.¹⁶ On February 28, 2011, the Town of Dish and eighteen of its residents sued the energy companies, alleging trespass and nuisance injuries.¹⁷ The residents argued that their claims for trespass and nuisance did not accrue until the metering station was added to Ponder Station in June 2009.¹⁸ To them, it was after “the full force and cumulative effect of all of the parts of the completed [Ponder Station] came to bear” that they felt “that a nuisance and trespass was occurring and that a substantial interference with their property use and enjoyment was taking place.”¹⁹

6 *Id.* at 607.

7 *Id.* at 609.

8 *Id.* at 610.

9 *Id.* at 610–11.

10 *Id.*

11 *Id.* at 610.

12 *Id.* at 611.

13 *Id.*

14 *Id.* at 612–13 n.7.

15 *Id.*

16 *Id.* at 607.

17 *Id.*

18 *Id.* at 609.

19 *Id.* at 607.

In eighteen affidavits submitted with their claims, the residents stated that they noticed a “significant change in the noise being emitted” from the Ponder Station from September 2009 to early 2010.²⁰ Before that, each resident stated that the noises were “occasionally loud and sometimes annoying,” but they felt the noises did not rise “to the level of a nuisance.”²¹ Furthermore, the residents stated in the affidavits that “until disclosure of the findings of the Wolf Eagle Report,” they were unaware of the “dangerous substances that were being emitted into the air from the facilities.”²²

The District Court of Tarrant County granted a series of summary judgment motions brought by the energy companies on various grounds, including limitations.²³ It then granted a final, take-nothing judgment in favor of the energy companies.²⁴ The Amarillo Court of Appeals reversed the trial court’s ruling on limitations.²⁵ It held that the energy companies failed to prove as a matter of law that the residents’ claim accrued before February 28, 2009.²⁶ It held the residents’ summary judgment evidence (affidavits and the Wolf Eagle Report) raised “at least a scintilla of evidence that [the residents] were harmed by noise, odors, light, and hazardous chemicals emanating from [the energy companies’] facilities.”²⁷

After the court’s decision, the energy companies appealed.

TEXAS SUPREME COURT’S DECISION

The Texas Supreme Court was asked to decide when the residents’ trespass and nuisance claims accrued, and consequently, whether they were barred by the two-year statute of limitations.

The energy companies argued that the residents’ claims accrued before February 28, 2009, two years before the residents sued in the trial court, if they ever accrued in the first place.²⁸ The residents of Dish, on the other hand, argued that their claims accrued in the summer of 2009.²⁹ First, they argued that they did not experience the full brunt of the Ponder Station’s operations until the metering station was completed in June 2009.³⁰ Second, they argued their eighteen individual affidavits stating the problems became substantially worse in late 2009 to early 2010 amount to some evidence that their claims did not accrue until then.³¹ And third, they cited the Wolf Eagle Report as the first time they became aware dangerous chemicals were in the air.³²

20 *Id.*

21 *Id.*

22 *Id.*

23 *Id.* at 606.

24 *Id.* at 605.

25 *Id.* at 607.

26 *Id.*

27 *Id.* at 608.

28 *Id.* at 609.

29 *Id.* at 607.

30 *Id.* at 611.

31 *Id.*

32 *Id.*

The Court rejected the Dish residents' first argument, holding that there was no evidence showing that the addition of the metering station elevated a mere annoyance to an actual legal nuisance.³³ The Court wrote that there was no evidence suggesting the metering station contributed to the source of the residents' complaints.³⁴ The residents, the Court wrote, offered no evidence refuting Enterprise's claim that the metering facilities were "fundamentally different from the other energy companies' and that a metering station cannot be a source of the residents' complaints."³⁵ Also, the Court noted that the Wolf Eagle Report could not prove to a fact that Enterprise produced any of the compounds reported.³⁶

The Court rejected the Dish residents' second argument that the eighteen individual affidavits amount to evidence that their claims did not accrue until the summer of 2009. According to the court, an accrual date of action must be based on objective evidence instead of subject attestations.³⁷ The residents' subjective beliefs, the Court wrote, could not set the claims' accrual date.³⁸ Citing the case of *Holubec v. Brandenberger*, 111 S.W.3d 32, 37 (Tex. 2003), the Court wrote that a condition is a nuisance when it substantially interferes with "the use and enjoyment of land by causing unreasonable discomfort or annoyance to *persons of ordinary sensibilities* attempting to use and enjoy it."³⁹ Such unreasonableness, the Court stated, must be determined on an objective standard, not on the "subjective response of any particular plaintiff."⁴⁰

Although the residents did not plead as such, the Court rejected the Dish residents' reliance on the Wolf Eagle Report to invoke the discovery rule.⁴¹ The Dish residents' statements in their affidavits that they were unaware of the dangerous substances until reading the report, the Court wrote, did not amount to proof of when a legal injury occurred.⁴² To the Court, the Wolf Eagle Report demonstrated that the residents were already on notice of their claims, or had sufficient knowledge to be put on inquiry notice of them,⁴³ because prior Texas case law held that "once a claimant learns of a wrongful injury, the statute of limitations begins to run even if the claimant does not yet know the specific cause of the injury."⁴⁴

Finally, the Court addressed the Dish residents' limitations argument on the basis of *Natural Gas Pipeline Company of America v. Justiss*.⁴⁵ In *Justiss*, residents in Lamar County brought suit alleging that a compressor station's noise and odor constituted permanent nuisance.⁴⁶ The residents in *Justiss* began complaining shortly after the station came

33 *Id.*

34 *Id.*

35 *Id.* at 608.

36 *Id.*

37 *Id.* at 613.

38 *Id.*

39 *Id.* (emphasis added).

40 *Id.*

41 *Id.* at 612.

42 *Id.*

43 *Id.* at 613.

44 *Gonzales v. Sw. Olshan Found. Repair Co.*, 400 S.W.3d 52, 58 (Tex. 2013).

45 *Nat. Gas Pipeline Co. of Am. v. Justiss*, 397 S.W.3d 150 (Tex. 2012).

46 *Id.*

online in 1992, but did not file suit until 1998.⁴⁷ The Court sided with the residents in *Justiss*. The court distinguished *Dish* from *Justiss*—in *Justiss* “objective evidence corroborated the plaintiff’s claims that conditions worsened in 1997 and 1998.”⁴⁸ But in *Dish*, only subjective evidence such as residents’ affidavits was presented. The decision of *Justiss*, the Court wrote, does not mean that “mere subjective affidavit evidence can defeat a limitations defense.”⁴⁹

CONCLUSION

The Court determined that the claims brought by the residents in *Dish* were barred by the two-year statute of limitations. This case can serve as a warning to Texas residents to be diligent in bringing nuisance or trespass claims.

Patrick Leahy is a lawyer with Baker Botts in Austin, Texas. He works on a wide range of litigation, infrastructure, and regulatory compliance matters at the state and federal levels. His environmental experience includes air and water quality, enforcement, and waste issues. He also provides transactional support relating to air, water, waste and natural resources issues.

Zimei Fan is a second-year law student at The University of Texas School of Law and a staff editor for the TEXAS ENVIRONMENTAL LAW JOURNAL.

PUBLICATIONS

ALEXANDER KAZAM, *FROM INDEPENDENCE HALL TO THE STRIP MALL: APPLYING COST-BENEFIT ANALYSIS TO HISTORIC PRESERVATION*, 47 ENVTL. L. 429 (2017)

Historic preservation laws, originally used sparingly to protect sites of historic significance, have increasingly become used to entirely stop development.¹ In particular, in his article, Alexander Kazam argues the laws overemphasize the benefits of preserving historical buildings over the costs of said saving.²

In his article, Kazam reviews the history of historic preservation laws. The national catalyst for the increase in historic preservation law in an urban planning context was the destruction of the original Pennsylvania Railroad Station in New York City in 1963.³ The railroad company itself sought to destroy the station in an effort to recover

47 *Id.* at 151.

48 *Town of Dish*, 519 S.W.3d at 613.

49 *Id.*

1 Alexander Kazam, *From Independence Hall to the Strip Mall: Applying Cost-Benefit Analysis to Historic Preservation*, 47 ENVTL. L. 429 (2017).

2 *Id.*

3 *Id.* at 430.

from a business downturn.⁴ Though this particular act is used as a primary example of the potential upside of historic preservation, Kazam argues that such use is misleading.⁵ The benefits to preserving the Pennsylvania Railroad Station were high, notably for its architectural significance, but the costs were also low.⁶ This stands in stark contrast to historical preservation today.⁷

Preservation boards across the nation have stepped up their use of historic preservation laws.⁸ Protections have evolved from preserving particular buildings to safeguarding entire historic districts.⁹ The attractive features of historic preservation include the protection of cultural heritage, aesthetically significant architecture, the promotion of tourism, and the creation of a distinct “sense of place.”¹⁰ However, the implementation of historic preservation has accelerated.¹¹ More than a quarter of buildings in Manhattan have been protected under such laws, suppressing development of both the buildings themselves and the areas around them.¹²

One reason for the proliferation of such laws is that the decisions to protect a building or area are often left to local preservation agencies rather than federal ones.¹³ This becomes an issue because, while federal agencies must apply a cost-benefit analysis (CBA) to decisions, local preservation boards often have no such requirement.¹⁴ Kazam argues that regulatory review would be a stronger check on over-landmarking than judicial review.¹⁵ Specifically, he argues that an application of a CBA to local historic preservation efforts would lead to preferable results in the realm of the use of historic preservation laws.¹⁶ Finally, he suggests ways to implement such a system at the local government scale.¹⁷

For much of the Nineteenth Century, historic preservation was largely an effort by private citizens.¹⁸ It was not until the late Nineteenth Century that the federal government began to take a role in historic preservation.¹⁹ Early federal efforts in this field came in the form of national parks, such as Yellowstone.²⁰ State and local governments also got involved in historic preservation through land use regulations. In *Village of Euclid v. Amber Realty Company*,²¹ the Supreme Court upheld the constitutionality of zon-

4 *Id.*

5 *Id.* at 431.

6 *Id.*

7 *Id.*

8 *Id.* at 432.

9 *Id.*

10 *Id.* at 432–33.

11 *Id.* at 433.

12 *Id.* at 434.

13 *Id.* at 436.

14 *Id.*

15 *Id.*

16 *Id.*

17 *Id.*

18 *Id.* at 437.

19 *Id.*

20 *Id.*

21 *Village of Euclid v. Ambler Realty Co.*, 272 U.S. 365 (1926).

ing laws, allowing for an increase in such laws across the nation.²² The first of these was the creation of a “historic district” by the city of Charleston, South Carolina, with more cities following suit.²³

The modern form of historic preservation emerged in the 1960s, following the destruction of the Pennsylvania Railroad Station.²⁴ Federal solutions to concerns about large-scale infrastructure projects came from the National Historic Preservation Act (NHPA), the National Environmental Policy Act, and the Department of Transportation Act’s section 4(f).²⁵ Ultimately, though, the federal government has less sway in historic preservation than state and local governments.²⁶ The federal laws are largely directed at raising awareness, while the bulk of preservation is performed on a local scale.²⁷ This is reflected by the extreme increase in local preservation ordinances, from only around a dozen in the 1960s to more than 500 by 1978.²⁸ The National Register of Historic Places, set up by the NHPA, largely serves as an example for similar local ordinances.²⁹

Historically, judicial review of the scope of landmark designation has been deferential.³⁰ The Supreme Court opened the gates to local preservation in *Penn Central Transportation Company v. City of New York*,³¹ prohibiting the building of an office tower on the top of Grand Central Terminal.³² The Court reasoned that broad applicability was acceptable, in part because it did not single out individuals.³³ Because judicial review is unlikely to check the expansion of historic preservation laws, Kazam suggests the application of a federal CBA to local level historic preservation.³⁴

At the most basic level, a CBA simply weighs the benefits of an action against the costs of said action.³⁵ In modern form, federal CBAs involve a formulaic weighing of benefits and costs.³⁶ The system has benefits ranging from transparency to rationality, but may suffer from an anti-regulatory bias.³⁷ Executive Order 12,291 forced agencies to conduct a Regulatory Impact Analysis (RIA) for the creation of all “major” rules.³⁸ The

22 Kazam, *supra* note 1, at 437.

23 *Id.* at 437–38.

24 *Id.* at 438.

25 *Id.*; see National Historic Preservation Act, 16 U.S.C. §470 et seq.; National Environmental Policy Act, 42 U.S.C. §4321 et seq.; and the Department of Transportation Act regulations, 23 C.F.R. Pt. 774.

26 Kazam, *supra* note 1, at 438.

27 *Id.*

28 *Id.*

29 *Id.* at 439.

30 *Id.* at 441.

31 *Penn Cent. Transp. Co. v. City of New York*, 438 U.S. 104, 152 (1978).

32 Kazam, *supra* note 1, at 441.

33 *Id.* at 442.

34 *Id.* at 446.

35 *Id.* at 447.

36 *Id.*

37 *Id.*

38 *Id.* at 448; 46 Fed. Reg. 13,193 (Feb. 17, 1981).

Office of Management and Budget (OMB) outlines guidelines for such analyses.³⁹ These guidelines include the requirement for a statement outlining the need for regulatory action, a presentation of the range of regulatory approaches, including the lack of regulation, and a weighing of “benefits and costs—[both] quantitative and qualitative—of the proposed [regulatory] action and the main alternatives.”⁴⁰ The OMB finds monetization of such costs preferable, and demands explanation when such quantification is not feasible.⁴¹

One technique recognized by the OMB for assessing the value of difficult-to-quantify benefits and costs is “contingent valuation,” a method employing surveys often used to assess non-market resources, including environmental preservation.⁴² Contingent valuation involves asking survey populations to assess how much they would pay for an identified goal.⁴³ Another technique is “revealed preference.”⁴⁴ Revealed preference assesses what a prospective population would be willing to pay based on current behaviors in established markets.⁴⁵

The use of CBAs in decision-making has several upsides as well as valid criticisms.⁴⁶ Especially in the field of historic preservation, CBAs can ameliorate the effects of extraneous political influence.⁴⁷ Strong or well-funded advocacy groups in favor of historic preservation can often push their agenda on the strength of the benefits of historic preservation, and CBAs would help account for costs that are otherwise overlooked.⁴⁸ CBAs also help avoid cognitive errors, such as allowing memory to affect assessments of a scenario.⁴⁹ These benefits can be seen in the example of Penn Station; the fact that the station was represented at the height of its glory meant that its destruction rang more negatively than assessing its value at the end of its life.⁵⁰

CBA detractors argue that CBAs have a bias skewing towards anti-regulation and against the poor.⁵¹ The costs of regulation are often easier to assess than the benefits.⁵² However, internal studies have shown that, rather than under-assessing benefits, benefits tend to be exaggerated in CBAs.⁵³ Additionally, Executive Order 12,866 requires agencies to make assessments that give different weight to low-income population results.⁵⁴

39 Kazam, *supra* note 1, at 449; U.S. OFFICE OF MGMT. & BUDGET, EXEC. OFFICE OF THE PRESIDENT, CIRCULAR A-4 (2003) [hereinafter Circular A-4], <https://perma.cc/KM9F-BU28>; OFFICE OF MGMT. & BUDGET, EXEC. OFFICE OF THE PRESIDENT, REGULATORY IMPACT ANALYSIS: A PRIMER (2011), <https://perma.cc/F4FE-YKJZ>.

40 Circular A-4, *supra* note 39, at 2.

41 Kazam, *supra* note 1, at 449–509 (citing Circular A-4, *supra* note 39, at 26–27).

42 Kazam, *supra* note 1, at 450 (citing Circular A-4, *supra* note 39, at 22).

43 Kazam, *supra* note 1, at 450 (citing Circular A-4, *supra* note 39, at 22).

44 Kazam, *supra* note 1, at 450 (citing Circular A-4, *supra* note 39, at 20).

45 Kazam, *supra* note 1, at 450 (citing Circular A-4, *supra* note 39, at 20).

46 Kazam, *supra* note 1, at 452.

47 *Id.*

48 *Id.*

49 *Id.* at 452–53.

50 *Id.* at 453.

51 *Id.* at 454.

52 *Id.*

53 *Id.*

54 *Id.*

Without debating the merits of CBA, Kazam argues that application to local historic preservation is at least worth consideration.⁵⁵ At its core, his argument is that “preservation has value, but restrictions on development are costly.”⁵⁶ Especially today, where historic preservation has become widespread and real estate costs have increased, the conflict can be detrimental to economic development.⁵⁷ In addition, the measurement of benefits and costs has become much more achievable in the modern era.⁵⁸ Cities aggregate data from urban areas, and modern economics has quantified much of what would have been considered incalculable in the past.⁵⁹

When applying CBAs to modern historic preservation, costs tend to be easier to assess.⁶⁰ In proposals for redevelopment, the proposed cost is a tangible baseline for cost evaluation.⁶¹ When a complete proposal is not being fielded, historic information can be used to estimate a cost of the redevelopment.⁶² Techniques have also been developed to assess the costs of development on the affordability of housing and costs to the environment.⁶³

The benefits of historic preservation tend to focus first on cultural or aesthetic considerations.⁶⁴ CBA measurements of the benefits of redevelopment (or denial of redevelopment) might thus focus on survey results from the surrounding population.⁶⁵ In addition, the benefits calculation can also take into account the economic effects of tourism for a site or district being considered for historic preservation or redevelopment.⁶⁶

The final consideration is the implementation of CBAs at the local level.⁶⁷ First, in assessing *when* to use a CBA, it can be helpful to examine the federal guidelines, where CBAs are implemented in “major” rule making decisions.⁶⁸ Second, CBAs can be implemented at the state level, where resources are more plentiful than in individual municipalities, and CBA analysts can be placed on landmark boards, or in positions with mayors’ offices or agencies working with city councils.⁶⁹

Historic preservation’s spread has forced the reality that the costs and the benefits must be reconsidered in assessing the effect on major urban development.⁷⁰ Cities appear to protect buildings and districts without regard for the ultimate costs.⁷¹ Kazam argues persuasively that the implementation of a federal-style CBA at a local level can be an

55 *Id.* at 457.

56 *Id.* at 458.

57 *Id.*

58 *Id.*

59 *Id.*

60 *Id.* at 459.

61 *Id.* at 460.

62 *Id.*

63 *Id.* at 462.

64 *Id.* at 465.

65 *Id.* at 466.

66 *Id.*

67 *Id.* at 468.

68 *Id.*

69 *Id.* at 469.

70 *Id.*

71 *Id.* at 470.

effective tool for assessing the costs and benefits of historic preservation, as opposed to the seemingly haphazard amount of buildings and sites being protected under the auspices of historic preservation.⁷²

Joshua D. Katz is an attorney with Bickerstaff Heath Delgado Acosta L.L.P. in Austin. Mr. Katz practices environmental law, administrative law, water law, electric utility regulation, and related litigation. He received his law degree from the University of Houston Law Center.

Phillip Chang is a second-year law student at The University of Texas School of Law and a staff editor of the TEXAS ENVIRONMENTAL LAW JOURNAL.

SOLID WASTE

D.C. CIRCUIT DECISION ESTABLISHES CHANGES TO RCRA DEFINITION OF SOLID WASTE IN RECENT RULING

INTRODUCTION

Recently, the D.C. Circuit addressed industry and environmental challenges to the EPA's definition of "solid waste" in the Resource Conservation and Recovery Act ("RCRA").¹ The EPA last updated this definition with its 2015 final rule to strengthen incentives for the proper management of secondary materials meant for recycling.² The Court's ruling partially affirmed and partially struck down the EPA's revisions to the definition of solid waste, eliminating requirements adopted in the past few years and affirming others.³ Additionally, the Court allowed the EPA to defer deciding whether to implement two additional conditions to the list of 32 exclusions from the definition of solid waste.⁴ These two conditions regard containment of waste and a duty to notify the EPA of intent to use an exclusion.⁵ As part of the 2015 final rule, the EPA implemented four mandatory legitimacy factors designed to detect sham recycling of secondary materials.⁶ In its decision, the Court vacated one of the four legitimacy factors the agency considers in determining whether a generator meets an exemption.⁷ Last, the Court's decision vacated the Verified Recycler Exclusion, except for its emergency preparedness

72 *Id.*

1 *See generally* *Am. Petroleum Inst. v. EPA*, 862 F.3d 50 (D.C. Cir. 2017); Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901 *et seq.*

2 Definition of Solid Waste, 80 Fed. Reg. 1,694, 1,719-20 (Jan. 13, 2015) (to be codified at 40 C.F.R. pts. 260-261) [hereinafter 2015 Rule]; *see also* *Am. Petroleum Inst.*, 862 F.3d at 57-7.

3 *See id.* at 61, 67-8.

4 *Id.* at 74.

5 *Id.* at 73-4.

6 2015 Rule, 80 Fed. Reg. at 1,719-20.

7 *Am. Petroleum Inst.*, 862 F.3d at 63.

provision and the expanded containment requirement.⁸ Instead, the Court reinstated the 2008 Transfer-Based Exclusion.⁹

BACKGROUND

To be a “hazardous waste” under the EPA’s definition, a substance must first be classified as a “solid waste” under RCRA.¹⁰ The EPA’s implementing regulations broadly define a solid waste as a material of any physical form (1) discarded by abandonment, (2) being inherently waste-like, (3) recycled in specific ways that are considered waste management, or (4) being a military munition.¹¹ However, the EPA has also specified numerous exclusions to this definition.¹² The EPA has amended the definition of solid waste in its RCRA regulations several times, including in 2008¹³ and most recently in 2015.¹⁴ The Court’s ruling in *American Petroleum Institute v. EPA* addresses one particular exclusion from the definition of solid waste, two of the four factors promulgated by the EPA to ensure the legitimacy of the exclusion-covered action taken by a waste generator, and to a lesser extent, two further conditions the environmental petitioners hoped to see added to the definition. This Development addresses the Court’s holding on each of these issues in turn, and examines likely outcomes related to the decision.

KEY ELEMENTS OF THE REGULATORY DEFINITION OF SOLID WASTE INVALIDATED

The D.C. Circuit examined and modified two key functions of the EPA’s definition of solid waste. First, the Court studied the legitimacy factors the EPA established to ensure a generator was not taking advantage of an exclusion to the definition of solid

8 *Am. Petroleum Inst.*, 862 F.3d at 72; 2015 Rule, 80 Fed. Reg. at 1,695.

9 *Am. Petroleum Inst.*, 862 F.3d at 76; 2015 Rule, 80 Fed. Reg. at 1,695.

10 2015 Rule, 80 Fed. Reg. at 1,696.

11 40 C.F.R. § 261.2(a) (2015); 42 U.S.C. § 6903 (27) (defining “solid waste” as; any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under section 1342 of title 33, or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923) [42 U.S.C. 2011 et seq.]).

12 *See, e.g.*, 40 C.F.R. §§ 260.30, 260.31, 261.4.

13 *See* Definition of Solid Waste, 73 Fed. Reg. 64,668, 64,701–64,703 (Oct. 30, 2008) [hereinafter 2008 Rule].

14 *Id.*; 2015 Rule, 80 Fed. Reg. at 1,694.

waste.¹⁵ Second, the Court reviewed and altered one specific exclusion to the solid-waste definition, changed by the EPA in 2015.¹⁶

The legitimacy factors are intended to ensure waste generators intend to participate in a valid recycling.¹⁷ The EPA's 2008 final rule on the definition of solid waste introduced an earlier version for the first two legitimacy factors.¹⁸ It also introduced two less frequently relevant considerations, which resemble the third and fourth legitimacy factors.¹⁹ The 2015 final rule slightly altered these tests, made all four factors mandatory, and applied them to all exclusions under the regulatory definition of solid waste.²⁰

Industry petitioners challenged whether either of the last two factors, known as Factor 3 and Factor 4, need apply. The Court largely upheld Factor 3, which requires that secondary materials be handled as "valuable commodities."²¹ Factor 3 imposes a relatively germane requirement that generators must contain and label materials²² and allows generators great flexibility in fulfilling those requirements.²³ The Court held the EPA maintains the authority to impose such a requirement "so long as it is such that an inference of 'sham' or illegitimacy would logically flow from a firm's non-compliance."²⁴

Despite leaving Factor 3 largely intact, the D.C. Circuit vacated Factor 4 except for instances where it is part of other specific exclusions.²⁵ Factor 4 requires that a product being recycled must "be comparable to a legitimate product or intermediate."²⁶ The factor generally takes two tracks: the first for materials that have a legitimate analog, and the second for materials that do not.²⁷ The Court found fault with the analog track—specifically the requirement that the proportion of hazardous material in the recycled product must be less than or equal to that of the analog to the recycled products.²⁸ The Court classified this requirement as overly broad, given industry standards and the difficulty of qualifying for the few, narrow exceptions to the requirements.²⁹ In some cases, an analog material may have a hazardous material ratio dramatically lower than required. In such a case, the rule would impose an arbitrary and overly-strict burden on generators

15 *Am. Petroleum Inst. v. EPA*, 862 F.3d 50, 56–63 (D.C. Cir. 2017) (reviewing factors 3 and 4).

16 *Id.* at 64–72 (reviewing the Verified Recycler Exclusion).

17 *See id.* at 56–7.

18 2008 Rule, 73 Fed. Reg. at 64,701–64,703 .

19 *See id.* at 64,702–703 [*EPA's Final Revisions to the Definition of Solid Waste*, BEVERIDGE & DIAMOND, P.C. (Oct. 30, 2008), <http://www.bdlaw.com/news-406.html> (summary and analysis of the 2008 Rule).

20 2015 Rule, 80 Fed. Reg. 1,694, 1,700, 1,703 (Jan. 13, 2015).

21 *Am. Petroleum Inst.*, 862 F.3d at 57–8.

22 *Id.*

23 *See id.*

24 *Id.* at 58.

25 *Id.* at 63.

26 *Id.* at 57 (quoting 40 C.F.R. § 260.43(a)(4) (2015)).

27 40 C.F.R. § 260.43(a)(4)(i)–(ii) (2015).

28 *Am. Petroleum Inst.*, 862 F.3d at 60.

29 *See id.* at 60–1.

seeking to rely on an exclusion.³⁰ Although the Court mostly vacated Factor 4, it left it intact where the requirement is already contained in another specific exclusions.³¹

In addition to making changes to the legitimacy factors, the Court also revised one of the specific exclusions from the definition of solid waste. The EPA's 2015 final rule sought to replace an exclusion from the 2008 rule known as Transfer-Based Exclusion with a new exclusion known as the Verified-Recycler Exclusion.³² Finding the latter overly burdensome to generators, the Court kept two of the new provisions under the Verified-Recycler Exclusion, but otherwise reinstated the 2008 Transfer-Based Exclusion. One of the new provisions the Court upheld requires generators to meet certain emergency preparedness standards.³³ The Court also affirmed an expanded requirement for materials to be properly contained.³⁴ The Court held that both accepted changes were generally consistent with RCRA and that the EPA had good reasons for changing the previous rule.³⁵

Otherwise, the Court expressly vacated the Verified-Recycler Exclusion, which required recyclers to obtain a variance from the EPA, citing a lack of evidence,³⁶ and reasoning that the EPA failed to show a rational basis for the increased regulation.³⁷

CONTAINMENT AND NOTIFICATION CONDITIONS REMAIN DEFERRED

In 2011, the EPA sought to add requirements that solid waste be properly contained and that generators notify the EPA of their desire to take advantage of a specific exclusion.³⁸ The EPA also sought to implement the four legitimacy factors discussed above. In the end, the EPA only implemented the legitimacy factors and deferred a decision on containment and notification.³⁹ The environmental petitioners in this case requested that the D.C. Circuit impose these requirements.⁴⁰ However, the Court ruled it lacked jurisdiction to hear these claims because no final decision had been made by the EPA.⁴¹ The environmental petitioners argued that the EPA's long deferral of a decision on the proposed requirements effectuated a final decision reviewable by the Court.⁴² The Court disagreed, explaining that the EPA had merely deferred its final decision, rather than definitively stating that it had decided never to adopt the containment and notification requirements.⁴³

30 *Id.*

31 *Id.* at 63.

32 2015 Rule, 80 Fed. Reg. at 1,694, 1,695 (Jan. 13, 2015).

33 *Am. Petroleum Inst.*, 862 F.3d at 66–7.

34 *Id.* at 66–7.

35 *Id.*

36 *Id.* at 72.

37 *Id.* at 689.

38 See Definition of Solid Waste, 76 Fed. Reg. 44,094–101, 44,139 (July 22, 2011).

39 See 2015 Rule, 80 Fed. Reg. 1,694, 1,696 (Jan. 13, 2015).

40 See *Am. Petroleum Inst.*, 862 F.3d at 74.

41 *Id.*

42 See *id.*

43 *Id.* at 74–5

The Court also declined to rule on the proposed requirements, under the “re-opener doctrine,”⁴⁴ which gives courts jurisdiction over agency rules if substantive changes to a rule are considered and then declined.⁴⁵ The Court reasoned that the proposed requirements merely affected enforcement of the pre-2008 rules and were not a change in substance.⁴⁶ For now, the EPA’s decision on whether to add containment and notification requirements to the exclusions and legitimacy factors remains deferred.

OUTLOOK

It remains to be seen what the EPA will ultimately decide regarding the implementation of containment and notification requirements. The environmental petitioners may still petition the EPA for rulemaking regarding these potential requirements. Industry petitioners are likely to continue to oppose these conditions.

While the Court vacated Factor 4 except in specific circumstances, the remaining three factors still apply to all exclusions. Perhaps the EPA or the environmental petitioners will seek to install a different mechanism to detect and deter sham recycling. Similarly, the EPA may seek to compensate for the loss of the Verified Recycler Exclusion by adding another exclusion. As the list of exclusions from the rule grows, one begins to wonder whether the entire rule should be overhauled in favor of something more easily administered and more effective in protecting public health. Regardless, RCRA’s definition of solid waste likely will continue to undergo both judicial and administrative changes over the coming years.

Ali Abazari is a partner in the regulatory and legislative section of Jackson Walker, L.L.P. He specializes in solid waste, remediation, surface mining, and industrial waste water permitting and compliance counseling. He previously served as a regulatory specialist at URS Corporation and as an attorney in the Litigation Division of the Texas Commission on Environmental Quality.

Garrett Peery is a second-year student at The University of Texas School of Law and a staff editor of the TEXAS ENVIRONMENTAL LAW JOURNAL.

44 *Id.*

45 *Id.* at 74 (citing *Mendoza v. Perez*, 754 F.3d 1002, 1019 n.12 (D.C. Cir. 2014) (explaining that “reopener doctrine permits a plaintiff to bring an otherwise-stale challenge where the agency has undertaken a serious, substantive reconsideration of the existing rule.”)).

46 *See Am. Petroleum Inst.*, 862 F.3d at 74–5.

STATE CASE NOTE

STATE V. BRAZORIA COUNTY, 518 S.W.3D 926 (TEX. APP—HOUSTON [1ST DIST.] 2017, NO PET.)

INTRODUCTION

On April 20, 2017, the First Court of Appeals issued its opinion in *State v. Brazoria County*.¹ The State of Texas, acting by and through the Attorney General, on behalf of the Texas Commission on Environmental Quality (TCEQ) appealed a final judgment of the 239th District Court, Brazoria County in favor of Brazoria County (“County”) and Daniel Infante, Humberto Lumbrero, Isidro DeJesus Luna, and Ma DeJesus Luna (collectively, “Defendants”).²

In the original suit, the County sued the Defendants for violating state environmental laws governing the management of on-site sewage facilities.³ As required by the Texas Water Code, the TCEQ was joined as a necessary and indispensable party.⁴ A preliminary injunction was entered and trial was set for November 9, 2015, but the County and the State jointly moved for a continuance so it could negotiate the terms of an Agreed Final Judgment and Permanent Injunction (AFJ/PI) with the Defendants.⁵ Before the court ruled on the motion for continuance and without the State’s input, the County and the Defendants signed a proposed AFJ/PI.⁶ The State did not execute the AFJ/PI presented by the County and the Defendants.⁷ Before the final judgment hearing, the State filed an objection to the AFJ/PI, which was overruled by the court.⁸ The Court then signed the AFJ/PI without the State’s signature.⁹ The basis for the State’s objection was that a final judgment could not be entered prior to the completion of statutory prerequisites to its entry, specifically that an agreed final judgment binding the State must be published in the Texas Register thirty days prior to entry.¹⁰

THE COURT’S DECISION

The State raised two issues to the court of appeals. First, because the State is a necessary and indispensable party who did not agree to or sign the AFJ/PI, the trial court

1 518 S.W.3d 926 (Tex. App—Houston [1st Dist.] 2017, no pet.).

2 *Id.*

3 *Id.* at 927.

4 *Id.*

5 Brief of the Appellant the State of Texas at 3, *State v. Brazoria Cty.*, 518 S.W.3d 926 (Tex. App.—Houston [1st Dist.] 2017, no pet.) (No. 01-16-00334-CV).

6 *Brazoria Cty.*, 518 S.W.3d at 928.

7 *Id.*

8 *Id.* at 928–29.

9 *Id.*

10 *Id.* at 928 (citing TEX. WATER CODE ANN. § 7.110 (West 2008)).

“committed reversible error when it signed the [AFJ/PI] over the State’s objection and without the State’s signature.”¹¹ Second, the AFJ/PI signed by the County and Defendants, which incorrectly stated that it had been published in the Texas Register, was invalid.¹²

The County and Defendants (together “Appellees”) presented four counter-arguments. First, they argued that the State had an opportunity to negotiate and that it “never raised specific concerns regarding its lack of opportunity to negotiate, the lack of time to review the proposed judgments, or the lack of civil penalties assessed in the agreed judgments.”¹³ Second, they argued that the trial court did not err because its judgment was actually a final judgment.¹⁴ Third, they argued that the trial court was entitled to render judgment because there were no disputed facts in this case and the judgment “is fully supported by the pleadings and undisputed facts of the case.”¹⁵ Finally, and related to the Appellees’ third argument, they argued that the lower court found all of the necessary facts to support its judgment.¹⁶

The Texas Water Code requires that the TCEQ be included as a “necessary and indispensable party” in suits “brought by a local government [under the Texas Water Code].”¹⁷ Additionally, the Texas Water Code requires that, “[b]efore the commission approves an agreed final judgment . . . that would finally settle a civil enforcement action . . . to which the State of Texas is a party . . . the attorney general shall permit the public to comment in writing on the proposed order, judgment, or other agreement.”¹⁸ Further, the judgment or agreement shall be available in the Texas Register for the public’s comments for not less than 30 days before any final signature.¹⁹ After publication in the Texas Register, “the attorney general shall promptly consider any written comments,” and, “if the comments disclose facts or considerations that indicate that the consent is inappropriate, improper, inadequate, or inconsistent with the requirements,” the attorney general “may withdraw or withhold consent to the proposed order, judgment, or other agreement of this chapter.”²⁰

The court determined that it was undisputed that the State did not agree to or sign the AFJ/PI between the County and Defendants.²¹ Additionally, the court determined that the affirmation in the AFJ/PI that the County and Defendants had complied with the Texas Water Code’s commenting requirement was incorrect.²² Further, contrary to the Appellees’ assertion otherwise, when the State filed its objection to the AFJ/PI, it had raised “concerns regarding its lack of opportunity to negotiate [and] the lack of civil

11 Brief of the Appellant the State of Texas, *supra* note 5, at 2.

12 *Id.*

13 *Brazoria Cty.*, 518 S.W.3d at 928.

14 *Id.* at 930.

15 *Id.*

16 *Id.* at 931.

17 TEX. WATER CODE ANN. § 7.353 (West 2008).

18 *Id.* § 7.110(a).

19 *Id.* § 7.110(b).

20 *Id.* § 7.110(c).

21 *Brazoria Cty.*, 518 S.W.3d at 930.

22 *Id.* at 931.

penalties assessed in the agreed judgments.²³ Finally, considering the Appellees' third and fourth arguments together, the court explained that a presumption that a lower court "found all of the facts necessary to support its judgment"²⁴ did not apply because that presumption arises only when a matter is tried to the bench, the appellant does not request findings of fact and conclusions of law, and no findings or conclusions were filed.²⁵

CONCLUSION

The court of appeals determined that necessary and indispensable parties must consent to agreed final judgments.²⁶ Agreed judgments rendered without the necessary and indispensable party's consent must be set aside.²⁷ Although the County and the Defendants may have just gotten ahead of the TCEQ in their negotiations and agreements, the court reversed the trial court's judgment and remanded for further proceedings consistent with its opinion because the TCEQ had not consented to the agreed final judgment.²⁸

Howard S. Slobodin is General Counsel for Trinity River Authority of Texas. He is a graduate of The University of Texas School of Law.

Katelyn Hammes is a second-year student at The University of Texas School of Law and the Lead Article and Notes Editor of the TEXAS ENVIRONMENTAL LAW JOURNAL.

WASHINGTON UPDATE

REDEFINING "WATERS OF THE UNITED STATES" IN THE TRUMP ERA

INTRODUCTION

On February 28, 2017, President Trump issued an executive order titled "Restoring the Rule of Law, Federalism, and Economic Growth by Reviewing the 'Waters of the United States' Rule."¹ It outlined broad policy goals for reducing regulatory burdens and promoting economic growth, calling for a more limited interpretation of the definition of "Waters of the United States" (WOTUS), namely, what it means for a water to be "navigable."² The Executive Order mandated that the Administrator of the U.S. Envi-

²³ *Id.*

²⁴ *Id.* (citing *Chang v. Nguyen*, 81 S.W.3d 314, 317–18 (Tex. App.—Houston [14th Dist.] 2001, no pet.).

²⁵ *Id.*

²⁶ *Id.*

²⁷ *Id.*

²⁸ *Id.*

¹ Exec. Order No. 13,778, 82 Fed. Reg. 12,497 (Mar. 3, 2017).

² *Id.*

ronmental Protection Agency (EPA) and the Assistant Secretary of the Army for Civil Works, who oversees the U.S. Army Corps of Engineers (Corps), undertake a new review of the definition of WOTUS consistent with these policy preferences.³

The definition of WOTUS determines the scope of authority that the EPA and the Corps can exert over numerous parts of the United States economy, including Clean Water Act (CWA) section 404 permitting—permitting of the discharge of dredged or fill materials in the waters of the United States.⁴ This is particularly relevant for projects covering large areas of land with various types of intermittent and ephemeral water bodies, including wetlands and bodies of water near traditionally defined WOTUS.⁵

Regulatory oversight of pollutant discharge has expanded over time to include non-navigable upstream waters that have connections to navigable waters.⁶ Interpreting what constitutes a “connection” to navigable water, and therefore ultimately what is or is not a WOTUS, has been subject to a series of legal challenges, revised and re-revised agency guidance, and a controversial rule issued in 2015.⁷

The Trump Administration’s executive order purports to seek more certainty to this area of law.⁸ It has compelled the EPA and the Corps to develop a two-part regulatory process to effectuate these goals, as discussed herein.

BACKGROUND

The CWA makes it unlawful to discharge dredged or fill material into “navigable waters” without a permit.⁹ The jurisdictional scope of the Act includes “navigable waters,” which are defined as “waters of the United States.”¹⁰ The CWA provides the discretion for the EPA and the Corps to define navigable waters, and courts have further refined those definitions.¹¹ From the 1970s through the 1990s, the majority of federal courts and agencies interpreted a broad scope of CWA jurisdiction as necessary and consistent with the CWA’s goals of protecting water quality.¹² In *Solid Waste Agency of Northern Cook County v. Army Corps of Engineers*, 531 U.S. 159 (2001), the Supreme Court said navigable waters were waters that are “navigable in fact or which could rea-

3 *Id.*

4 CWA section 404 is codified at 33 U.S.C. § 1344 (2012); this section applies to “navigable waters,” defined as “waters of the United States.” 33 U.S.C. § 1362(7).

5 See *Rapanos v. United States*, 547 U.S. 715, 739 (2006); Clean Water Rule: Definition of “Waters of the United States,” 80 Fed. Reg. 37,053 (June 29, 2015) (to be codified at 33 C.F.R. pt. 328, 40 C.F.R. pts. 110, 112, 116, 117, 122, 230, 232, 300, 302, 401).

6 Clean Water Rule: Definition of “Waters of the United States,” 80 Fed. Reg. at 37,058.

7 Mark A. Ryan, *President Trump’s Executive Order on the Waters of the United States Rule*, TRENDS: ABA SECTION OF ENV’T, ENERGY, AND RES. NEWSL., May/June 2017, at 7, 9; Clean Water Rule: Definition of “Waters of the United States,” 80 Fed. Reg. at 37,055.

8 See Exec. Order No. 13,778, 82 Fed. Reg. at 12,497.

9 33 U.S.C. § 1311(a).

10 See 33 U.S.C. § 1362(7).

11 33 U.S.C. § 1251; see, e.g., *Rapanos v. United States*, 547 U.S. 715, 723–729 (2006) (Scalia, J., plurality).

12 See *Rapanos*, 547 U.S. at 723–24.

sonably be so made.”¹³ In a subsequent split decision in *Rapanos*, two different tests resulted: a broad nexus test from Justice Kennedy and a narrower test from Justice Scalia.¹⁴

In *Rapanos*, Justice Kennedy concluded in his concurring opinion that a wetland is WOTUS under the Act if it possesses a “significant nexus” to navigable waters, but he did not discuss the factors necessary to determine that the lands in question had, or did not have, the requisite nexus.¹⁵ Writing for the plurality, Justice Scalia said that “the phrase ‘the waters of the United States’ includes only those relatively permanent, standing or continuously flowing bodies of water ‘forming geographic features’ that are described in ordinary parlance as ‘streams[,] . . . oceans, rivers, [and] lakes.’ . . . The phrase does not include channels through which water flows intermittently or ephemerally, or channels that periodically provide drainage for rainfall.”¹⁶ A few circuit courts and the EPA developed a WOTUS definition using Justice Kennedy’s “significant nexus” test.¹⁷ Some consider this to be the controlling standard from the case.¹⁸

2015 WOTUS RULE & LEGAL CHALLENGES

Following the decision in *Rapanos*, EPA guidance expanded the definition of navigable waters using the “significant nexus” test.¹⁹ In June 2015, the EPA and the Corps finalized a rule to redefine the definition of WOTUS under the CWA (2015 WOTUS Rule).²⁰ The primary changes of the 2015 WOTUS Rule impact the assessment of tributaries to the traditionally navigable waters, adjacent wetlands and waters, and isolated waters.²¹ The 2015 WOTUS Rule includes new definitions, criteria, setbacks, and potentially subjective considerations.²²

Following the petition of numerous states and other parties, on October 9, 2015, the United States Court of Appeals for the Sixth Circuit issued a nationwide stay of the 2015 WOTUS Rule in *In re EPA and DOD Final Rule*, 803 F.3d 804 (6th Cir. 2015).²³ In response to this decision, the EPA and the Corps resumed nationwide use of the

13 *Solid Waste Agency of N. Cook Cty. v. Army Corps of Eng’rs*, 531 U.S. 159, 172 (2001). The Court held that the authority granted by CWA did not extend to abandoned gravel pits with seasonal ponds. *Id.* at 162.

14 Ryan, *supra* note 7, at 7–8.

15 *See Rapanos*, 547 U.S. at 753 (Scalia, J., plurality).

16 *Id.* at 739.

17 *See, e.g., United States v. Gerke Excavating, Inc.*, 464 F.3d 723, 724 (7th Cir. 2006) (per curiam); Clean Water Rule: Definition of “Waters of the United States,” 80 Fed. Reg. 37,053, 37,056 (June 29, 2015) (to be codified at 33 C.F.R. pt. 328, 40 C.F.R. pts. 110, 112, 116, 117, 122, 230, 232, 300, 302, 401).

18 *See Gerke Excavating*, 464 F.3d at 724.

19 Clean Water Rule: Definition of “Waters of the United States,” 80 Fed. Reg. at 37,056.

20 *Id.*

21 *See id.* 37,057–59.

22 *Id.*

23 *In re Envtl. Prot. Agency and Dep’t of Def. Final Rule*, 803 F.3d 804, 808–09 (6th Cir. 2015).

agencies' regulations defining the term "waters of the United States" prior to the 2015 WOTUS Rule.²⁴

The Supreme Court agreed to hear arguments on whether the Sixth Circuit had jurisdiction over the 2015 WOTUS Rule in early October 2017.²⁵ On January 22, 2018, the Court unanimously held that the Sixth Circuit did not have jurisdiction because the judicial review provisions of CWA § 509(b)(1)²⁶—which provide the appellate courts with original jurisdiction over the certain agency actions—do not apply to the 2015 WOTUS Rule.²⁷ The Court reversed the judgment of the Sixth Circuit and "remanded the case with instructions to dismiss the petitions for review for lack of jurisdiction."²⁸ Upon remand, the cases will be dismissed without prejudice and then can be refiled before the appropriate district courts consistent with the general judicial review provisions of the Administrative Procedure Act (APA).

On February 6, 2018, the EPA and the Corps published a final rule to delay the effective date of the 2015 WOTUS Rule until 2020 in the Federal Register.²⁹ This action is intended to prevent the 2015 WOTUS Rule from going into effect in the event that the Sixth Circuit lifts its nationwide injunction to comply with the Supreme Court's ruling.³⁰ However, this rulemaking was immediately challenged as failing to comply with the APA in two separate lawsuits—a suit by eleven states in the Southern District of New York³¹ and a suit by several environmental organizations in the District of South Carolina.³² In both cases, the EPA and the Corps have moved to transfer the

24 Intention to Review and Rescind or Revise the Clean Water Rule, 82 Fed. Reg. 12,532, 12,532 (Mar. 6, 2017).

25 Jonathan H. Adler, *WOTUS goes to SCOTUS*, WASH. POST: THE VOLOKH CONSPIRACY (Jan. 14, 2017), <https://www.washingtonpost.com/news/volokh-conspiracy/wp/2017/01/14/wotus-goes-to-scotus/>; *US Supreme Court Hears Arguments on Clean Water Act Jurisdiction*, NAT'L. ASS'N. OF CLEAN WATER AGENCIES (October 17, 2017), <https://www.nacwa.org/news-publications/clean-water-current-archives/clean-water-current/2017/10/17/u.s.-supreme-court-hears-arguments-on-clean-water-act-jurisdiction/>.

26 33 U.S.C. § 1369(b)(1) (2012).

27 *Nat'l Ass'n of Mfrs. v. Dep't of Def.*, No. 16–299, slip op. at 9–17 (Jan. 22, 2018) (discussing at length the applicability of 33 U.S.C. § 1369(b)(1)(E)–(F) to the 2015 WOTUS Rule).

28 *Id.* at 20.

29 Definition of "Waters of the United States"—Addition of an Applicability Date to 2015 Clean Water Rule, 83 Fed. Reg. 5,200, 5,200 (Feb. 6, 2018) (to be codified at 33 C.F.R. pt. 328).

30 Press Release, U.S. Envtl. Prot. Agency, EPA and Army Finalize "Waters of the United States" Applicability Date (Jan. 31, 2018), <https://www.epa.gov/newsreleases/epa-and-army-finalize-waters-united-states-applicability-date/> ("[L]ast week the Supreme Court determined that the U.S. Courts of Appeals do not have original jurisdiction to review these challenges and, therefore, the Sixth Circuit lacked authority to issue a stay. Given uncertainty about litigation in multiple district courts over the 2015 Rule, this action provides much needed certainty and clarity to the regulated community during the ongoing regulatory process.").

31 Complaint, *New York v. Pruitt*, No. 1:18-cv-1030 (S.D.N.Y. Feb. 6, 2018).

32 Complaint, *S.C. Coastal Conservation League v. Pruitt*, No. 2:18-cv-00330 (D.S.C. Feb. 6, 2018).

case to the Southern District of Texas³³ and several industry groups have moved to intervene.³⁴ This sets up a significant legal battle that will determine the interim definition of “waters of the United States” between the lifting of the Sixth Circuit’s stay and institution of the first step of the proposed WOTUS rule, discussed below.

EXECUTIVE ORDER

The President’s executive order, announced in February 2017, states that it is in the national interest to ensure that the Nation’s navigable waters are kept free from pollution while at the same time promoting economic growth, minimizing regulatory uncertainty, and showing due regard for the roles of Congress and the States under the Constitution.³⁵ To effectuate those policy goals, it directs the EPA and the Department of the Army to review the existing Clean Water Rule for consistency with these priorities and publish for notice and comment a proposed rule rescinding or revising the rule, as appropriate and consistent with the law.³⁶ Further, the order directs the agencies to consider interpreting the term “navigable waters,” as defined in 33 U.S.C. 1362(7), in a manner consistent with the opinion of Justice Scalia in *Rapanos*.³⁷ The goal of the Executive Order is to use a more restrictive definition, lifting the burdens on land use for business owners.³⁸

TWO-STEP RULE PROCESS

The EPA proposed a new WOTUS rule consistent with the order on July 27, 2017, which was published in the Federal Register.³⁹ The proposed regulatory text would replace the stayed rulemaking text from 2015, and re-codify the regulatory definition as it existed prior to the promulgation of the stayed, 2015 definition.⁴⁰

33 Motion to Transfer Case, *New York v. Pruitt*, No. 1:18-cv-1030 (S.D.N.Y. Feb. 14, 2018); Motion to Transfer Case, *S.C. Coastal Conservation League v. Pruitt*, No. 2:18-cv-00330 (D.S.C. Feb. 15, 2018).

34 Motion to Intervene, *New York v. Pruitt*, No. 1:18-cv-1030 (S.D.N.Y. Feb. 27, 2018); Motion to Intervene, *S.C. Coastal Conservation League v. Pruitt*, No. 2:18-cv-00330 (D.S.C. Feb. 28, 2018).

35 Exec. Order No. 13,778, 82 Fed. Reg. 12,497, 12,497 (Mar. 3, 2017).

36 *Id.*

37 *Id.*

38 *Id.*; Timothy Cama, *EPA Moves to Repeal Obama Water Rule*, THE HILL (June 27, 2017, 2:39 PM), <http://thehill.com/policy/energy-environment/339691-epa-seeks-to-repeal-obama-water-rule>.

39 Definition of “Waters of the United States”—Recodification of Pre-Existing Rules, 82 Fed. Reg. 34,899 (proposed July 27, 2017) (to be codified at 33 C.F.R. pt. 328, 40 C.F.R. pts. 110, 112, 116, 117, 122, 230, 232, 300, 302, 401).

40 *Id.*

The first step is the withdrawal of the rule and return to the previous definition.⁴¹ In this step, the agencies propose to restore 1986 regulations and 2008 Bush-era guidance to define coverage of “waters of the U.S.,” which is currently being implemented due to the Sixth Circuit’s stay of the 2015 rule.⁴² The Bush-era definition did not include the wetlands, tributaries, adjacent waters, or intermittent streams that the 2015 rule included.⁴³ The practical effect of the repeal would be to restore the status quo while the Trump Administration works on a replacement WOTUS rule.⁴⁴ That definition would then be re-codified in the Code of Federal Regulations.⁴⁵

The second step will include a substantive re-evaluation of the definition of WOTUS.⁴⁶ The EPA and the Corps plan to propose a new definition re-interpreting the jurisdictional bounds of the Clean Water Act, taking into consideration Justice Scalia’s opinion in the *Rapanos* decision.⁴⁷ Justice Scalia’s opinion in *Rapanos* indicates Clean Water Act jurisdiction includes relatively permanent waters and wetlands with a continuous surface connection to relatively permanent waters but would not include more tenuously connected waters.⁴⁸ Implementing a rule based on Scalia’s opinion will effectively undo many of the actions and guidance used by the EPA to expand the definition of WOTUS.⁴⁹

The second step will require that the agencies provide a reasoned basis for the new rule in order to withstand judicial review; this step may prove challenging given the existing administrative record for the 2015 WOTUS Rule.⁵⁰ The agencies will need to develop a substantial new or supplemental administrative record to supply a reasoned basis for a material change to or wholesale rescission of the 2015 WOTUS Rule.⁵¹ The timing and content of this replacement rule proposal is unknown.

CONCLUSION

The Supreme Court’s decision that the Sixth Circuit lacked jurisdiction to hear the challenge to the 2015 WOTUS Rule has set off a high stakes fight over the interim rules while the EPA and the Corps work to promulgate a new WOTUS rule. To the victor will go control over the interim rule. Should the state challengers and environmentalists prevail, striking down the delay of the effective date of the 2015 WOTUS Rule, the

41 *Id.*

42 *See id.*; *In re Envtl. Prot. Agency and Dep’t of Def. Final Rule*, 803 F.3d 804, 808 (6th Cir. 2015).

43 *See* Definition of “Waters of the United States”—Recodification of Pre-Existing Rules, 82 Fed. Reg. at 34,899–903.

44 *Id.*

45 *Id.* at 34,899–900.

46 *Id.* at 34,899.

47 *Id.* at 34,901.

48 *Rapanos v. United States*, 547 U.S. 715, 739 (2006).

49 Ryan, *supra* note 7, at 9.

50 *See* Definition of “Waters of the United States”—Recodification of Pre-Existing Rules, 82 Fed. Reg. at 34,899–903.

51 *See id.*

2015 WOTUS Rule will likely go into effect at least temporarily. But, if the Trump Administration and industry groups succeed in defending the delay, the status quo may prevail through at least early challenges to the proposed new WOTUS rule.

Jacob Arechiga is a senior counsel in the Environmental and Legislative practice group at Jackson Walker L.L.P.'s Austin, Texas, office where he focuses on advising clients in the electric power generation, oil and gas, mining, waste, and renewable energy industries regarding federal and state environmental law compliance.

Greer Gregory is a third-year student at The University of Texas School of Law and a senior staff editor of the TEXAS ENVIRONMENTAL LAW JOURNAL

WATER RIGHTS

THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY'S NEW WATER RIGHTS PERMITTING APPLICATION FORMS

INTRODUCTION

The Texas Commission on Environmental Quality (TCEQ) recently updated the forms for its Water Rights Permitting Application. The revised forms—the Administrative Information Checklist¹ and the Technical Information Report²—went into effect on September 1, 2017. Applicants must complete both forms to receive new water rights permits, amendments, or bed and banks permits. The new forms are intended to streamline the process of applying for water rights and facilitate faster processing times.³ The forms were designed to be comprehensive enough to collect all the necessary information required to process the application, while remaining simple and intuitive enough that the average applicant can complete the forms with a minimum of trouble.⁴

BACKGROUND: BRIEF OVERVIEW OF WATER RIGHTS IN TEXAS

After independence, Texas adopted a system of riparian rights that allowed owners of lands adjacent to streams to use that water for irrigation of riparian lands as was

1 TCEQ *Water Rights Permitting Application: Administrative Information Checklist, Water Rights: Permits*, TEX. COMM'N ON ENVTL. QUALITY, <https://www.tceq.texas.gov/assets/public/permitting/forms/10214b.pdf> (last visited Nov. 21, 2017).

2 *Technical Information Report: Water Rights Permitting*, TEX. COMM'N ON ENVTL. QUALITY, <https://www.tceq.texas.gov/assets/public/permitting/forms/10214c.pdf> (last visited Nov. 21, 2017).

3 Telephone Interview with Ross Henderson, Tech. Specialist, Tex. Comm'n on Env'tl. Quality (Sept. 27, 2017) [hereinafter First Interview].

4 *Id.*

reasonable.⁵ But the riparian system was “ill-suited to more arid parts of the state,” leading the Texas Legislature to allow the acquisition of appropriative water rights in certain parts of the state.⁶ Under the appropriation system, the first in time is the first in right—i.e., in times of shortage, the right to divert water is determined by seniority of appropriation.⁷

The waters of the State of Texas are held in trust for the public, and the right to use state water may be appropriated only as expressly authorized by law.⁸ State water may be appropriated for beneficial use.⁹ To appropriate state water, a person must file an application with and obtain authorization from the TCEQ.¹⁰

PROCESSING WATER RIGHTS APPLICATIONS

The TCEQ’s rules provide that the agency will review a water rights application for administrative completeness within ten working days of the application’s receipt.¹¹ This review is done to determine whether the applicant has submitted all required portions of the application, whether the portions submitted are consistent throughout, and whether the person signing the application has the authority to act on behalf of the applicant.¹² If any information is missing, the TCEQ will send a Request for Further Information (RFI) to the applicant.¹³ The applicant will then have 30 days to respond to the RFI by providing the requested information.¹⁴ If, after the TCEQ receives the applicant’s response, the required information is still missing, the RFI process will repeat until the applicant has provided all the necessary information.¹⁵ Once the applicant has done so, the application will be considered administratively complete.¹⁶ The date of administrative completeness establishes the priority date for the water right being requested, if ultimately issued.¹⁷

Once the TCEQ determines that the application is administratively complete, the application undergoes a technical review.¹⁸ This involves, among other things, ensuring that there is enough water to authorize the amount requested by the applicant and that

5 See *City of Marshall v. City of Uncertain*, 206 S.W.3d 97, 101–02 (Tex. 2006).

6 See *id.* at 102.

7 TEX. WATER CODE ANN. § 11.027 (West, 2008) (“As between appropriators, the first in time is the first in right.”); *Marshall*, 206 S.W.2d at 102.

8 TEX. WATER CODE § 11.0235(a).

9 *Id.* §§ 11.023(a)–(b).

10 *Id.* § 11.121.

11 30 TEX. ADMIN. CODE § 281.3(a) (2017).

12 First Interview, *supra* note 3.

13 See TEX. ADMIN. CODE . § 281.18(a) (explaining that, if an application is not administratively complete, the TCEQ will notify the applicant of the deficiencies by certified mail).

14 *Id.*

15 First Interview, *supra* note 3.

16 *Id.*

17 See 30 TEX. ADMIN. CODE § 297.44(c) (noting that priority dates from the filing of the application and that the application is considered filed after it has been declared administratively complete).

18 *Id.* at § 281.19(a).

the applicant's diversion will not significantly impact the flow of the water.¹⁹ This process might call for additional RFI's.²⁰ Furthermore, applicants may modify their applications at this stage, which may improve the chance of approval.²¹

PURPOSE OF APPLICATION FORM REVISIONS

Review and approval of a water rights permitting application is often a lengthy process. At present, it is not unusual for even a simple, uncontested application to take about 300 days to process. For this reason, the TCEQ decided to update its forms to increase the efficiency of the process. As stated above, the date of administrative completeness is the priority date of the water right.²² This is significant given that Texas's system of appropriation follows the rule of appropriation (first in time, first in right).²³ Thus, timeliness is of great importance to the rights-holder.

Applicants and their intended uses for water rights in the State of Texas vary broadly, from large water districts such as the Lower Colorado River Authority and the Brazos River Authority to independent farmers.²⁴ As such, it is necessary for the TCEQ to acquire as much information as possible from each applicant to properly process the application.²⁵ At the same time, the TCEQ aims to ensure that less-sophisticated applicants will be able to successfully navigate the application process.²⁶ Therefore, when designing the new forms, the TCEQ's focus was on striking the proper balance between the comprehensiveness of information and comprehensibility to the public.²⁷ Furthermore, standardization of forms and procedures helps ensure that new TCEQ staff can easily learn how to process the forms.²⁸

THE REVISION PROCESS

Once the TCEQ decided to update its forms, it held a stakeholder meeting to solicit comments and suggestions regarding the new forms.²⁹ The TCEQ concurrently published a solicitation for comments, which it accepted for a period of around 30 days.³⁰ The process was fairly informal. The TCEQ received around ten total comments from

19 First Interview, *supra* note 3.

20 See 30 TEX. ADMIN. CODE § 281.19(b) (stating that applicants shall be promptly notified of any additional technical material necessary for a complete review).

21 First Interview, *supra* note 3.

22 See 30 TEX. ADMIN. CODE § 297.44(c).

23 See TEX. WATER CODE § 11.027.

24 First Interview, *supra* note 3.

25 *Id.*

26 *Id.*

27 *Id.*

28 *Id.*

29 Telephone Interview with Ross Henderson, Tech. Specialist, Tex. Comm'n on Env'tl. Quality (Oct. 4, 2017).

30 *Id.*

stakeholder groups.³¹ These comments were largely non-substantive and mostly dealt with the organization and formatting of the new forms.³² As the TCEQ's primary goal throughout this process was only to change the functionality of the forms, any comment that did not substantively change the TCEQ's policy but improved the forms was accepted by the TCEQ and incorporated into the new forms.³³

The primary differences between the old forms and the new forms are related to the amount of information an applicant is asked to submit with the application.³⁴ The old forms collected very little beyond the applicant's information and what the applicant was generally applying for.³⁵ The TCEQ would collect these forms and then request further information from the applicants.³⁶ The new forms frontload this process by requiring the applicant to include as much information as possible in the forms, in hope of reducing the need for RFIs.³⁷ Beyond these major organizational changes, the new forms also eliminate some outdated requirements present in the old forms.³⁸

THE NEW FORMS

As stated above, the new forms consist of the Administrative Information Checklist and the Technical Information Report.³⁹ Both forms can be downloaded from the TCEQ's website⁴⁰ and are form-fillable, meaning that the applicant can type responses directly onto the electronic versions of the forms. The first form, the Administrative Information Checklist, collects information about the applicant and the type of right for which the applicant is applying.

The second form, the Technical Information Report, is lengthier and more complex. The first few pages of the Technical Information Report guide the applicant through a series of questions to help determine what authorizations the applicant may require.⁴¹ The first page relates to new appropriations, the second to amendments to existing rights, and the third to the use of a river's beds and banks to transport water.⁴² The fourth page collects general information required of all applicants. These first pages direct the applicant to various Worksheets appended to the end of the application. The Worksheets aren't all necessary for each individual application; each applicant will complete the Worksheets relevant to its particular application. The various Worksheets col-

31 *Id.*

32 *Id.*

33 *Id.*

34 *Id.*

35 *Id.*

36 *Id.*

37 *Id.*

38 *Id.*

39 *See supra* notes 1–2 and accompanying text.

40 *Water Right Application Forms, Water Rights: Permits*, TEX. COMM'N ON ENVTL. QUALITY, https://www.tceq.texas.gov/permitting/water_rights/wr-permitting/wr_applications.html/#applications (last visited Nov. 21, 2017).

41 First Interview, *supra* note 3.

42 *Id.*

lect, among other things, information related to: (1) the quantity, purpose, and place of use of the water; (2) impoundments, reservoirs, and dams; (3) diversion points; (4) discharge information; (5) environmental information; (6) conservation and drought contingency plans; (7) accounting plans; and (8) fee calculations.

CONCLUSION

The revisions to the Water Rights Permitting Application were primarily intended to obtain more complete applications to cut down on processing times. Given that the new forms were only placed into use last Fall, not enough time has passed to gauge their effectiveness. Furthermore, the TCEQ only receives between five and twenty applications per month.⁴³ As such, it may take some time before the TCEQ can accurately judge whether the revisions are a success. The forms also do not yet address other types of applications, such as applications for temporary rights. Nevertheless, the TCEQ will be closely monitoring the process and will modify the forms as necessary to address confusion and to include these other types of applications.

Shana Horton is an attorney in Austin, Texas specializing in matters related to surface water and groundwater rights, policy and management; water utilities and districts; public drinking water; wastewater; underground injection control; solid waste; mining; and environmental enforcement. Shana's experience includes almost six years at the Texas Commission on Environmental Quality in the Environmental Law and Litigation Divisions and she is a past chair of the Austin Bar Association Environmental Law Section.

Nicholas Miller is a second-year student at The University of Texas School of law and a staff editor of the TEXAS ENVIRONMENTAL LAW JOURNAL.

WATER UTILITIES

CHISHOLM TRAIL SUD STAKEHOLDERS GROUP V. CHISHOLM TRAIL SPECIAL UTILITY DISTRICT, No. 03–16–00214–CV, ___ S.W.3d___, 2017 WL 2062258 (TEX. APP.—AUSTIN MAY 11, 2017, PET. DENIED) (MEM. OP.)

INTRODUCTION

In *Chisholm Trail SUD Stakeholders Group v. Chisholm Trail Special Utility District*, No. 03–16–00214–CV, ___ S.W.3d___, 2017 WL 2062258 (Tex. App.—Austin May 11, 2017, pet. denied) (mem. op.), the Austin Court of Appeals addressed whether the

43 *Id.*

Travis County District Court had subject matter jurisdiction over claims brought by the Chisholm Trail SUD Stakeholders Group (“Stakeholders Group”) against the Chisholm Trail Special Utility District (“District”), the City of Georgetown (“City”), the Public Utility Commission of Texas (PUCT), and various District Directors and PUCT Commissioners in their official capacities.¹ The initial claims brought by the Stakeholders Group concerned the authority of the District to enter into an asset transfer and utility system consolidation agreement with the City in which the District transferred to the City most of its assets in connection with water and wastewater services in exchange for the City’s agreement to assume certain specified liabilities and obligations.² Following a contested case hearing and the PUCT’s approval of the application to transfer, the Stakeholders Group added additional claims against the PUCT and its Commissioners.³ In examining the trial court’s decision to grant the pleas to the jurisdiction filed by the appellees, the Court of Appeals found that the Stakeholders Group failed to demonstrate the trial court had jurisdiction over the claims.⁴

BACKGROUND

The District is a water utility provider located in Williamson County that serves the customers of Williamson, Burnet, and Bell counties.⁵ In October 2013, the District and the City of Georgetown entered into an asset-transfer and utility-system consolidation agreement in which the District transferred all of its assets “used or held for use in connection with, the water and wastewater service” provided by the District, excluding \$500,000 in cash.⁶ In return, the City agreed to assume “certain specified liabilities and obligations.”⁷ The parties also agreed to use their “best efforts to obtain the approval of the transfer of the District’s certificate of convenience and necessity (CCN) to the City.”⁸

Upon agreement to these terms, the District and City filed an application with the Texas Commission on Environmental Quality (TCEQ) to transfer the service area, assets, and facilities subject to the District’s CCN to the City.⁹ As jurisdiction over water and sewer utility certification was transferred to the PUCT in September 2014, the application was eventually reviewed by the PUCT and, in May 2014, was referred to the State Office of Administrative Hearings (SOAH) for a contested case hearing.¹⁰

In September 2014—prior to the contested case hearing—the parties amended the agreement, concluding that “it was in the best interest of the parties” for the District to

1 Chisholm Trail SUD Stakeholders Grp. v. Chisholm Trail Special Util. Dist., 2017 WL 2062258, at *2–3.

2 *Id.* at *1.

3 *Id.* at *2–3.

4 *Id.* at *1.

5 *Id.*

6 *Id.*

7 *Id.*

8 *Id.*

9 *Id.* at *1 & n.1.

10 *Id.* at *1 & n.1.

maintain its CCN upon completing the transaction.¹¹ The parties also entered into a service-area operations-and-management agreement that required the District to continue its role as CCN holder for water utility services; adopted “rates, fees, and charges consistent with the City’s rates”; and set a transition surcharge of \$4.75 per meter per month to cover “operating costs and expenses associated with the transition of services to the City.”¹² At that time, the District and City closed on the transaction and transferred the stipulated assets and liabilities.¹³

The contested case hearing occurred in July 2015.¹⁴ The Stakeholders Group is a “nonprofit corporation organized to advocate for residents and landowners in rural areas of Bell, Burnet, and Williamson counties concerning adequate water utility service.”¹⁵ After the hearing’s conclusion, the Stakeholders Group sued the District, the District Directors in their official capacities, the City, and the PUCT in Travis County District Court challenging the transfer of the District’s assets and liabilities to the City.¹⁶ The Stakeholders Group alleged “ultra vires conduct and sought declaratory and injunctive relief under the Uniform Declaratory Judgments Act (UDJA).”¹⁷ The District, the District Directors, and the City asserted pleas to the jurisdiction shortly thereafter.¹⁸ In January 2016, the PUCT issued its final order approving the transfer application and also filed a plea to the jurisdiction.¹⁹

On March 8, 2016, the hearing on the appellees’ pleas to the jurisdiction took place, and the Stakeholders Group amended its petition to add the PUCT Commissioners in their official capacities.²⁰ The full list of appellees now included the District, the District Directors, the City, the PUCT, and the PUCT Commissioners.²¹ After the hearing, the trial court granted the appellees’ pleas to the jurisdiction and “specifically address[ed] the Stakeholders Group’s various requests for declaratory and injunctive relief.”²² The Stakeholders Group filed an interlocutory appeal, and the case progressed to the Austin Court of Appeals.²³

THE CHISHOLM TRAIL DECISION

CITY, DISTRICT, AND PUCT’S PLEAS TO THE JURISDICTION

In their pleas to the jurisdiction, the District and District Directors claimed that they were immune from suit, the appellant lacked proper standing to bring the claims,

11 *Id.* at *1.

12 *Id.*

13 *Id.*

14 *Id.* at *2.

15 *Id.*

16 *Id.*

17 *Id.*; TEX. CIV. PRAC. & REM. CODE §§ 37.001-.011 (West 2015).

18 *Chisholm Trail*, 2017 WL 2062258, at *2.

19 *Id.*

20 *Id.* at *3.

21 *Id.* at *1.

22 *Id.* at *3.

23 *Id.*

and certain claims were not yet ripe for review.²⁴ The City offered similar grounds for its plea to jurisdiction.²⁵ The appellees also argued that the Stakeholders Group failed to plead a valid waiver of immunity because “declaratory judgment suits against a governmental entity to invalidate a contract are barred by immunity.”²⁶ The District Directors also argued that, as a matter of law, they were within their authority as provided by the Legislature, refuting the appellant’s ultra vires claims.²⁷ To support their pleas, the City, District, and District Directors provided copies of the transfer agreement, management agreement, and respective amendments, the language of which they claimed expressly supported their pleas.²⁸

The PUCT also argued that the trial court lacked jurisdiction over the Stakeholder Group’s claims because the UDJA “did not waive sovereign immunity over the claims asserted” against it and the PUCT had “primary or exclusive jurisdiction to consider the CCN transfer application.”²⁹ The PUCT also argued that, because the Stakeholders Group had not exhausted its administrative remedies, the district court lacked jurisdiction over the claims.³⁰ The trial court granted the pleas to the jurisdiction and the Stakeholders Group appealed.³¹

THE STAKEHOLDERS GROUP’S ARGUMENT

The Stakeholders Group argued that the trial court erred in granting the appellees’ pleas to the jurisdiction and asserted three primary arguments in favor of the trial court’s subject matter jurisdiction over its claims.³² First, the Stakeholders Group contended that the trial court had jurisdiction over its claims against the District and the City under Article III, Section 52(a) of the Texas Constitution.³³ Section 52(a) provides that “the Legislature shall have no power to authorize any county, city, town, or other political corporation or subdivision of the State to lend its credit or to grant public money or thing of value in aid of, or to any individual, association or corporation whatsoever.”³⁴ The Stakeholders Group claimed that the agreements entered into by the District and the City violated this provision, and were therefore void.³⁵ To support this, the Stakeholders Group argued that, when a political subdivision such as the District transfers funds, it must be “for a public purpose with a clear public benefit received in return,” and “the political subdivision must retain some degree of control over the performance of the contract.”³⁶ The Stakeholders Group argued that, when section 52(a) is violated, it pro-

24 *Id.* at *2.

25 *Id.*

26 *Id.*

27 *Id.*

28 *Id.*

29 *Id.*

30 *Id.*

31 *Id.* at *3.

32 *Id.* at *4.

33 *Id.* at *5.

34 TEX. CONST. art. III, § 52(a).

35 *Chisholm Trail*, 2017 WL 2062258, at *5.

36 Appellant’s Brief at 38, *Chisholm Trail SUD Stakeholders Group v. Chisholm Trail Special Util. Dist.*, No. 03–16–00214–CV, 2017 WL 2062258 (Tex. App.—Austin May 11, 2017, pet. denied) (mem. op.).

vides a right of action against the government “without the need for legislative consent or waiver of immunity.”³⁷ Because the District transferred “its entire water system to the City without consideration,” which was valued at over \$70 million, the Stakeholders Group argued that this was an “illegal grant of public funds” in violation of section 52(a).³⁸

In its second argument, the Stakeholders Group argued that the PUCT lacked jurisdiction to review the CCN transfer and therefore the PUCT’s final order granting the application was void on its face.³⁹ It also asserted that the trial court had jurisdiction over its claims against the PUCT and the Commissioners for the same reasons.⁴⁰ According to the appellant, because the final order was void on its face, it was not required to exhaust administrative remedies.⁴¹ It claimed that the PUCT was granted only authority to exercise “economic regulation over water utility services,” and the PUC had no jurisdiction to regulate these services in a manner that:

- (i) renders the District legally incapable of providing water utility service to its constituents;
- (ii) precludes the District and its Directors from governing the manner in which water utility service is provided to their constituents;
- (iii) nullifies the District landowners’ and consumers’ statutory right to vote on water utility issues affecting them; or
- (iv) effects the District’s dissolution.⁴²

Lastly, the Stakeholders Group asserted that the trial court had jurisdiction over its ultra vires claims against the PUCT Commissioners because they “acted outside their statutory and constitutional duties” by approving the transfer application.⁴³ The appellant alleged that when the Commissioners approved the original transfer application and its amendments, they “committed ultra vires acts outside of their legal authority.”⁴⁴ Arguing that the transfer agreements “will make it impossible” for the District to fulfill its statutory duties, the appellant contended that the agreement would effectively dissolve the District and constituted an “illegal grant of the District’s assets to the City.”⁴⁵ Furthermore, the Stakeholders Group claimed that sections 65.723 through 65.276 of the Texas Water Code prohibit the consolidation of the District with the City.⁴⁶

THE APPELLEES’ ARGUMENTS

The City of Georgetown, the District, and the District Directors primarily reasserted their pleas to the jurisdiction in response to the Stakeholders Group’s issues on appeal.⁴⁷

37 *Id.* at 40.

38 *Id.* at 68; *Chisholm Trail*, 2017 WL 2062258, at *6.

39 *Chisholm Trail*, 2017 WL 2062258, at *8.

40 *Id.*

41 *Id.*

42 Appellant’s Brief, *supra* note 36, at 49.

43 *Chisholm Trail*, 2017 WL 2062258, at *9.

44 *Id.*

45 *Id.*

46 *Id.*

47 Brief of Appellees the City of Georgetown, *Chisholm Trail Special Util. Dist.*, District Directors Delton Robinson, Ed Pastor, Mike Sweeney, James Pletcher, Robert Kostka,

The parties argued that the lower court was correct in granting their pleas to the jurisdiction for the reasons argued in their pleas, principally because the City and District are immune from suit as political subdivisions of Texas.⁴⁸ They argued that the Stakeholders Group did not plead a valid waiver of the parties' immunity, because immunity bars declaratory judgment suits that seek to invalidate a contract.⁴⁹ Although the appellant looked to the UDJA for relief, the City and the District noted that the UDJA "is not a grant of jurisdiction, but merely a procedural device for deciding cases already within a court's jurisdiction."⁵⁰ They argued that the Stakeholders Group failed to establish the court's underlying jurisdiction over its claims, and therefore immunity was not waived.⁵¹ Furthermore, any declaratory relief sought by the appellant would be unavailable.⁵² The City and the District argued that the declaratory judgments sought by the appellant "are exactly the kind of back-door pleading that the Texas Supreme Court has held fails to circumvent immunity" and therefore cannot be granted by the appellate court.⁵³

In answering the ultra vires claims made against the District Directors, the appellees argued that the Stakeholders Group failed to properly make such a claim because the District Directors had legal authority to take the actions under the agreement, and the agreement is allowed by Texas law.⁵⁴ The District Directors first acknowledged that, to receive the declaratory relief pleaded by the Stakeholders Group, a suit for declaratory judgment may be brought against individual state officials who have acted ultra vires.⁵⁵ However, the standard for pleading the ultra vires exception is that the officer "acted without legal authority or failed to perform a ministerial act."⁵⁶ To sufficiently establish that the District Directors acted ultra vires, the Stakeholders Group must plead "alleged facts that affirmatively demonstrate the court's jurisdiction to hear the cause."⁵⁷ The District Directors asserted that the Stakeholders Group failed to allege any facts that affirmatively demonstrated the court's jurisdiction concerning the District Directors' lack of legal authority to enter into the agreement.⁵⁸ Additionally, the District Directors asserted that the appellant did not plead any facts that adequately supported "its theories that the Agreement illegally dissolved the District, provided for an illegal grant of public funds, made it impossible for the District to accomplish its purpose, or rendered the District incapable of providing service."⁵⁹

David Maserang, Gary Goodman, and Robert Johnson, Jr. at 10-11, *Chisholm Trail SUD Stakeholders Group v. Chisholm Trail Special Util. Dist.*, No. 03-16-00214-CV, 2017 WL 2062258 (Tex. App.—Austin May 11, 2017, pet. denied) (mem. op.).

48 *Id.* at 12.

49 *Id.* at 14.

50 *Id.*

51 *Id.*

52 *Id.* at 16.

53 *Id.*

54 *Id.* at 17.

55 *Id.*

56 *Id.* (citing *City of El Paso v. Heinrich*, 284 S.W.3d 366, 373 n.6 (Tex. 2009)).

57 *Id.* at 18 (citing *Tex. Dep't of Parks & Wildlife v. Miranda*, 133 S.W.3d 217, 226 (Tex. 2004)).

58 *Id.* at 18.

59 *Id.*

The PUCT also primarily asserted its plea to the jurisdiction in response to the Stakeholders Group's arguments.⁶⁰ It argued that because the appellant did not take part in the agency proceeding, file a motion for rehearing, or bring proper administrative appeal, administrative remedies were not exhausted.⁶¹ The PUCT also echoed the other appellees' arguments concerning the UDJA and immunity, adding emphasis to the fact that the UDJA allows only ultra vires claims that seek prospective relief, not retrospective relief.⁶² Therefore, even if the Stakeholders Group had pleaded a proper ultra vires claim, the order it sought to challenge was already final, and its arguments constituted an impermissible collateral attack on that order.⁶³

THE APPELLATE COURT'S HOLDING AND REASONING

In answering the question of whether the trial court erred in granting the appellees' pleas as to subject matter jurisdiction, the Austin Court of Appeals essentially analyzed the Stakeholders Group's claims in two ways. First, for each claim, the appellate court answered the question of subject matter jurisdiction, finding that the trial court was correct in its decision to grant the appellees' pleas.⁶⁴ The court then turned to the claims themselves and further found for the appellees on each claim.⁶⁵ The court of appeals overruled the Stakeholder Group's issues on appeal, and affirmed the trial court's order granting the appellees' pleas to the jurisdiction.⁶⁶

The appellate court first examined the Stakeholder Group's claims against the City and the District under article III, section 52(a) of the Texas Constitution.⁶⁷ The Stakeholders Group argued that, because governmental immunity does not bar claims alleging a constitutional violation, the trial court would have jurisdiction over its claims against the City and District without the need of a waiver of immunity.⁶⁸ While the appellate court agreed with the Stakeholders Group on that point, it noted that the appellant "must actually plead a valid constitutional violation."⁶⁹ The relevant portion of section 52(a), quoted in the Stakeholder Group's argument above, prohibits a political subdivision of the state from lending its credit or granting public money to "any individual, association or corporation whatsoever."⁷⁰ Citing Texas Supreme Court precedent, the appellate court noted that the prohibition of granting public money in section 52(a) "means that the Legislature cannot require gratuitous payments to individuals, associations, or corporations," but if the political subdivision receives consideration for the

60 See Brief of Appellee the Public Util. Comm'n of Texas at 3, Chisholm Trail SUD Stakeholders Group v. Chisholm Trail Special Util. Dist., No. 03-16-00214-CV, 2017 WL 2062258 (Tex. App.—Austin May 11, 2017, pet. denied) (mem. op.).

61 *Id.*

62 *Id.* at 4.

63 *Id.*

64 Chisholm Trail SUD Stakeholders Group v. Chisholm Trail Special Util. Dist., No. 03-16-00214-CV, ___ S.W.3d ___, 2017 WL 2062258, at *8-10 (Tex. App.—Austin May 11, 2017, pet. denied) (mem. op.).

65 *Id.*

66 *Id.* at *11.

67 *Id.* at *5.

68 *Id.*

69 *Id.* at *6.

70 TEX. CONST. art. III, § 52(a).

transfer, the payment is not considered gratuitous.⁷¹ Although the Stakeholders Group claimed that the District did not receive proper consideration for the transfer, the court found that the “express terms” of the transfer agreement “conclusively negate[d]” this claim.⁷² In exchange for the District’s assets relating to its water and wastewater services, the City agreed to assume specifically designated liabilities and obligations of the District.⁷³ This consideration refuted the Stakeholders Group’s constitutional claims.⁷⁴

The court also noted that, under section 52(a), payments to individuals, corporations, or associations are not prohibited if the statute “serves a legitimate public purpose” and “affords a clear public benefit received in return.”⁷⁵ The court used a three-part test to determine whether the agreement accomplished a public purpose consistent with section 52(a): (1) the statute’s predominant purpose must be to accomplish a public purpose rather than benefit private parties; (2) public control over the funds must be maintained; and (3) the political subdivision must receive a return benefit.⁷⁶ The court then found that the express language of the transfer agreements clearly demonstrated that the purpose of the transfer accomplished a public purpose.⁷⁷ The guiding principles of the agreement stated that the “cost savings and efficiencies of operation,” the establishment of “uniform service policies,” the “avoidance of disputes” between the two parties, and “efforts to secure new water supplies” would ensure efficiency of operation and reduced water service costs to the customers of the City and the District.⁷⁸ Therefore, the court concluded that the Stakeholders Group failed to allege facts that would “actually constitute a constitutional violation” and failed to establish the trial court’s jurisdiction over its constitutional claims.⁷⁹

In examining the Stakeholder Group’s second claim, which alleged the PUCT’s lack of jurisdiction to consider the CCN transfer and claimed the PUCT’s final order to be void on its face, the court cited the PUCT’s enabling statute.⁸⁰ Under the Texas Water Code sections 13.241, 13.246, and 13.254, respectively, the PUCT was granted the authority by the Legislature to: (1) grant applications for a CCN; (2) hold hearings and consider factors in reviewing CCN applications; and (3) revoke or amend CCNs.⁸¹ The Stakeholders Group argued that, because the PUCT lacked jurisdiction to consider the transfer, grant the application, or issue a final order as to the transfer, the trial court had jurisdiction over its claims.⁸² However, the court concluded that, because the PUCT has “express statutory authority to grant, revoke, and amend CCNs . . . [the] final order was

71 *Chisholm Trail*, 2017 WL 2062258, at *5 (citing *Texas Mun. League Intergovernmental Risk Pool v. Texas Workers’ Comp. Comm’n*, 74 S.W.3d 377, 383 (Tex. 2002)).

72 *Id.* at *6.

73 *Id.*

74 *Id.*

75 *Id.*; *Texas Mun. League Intergovernmental Risk Pool*, 74 S.W.3d at 383.

76 *Chisholm Trail*, 2017 WL 2062258, at *6; *Texas Mun. League Intergovernmental Risk Pool*, 74 S.W.3d at 384.

77 *Chisholm Trail*, 2017 WL 2062258, at *7.

78 *Id.*

79 *Id.* at *8.

80 *Id.*

81 See TEX. WATER CODE §§ 13.241, .246, .254 (West 2008).

82 *Chisholm Trail*, 2017 WL 2062258, at *8.

not void on its face such that it would be subject to collateral attack.”⁸³ Because the final order was not void on its face, the Stakeholders Group could not challenge the final order due to its failure to exhaust administrative remedies.⁸⁴ As administrative remedies were not exhausted, the trial court did not have jurisdiction over the claims against the PUCT and its Commissioners.⁸⁵ Furthermore, the court stated that, under the UDJA, immunity is not waived for “bare statutory construction claims,” barring the trial court from jurisdiction over the claims.⁸⁶

Finally, the appellate court turned to the Stakeholders Group’s claims that the District Directors acted ultra vires in forming the transfer agreement and that the PUCT Commissioners acted ultra vires in processing the transfer application and adopting the final order that “revoked the District’s CCN and amended the City’s CCN to include the District’s certified service area.”⁸⁷ This claim was based “on the same pleaded facts” as the section 52(a) constitutional claim against the City and the District.⁸⁸ The court quickly disposed of these claims for the same reasons stated in response to the constitutional claims and therefore concluded that the actions of the District Directors did not constitute ultra vires conduct.⁸⁹

Further, the court held that the District Directors did not act outside their statutory authority when they formed the transfer contract.⁹⁰ The appellant failed to plead sufficient facts to demonstrate that the District Directors’ actions constituted ultra vires conduct, as the Legislature has expressly granted authority to districts to contract with political subdivisions concerning their water utility services.⁹¹ The court also went on to assert that the pleaded ultra vires claims ultimately sought to invalidate the agreements and thus sought retrospective relief barred by governmental immunity, as the UDJA allows for prospective relief only.⁹²

CONCLUSION

The claims brought by the Stakeholders Group in *Chisholm Trail* were numerous and had the potential to bring about far-reaching consequences if granted. The pleas to the jurisdiction asserted by the City, District, PUCT, and the District Directors and the PUCT were supported by Texas precedent and Legislative intent. Ultimately, the Austin Court of Appeals agreed with the arguments put forth by the appellees and granted all the appellees’ pleas to the jurisdiction.

83 *Id.*

84 *Id.*

85 *Id.*

86 *Id.* at *9.

87 *Id.* at *8.

88 *Id.* at *10.

89 *Id.*

90 *Id.*

91 *Id.*

92 *Id.*

Emily Rogers is a partner in environmental, water, and wastewater utility law at Bickerstaff Heath Delgado Acosta, L.L.P. in Austin, Texas, where she represents cities, river authorities, and water districts in matters involving surface and groundwater water rights, water and wastewater utility matters, water issues, and industrial and municipal solid waste disposal. Ms. Rogers is a graduate of The University of Houston Law Center and formerly served as an attorney for the Texas Natural Resource Conservation Commission.

Susan Stradley is a second-year student at The University of Texas School of Law and a staff editor of the TEXAS ENVIRONMENTAL LAW JOURNAL.

State Bar Section News

**A N N U A L T E X A S E N V I R O N M E N T A L
S U P E R C O N F E R E N C E
A N D
O T H E R C O N T I N U I N G L E G A L E D U C A T I O N**

For details about CLE opportunities in the environmental and natural resources area, please see the Section's website at www.texenrls.org.

S P E C I A L A N N O U N C E M E N T S

Please see the Section's website, www.texenrls.org, for additional and more current information.

