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MINDING THE GAP: TEACHING INTERNATIONAL CLIMATE CHANGE LAW THROUGH SERVICE LEARNING

Tracy Bach *

Introduction

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INTRODUCTION

Recent reports about legal education highlight a gap between the real world of law practice and legal education. In March of 2007, the Carnegie Foundation called for substantial changes to the legal curriculum in

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Educating Lawyers: Preparation for the Profession of Law.\textsuperscript{1} The MacCrate Report, its immediate predecessor, similarly called for change.\textsuperscript{2} Individual professors and legal education groups from the American Bar Association (ABA) to the American Association of Law Schools (AALS) have joined the growing chorus to fill this void.\textsuperscript{3} The AALS’s Clinical Legal Skills Section offers its solution: the best practice of teaching includes “doctrine, theory, and practice as part of a unified, coordinated program of instruction.”\textsuperscript{4}

Bringing lawyering skills into legal education is not a new idea. Law school clinics were created in the 1970s to do just that.\textsuperscript{5} Legal writing courses were also added during that time to focus on the skills of writing and communicating legal analysis.\textsuperscript{6} But, these additions to the traditional legal doctrine courses in the law school catalogue were usually kept separate and isolated. A student clinician would help a client with a divorce complaint but not in conjunction with a Family Law course. Likewise, a

\textsuperscript{1} See \textit{William M. Sullivan et al., Educating Lawyers: Preparing for the Profession of Law} 8–9 (2007) (calling for “a dynamic curriculum that moves [students] back and forth between understanding and enactment, experience and analysis” and recommending integrating lawyering skills, legal analysis, and development of professional identity from the start of law school, supporting faculty efforts to work across the curriculum, and making better use of the second and third years and concluding that legal education should seek to unite “the two sides of legal knowledge: formal knowledge and the experience of practice”).


\textsuperscript{3} See, e.g., Todd D. Rakoff & Martha Minow, \textit{A Case for Another Case Method}, 60 \textit{Vand. L. Rev.} 597, 601–02 (2007) (“We do not agree with Langdell that mastery of doctrines so as to be able to apply them with constant facility and certainty to the ever-tangled skein of human affairs, is what constitutes a true lawyer.’ Lawyering is more creative and less determinate than that formulation supposes. All lawyers need to be able to take a set of facts and see that alternative doctrinal characterizations might be applicable, and that the choice of which doctrine will be applied will depend partly on how they shape the case. Lawyers need to see how conflicting narratives might be built on the data, and to think about how those narratives might equilibrate in one setting or another. Lawyers need to be able to think about not only the specific version of a problem that presents itself, but also about the more general version of which it is but an instance.”).

\textsuperscript{4} \textit{Roy Stuckey et al., Best Practices for Legal Education} 73 (2007); Leah M. Christensen, \textit{The Power of Skills Training: A Study of Lawyering Skills Grades as the Strongest Predictor of Law School Success (Or in Other Words, It’s Time for Legal Education to Get Serious About Skills Training If We Care About How Our Students Learn)}, 83 \textit{St. John’s L. Rev.} 795, 796 (2009) (“It is time for legal education to get serious about integrating skills into the law school curriculum.”).


\textsuperscript{6} \textit{Id.; see also Michael A. Millemann & Steven D. Schwinn, Teaching Legal Research and Writing with Actual Legal Work: Extending Clinical Education into the First Year}, 12 \textit{Clinical L. Rev.} 441, 449 (2006) (explaining how beginning in the 1960s and 1970s, law schools “developed more holistic” writing courses to make students more competent writers).
student might draft a contract in a Legal Writing class but not in tandem with the Contracts curriculum.

This article offers one classroom innovation to mind this gap. It brings the practice of international environmental law into a traditional “doctrinal” course, integrating skills with doctrine by using real-world problem solving as a service to others in the conventional law school classroom. Problem-based service learning (PBSL) is a teaching technique with a long and proven track record at the secondary and post-secondary levels of United States education. By adopting it in varying degrees in the law school curriculum, we build on our students’ educational experiences before they enter professional school. Law courses are particularly apt vehicles for PBSL, given their inherent focus on problem solving and the pro bono value of the legal-analysis skills being taught. There is a growing recognition that doctrine and skills, like legal research, analysis, and writing, go hand-in-hand and can be taught that way. Likewise, professors increasingly see value in integrating clinical and writing skills. The next step is to see how the conventional law school classroom might consciously build on these natural synergies by using PBSL to frame course assignments that connect students’ academic work to the real world.

Since 2013, Vermont Law School (VLS) has offered an international climate change law course that brings an experiential component to the traditional classroom. The course combines a semester-long relationship with a service-learning partner with onsite work at the annual Conference of Parties (COP) of the United Nations Framework Convention on Climate Change (UNFCCC). In this way, VLS students engage in applied learning in international environmental law. Students represent VLS as a non-governmental observer delegation at the climate change COPs, while simultaneously engaging in service learning to support a least developed


country (LDC) delegation.\footnote{List of Least Developed Countries (as of May 2016), U.N. COMM. FOR DEV. POLICY, https://perma.cc/XF4W-G5LE (last visited Jan. 10, 2017).} Through this curricular innovation, our students come away from this hybrid course—where classroom teaching mixes with experiential learning and service learning frames professional skill development—with an understanding of international environmental lawmaking informed by direct experience. This innovation in one course helps VLS see other opportunities for closing the gap between law practice and legal education in the curriculum.

This article seeks to encourage integration of skills into doctrinal classes through service learning projects. To help others incorporate PBSL into their classrooms, Part I provides background on service learning’s many forms, how students are exposed to it before attending law school, and how some professional schools are beginning to use it. Part II describes how service learning has been used at VLS in an international climate change course. This section maps out the steps for structuring and implementing service-learning relationships. It also notes how some course assignments may be service learning oriented, while others are not. Fundamentally, this section seeks to show how teaching goals—namely doctrinal course coverage and skills integration—can be balanced with serving a pro bono client’s needs. This article concludes with analysis of student response, as well as a short list of the pros and cons of teaching this way.

I. What Is Problem-Based Service Learning?

Practitioners define PBSL differently, but its core function is to connect student learning with solving problems posed by people and organizations in the real world.\footnote{Robert Hugg & Scott Wurdinger, A Practical and Progressive Pedagogy for Project Based Service Learning, 19 INT’L J. TEACHING & LEARNING HIGHER EDUC. 191, 192 (2007).} This teaching practice has evolved during the last three decades. It originally required full-course involvement and focused more on service than on learning outcomes. Today, we see the increasing practice of using discrete PBSL assignments as one component of a course and more explicit balancing of a curriculum’s service and academic goals.\footnote{See SULLIVAN ET AL., supra note 1, at 7 (detailing the service learning timeline and the current practice of teaching in an additive way).} Regardless of its form, PBSL is prevalent in United States high school and college courses and is growing in law schools.\footnote{Christine N. Coughlin et al., See One, Do One, Teach One: Dissecting the Use of Medical Education’s Signature Pedagogy in the Law School Curriculum, 26 GA. ST. U. L. REV. 361, 362 (2010) (explaining the “see one, do one, teach one” approach used in medical education and noting its potential for teaching inductive and deductive analytical skills and concluding that “because medical
students’ focus on the problem method of teaching since the rise of Langdel,15 relatively few law professors adopt PSL in their classrooms.

A. Service Learning

Service-learning initiatives and projects exist in diverse settings and forms in American education, from kindergarten through graduate and professional school. In Ojai, California, for example, kindergarten students help cook regular meals for a local senior center, and each meal corresponds to the students’ study of different continents.16 A high school project has students research the history of the National Park Service, the Environmental Protection Agency, and local parks and recreation departments, and culminates in students collaborating with local leaders and organizations to clean up a local park.17 At the post-graduate level, medical schools at the University of Chicago18 and Harvard19 have organizations or administrative offices dedicated to service-learning opportunities.20 Campus Compact, a national coalition of more than “1,100 colleges and universities committed to the public purposes of higher education,”21 estimates that in the 2008 to 2009 academic year, students at member colleges and universities participated in 366 million hours of service.22

15. See Myron Moskovitz, Beyond the Case Method: It’s Time to Teach with Problems, 42 J. LEGAL EDUC. 241, 244–49 (1992) (advocating using problems in legal education); Shirley Lung, The Problem Method: No Simple Solution, 45 WILLAMETTE L. REV. 723, 723 (2009) (“It is a refreshing development within legal education that greater numbers of law professors creatively experiment with problem-based learning to provide explicit instruction in legal analysis and practice-oriented skills. Even more exciting, this experimentation is not the exclusive province of clinical courses; it occurs increasingly in standard core and elective courses that have been traditionally doctrine-centric. Further, the ‘problem method’ and other forms of problem-based learning are being introduced sooner in the law school curriculum, including large first-year doctrinal classes.”).


20. See generally Nicole J. Borges & Paul J. Hartung, Service Learning in Medical Education: Project Description and Evaluation, 19 INT’L J. TEACHING & LEARNING HIGHER EDUC. 1, 1–2 (2007) (describing the “initial design, development, implementation, and evaluation of a service-learning project within a first-year medical school course”).


22. CAMPUS COMPACT, ANNUAL MEMBERSHIP SURVEY RESULTS: EXECUTIVE SUMMARY 3 (2009).
Although students in the United States have multiple opportunities to participate in service-learning projects, the level of participation and commitment required by service-learning programs varies significantly. Some service-learning requirements are extracurricular and episodic. For example, many colleges and universities encourage students to participate in service learning through volunteer opportunities, like alternative spring break trips. This kind of service learning often consists of a single project for a finite period of time that stands apart from the students’ curricula. In other settings, service-learning projects are systematically integrated into the curriculum as required components of a specific course or course of study. For example, at the University of St. Thomas in Minneapolis, all undergraduate business majors and minors are required to take a specific service-learning course that places students in “direct community service experiences.” Some undergraduate programs even require broad participation from all students. Starting in 2006, Tulane University instituted a public-service graduation requirement for all entering undergraduates as a response to Hurricane Katrina. Although many service-learning programs and opportunities remain purely voluntary, the number of schools requiring student participation in some form of service learning for graduation is steadily increasing.


24. See, e.g., Kelly Sundberg Seaman, Spring Break Can Be a Transformative Experience, DARTMOUTH NEWS (Apr. 14, 2014), https://perma.cc/5JEG-P8RB (describing student-organized alternative spring break trip opportunities available to undergraduates); Alternative Spring Break, U. VA., http://www.atuva.student.virginia.edu/organization/alternativespringbreak/about (last visited Nov. 5, 2016) (“Alternative Spring Break (ASB) is an entirely student-run service organization established in 1992 to conduct service projects during spring break for University of Virginia students. Originally, the trips were designed to function as a simple, service-oriented alternative to the standard college break experience. Over time the organization has expanded upon this original set of aspirations and experienced incredible growth in both the quantity and quality of service projects that make up an ASB experience.”).

25. Undergraduate Program: Service Learning, UNIV. ST. THOMAS OPUS COLL. BUS., https://perma.cc/P236-PPQ5 (last visited Oct. 23, 2016); see Debbi D. Brock & Susan Steiner, Social Entrepreneurship Education: Is It Achieving the Desired Aims? (unpublished manuscript) (on file with author) (detailing how undergraduate business programs appear to have embraced service learning); Simmons, supra note 7.


27. CAMPUS COMPACT, supra note 21, at 6 (stating that in 2009, 49% of member colleges and universities required “academic service-learning as part of [the] core curriculum [of] at least one major” and 11% of schools required “service for graduation”); CAMPUS COMPACT, 2002 SERVICE
In addition to the range of commitment required, service-learning opportunities also vary in the level of integration into educational curricula. Even when academic credit is granted, some service-learning projects can be as simple as a one-week trip to Guatemala to build a house with Habitat for Humanity—a project with minimal academic integration into the business curriculum for which the students receive credit. Other programs integrate service into formal curricula, using the service-learning project to reinforce the work done in the formal classroom. For example, Middlebury College addresses issues affecting riparian conservation through formal classroom discussion and assignments. The professor requires students to apply what they have learned in a collaborative project with a local community organization working on river conservation issues.

B. Service in Law School

The American Bar Association’s Standing Committee on Pro Bono and Public Service evaluated 184 law schools in a recent survey of law school public interest and pro bono programs. Forty-one schools had some type of pro bono, public service, or community service graduation requirement. One hundred and twenty-seven schools had “formal voluntary pro bono programs,” which the ABA characterizes as having some level of administrative support for facilitating student pro bono work. Sixteen schools had “independent pro bono group projects,” in which the school had no formal program for school-wide coordination, but individual pro bono projects exist, which students generally organize and run.

Significantly, the same diversity of form and substance of service-learning opportunities broadly available in United States undergraduate education also exists within legal education. Legal education, from first year to third year, offers service learning programs, including graduation

STATISTICS: HIGHLIGHTS OF CAMPUS COMPACT’S ANNUAL MEMBERSHIP SURVEY 3 (2002) (showing that in 2002, 27% of the member colleges and universities surveyed incorporated service learning in majors and 7% of schools had a service-learning graduation requirement).

31. Id.
32. Id.
33. Id.
requirements. Law schools also have a variety of commitment requirements for public service, from voluntary independent student projects to formal pro bono requirements with specific, mandated hours for graduation. Finally, the integration of service-learning projects into the law school curriculum also varies.

For example, the University of Pennsylvania Law School requires students to complete 70 hours of pro bono legal work before graduation. The requirement is seen as an opportunity for students to “gain lawyering knowledge and skills while providing critical services to clients who might otherwise not receive legal assistance.” Students do not receive academic credit or pay for their services. In contrast, other law schools with service requirements only mandate that students participate in some form of public-interest work. This may be satisfied through clinical coursework or a public-interest independent study, as well as through more typical kinds of pro bono work. Still, other law schools only require community service, which may be satisfied through legal or non-legal work. Finally, many schools do not require service-learning at all, and much of the students’ work is done on a voluntary basis and not integrated into the curriculum.

first year students working in teams and with local legal services organizations to conduct weekly workshops for unrepresented people).


36. In a recent survey of law school public interest and pro bono programs, the American Bar Association’s Standing Committee on Pro Bono & Public Service evaluated pro bono programs at 177 law schools. Chart of Law School Pro Bono Programs, supra note 30. Thirty-nine schools had some type of pro bono, public service, or community service graduation requirement. Id. One hundred and nineteen schools had “formal voluntary pro bono programs,” characterized by the ABA as having some level of administrative support for facilitating student pro bono work. Id. Nineteen schools had “independent pro bono group projects,” in which the school had no formal program for school-wide coordination, but individual pro bono projects—generally student organized and run—exist. Id.


39. Id.


41. Id.

42. Public Service, U. ST. THOMAS SCH. L., https://perma.cc/J54K-R6JV (last visited Oct. 23, 2016) (requiring 50 hours of public service during the three years of law school but noting that “the public service requirement does not need to be law-related”).

43. Chart of Law School Pro Bono Programs, supra note 30 (indicating that 143 of the 184 law schools with public service programs do not require participation as a graduation requirement).
C. Integration of Service Learning into the Legal Classroom

A panel at the 2011 AALS conference recognized the important contribution of law school clinics while making the case for integrating access-to-justice education—a variation on the service-learning theme—throughout the law school curriculum.\(^44\) The presentations highlighted research suggesting that, to foster increased commitment of new attorneys to performing pro bono work post-graduation, law school service work “must be connected to or part of the curriculum.”\(^45\) The panel explored how “experiential access-to-justice education” could be integrated into legal education to ensure that graduating students understand the gap between those who need legal services and those who provide them.\(^46\) While still relatively rare, a handful of professors have begun to integrate service learning into student coursework.\(^47\)

For example, the Seattle University School of Law collaborates with legal services organizations like the National Employment Law Project, ACLU of Washington, and Northwest Justice Project to use their research requests in the first-year legal writing coursework.\(^48\) The student work product has made its way into successful impact litigation, amicus briefs, and lobbying, while simultaneously reinforcing students’ legal research, analysis, and writing skills.\(^49\) Another example comes from Northeastern University School of Law, where first-year students do pro bono work for a variety of community-based organizations during their Legal Skills in Social Context course. This course seeks to ensure that students are “introduced to the core skills of effective team lawyering and given an


\(^45\) Id. at 574; see also DEBORAH L. RHOADE, *PRO BONO IN PRINCIPLE AND IN PRACTICE: PUBLIC SERVICE AND THE PROFESSIONS* 125–64 (2005) (discussing an empirical analysis of pro bono services among American lawyers and law schools).


\(^49\) Id. at 591–97.
opportunity to put them into practice through an extensive legal research project on behalf of a community-based or public service organization.\textsuperscript{50}

New research suggests that integrating service learning into the law school classroom can have profound impacts on students.\textsuperscript{51} One result is that public service, pro bono opportunities can promote leadership skills.\textsuperscript{52} Another result is raising awareness about access-to-justice problems that may lead to increased pro bono work in practice.\textsuperscript{53} Deborah Rhode argues that “the effect of pro bono work on lawyers is even more complex, however. Not only do lawyers reap emotional benefits from their pro bono practices, but the experiences associated with doing pro bono work can re-shape their political attitudes.”\textsuperscript{54} Finally, service-learning assignments may help students transfer learning from one course to another and from law school to practice.\textsuperscript{55} In sum, it looks as if service learning may mind more than one gap in legal education.

II. HOW IS PBSL USED TO TEACH CLIMATE CHANGE LAW AT VLS?

Students at VLS have the opportunity to learn about international climate change law and policy through classroom learning and first-hand observation. Selected J.D. and Masters \textsuperscript{56} students enrolled in VLS’s International Climate Change Law course engage in applied learning in international environmental law. Students represent VLS as an accredited non-governmental observer delegation at the annual COP of the UNFCCC.

This three-credit course revolves around three key components. The first two components focus on the learning environment. In the classroom,

\begin{itemize}
\item \textsuperscript{50} Practicing Law Takes Practice, \textsuperscript{\textit{NE. U. SCH. L.}} (https://perma.cc/4YWE-GYTQ (last visited Oct. 23, 2016)).
\item \textsuperscript{51} Jennah K. Jones & Amanda L. Mereau, Community Service and Service Learning, \textsuperscript{\textit{STATE UNIV. N.Y. COLL. OF ENVTL. SCI. & FORESTRY}} (https://perma.cc/M5JH-DE2Q (last visited Jan. 11, 2017)).
\item \textsuperscript{52} Faith Rivers James, Engaging Law Students in Leadership, \textsuperscript{30 ST. LOUIS U. PUB. L. REV.} 409, 431 (2011).
\item \textsuperscript{53} See Martha F. Davis, Access and Justice: The Transformative Potential of Pro Bono Work, \textsuperscript{73 FORDHAM L. REV.} 903, 904 (2004) (responding to DEBORAH L. RHOEDE, ACCESS TO JUSTICE (2004)).
\item \textsuperscript{54} Id. at 908.
\item \textsuperscript{55} See Tonya Kowalski, True North: Navigating for the Transfer of Learning in Legal Education, \textsuperscript{34 SEATTLE U. L. REV.} 51, 52 (2010) (discussing how law school students would benefit from “a greater understanding about how to translate knowledge and skills to other courses and, eventually, to practice”).
\item \textsuperscript{56} See Masters Degrees, \textsuperscript{\textit{VT. L. SCH.}} (https://perma.cc/78JY-4T2Q (last visited Oct. 28, 2016)) (detailing VLS’s range of masters degrees, including Masters of Environmental Law and Policy (MELP), Masters of Energy Regulation and Law (MERL), and Masters of Food and Agricultural Law and Policy (MFALP) for non-JD holders); see also LLM, \textsuperscript{\textit{VT. L. SCH.}} (https://perma.cc/NSP6-WM6N (last visited Oct. 28, 2016)).
\end{itemize}
weekly classes for the full semester cover a range of topics, from the underlying theory and practice of public international and environmental law, to multiparty negotiation principles and issues raised by the provisions of the UNFCCC and its Kyoto Protocol. Since 2013, these substantive topics have included mitigation and adaptation strategies; land use, forestry, and the REDD+ program; loss and damage beyond adaptation; climate finance; capacity building; technology development and transfer; nationally determined contributions and the transparency system to monitor them; and the treaty architecture and governance constructed under the Paris Agreement. Onsite at the COP, experiential learning serves as a capstone for the classroom component. VLS student delegates observe official negotiation sessions, including plenaries, contact groups, and informal consultations. They also attend side events, press

conferences, and special briefings. Drawing on these experiences, students blog about their observations and analyses.

The third component links the classroom and experiential components through VLS’s service-learning partnership. VLS students engage in service learning by supporting an LDC State Party Delegation in the COP negotiations. The VLS delegation researches and writes pre-COP briefing memos for the service-learning partner during the first 13 weeks of the semester. Some of these memos focus on UNFCCC governance and COP process and procedure, while others analyze substantive negotiation issues. While onsite at the COP, VLS students attend negotiation sessions in their areas of expertise, take detailed notes, and draft daily written summaries for the service-learning partner. In addition, our student delegates regularly brief the State Party Delegates in person on the latest developments.

By the end of the semester, students in the VLS international climate change course—a hybrid of classroom, experiential, and service-learning environments—develop an understanding of international environmental law informed by direct experience. In this one area of their legal education, students close the gaps between theory and practice, and knowledge and skills, when solving specific problems. Importantly, students are exposed to the need for, and garner a sense of satisfaction from, pro bono service to others.

A. Creating a Service-Learning Project

Service-learning requires clear, curricular objectives, identification of a partner whose needs fit these academic goals, sound footing in the substantive area of problem solving, and organizational skills. It is not for the novice teacher. Developing and managing a service-learning partnership requires a degree of flexibility and confidence that most of us lack in our first years of teaching. Having perspective on a subject helps a professor more comfortably decide which topics may be dropped in order to spend time on skill development. Likewise, experience in devising assignments to evaluate student learning makes it easier to take real world problems and structure them—both in terms of breadth and timeframe—so that students apply their knowledge and skill without exceeding their limits. Below, I describe five steps for structuring and implementing service-learning.

Minding the Gap

1. Clearly Identify Desired Curricular Outcomes

Before creating a service-learning project, a teacher must first establish the desired learning outcomes for the course. Once in place, one may create assignments that evaluate achievement of learning outcomes. These curricular outcomes become important reference points for identifying service-learning partners and clearly articulating the kinds of services that meet the outcomes. Through this advance thinking, teachers using service learning in their classrooms can ensure that the service component does not displace academic objectives.

One obvious goal of this international climate change law course is for students to learn a wide array of international environmental law doctrine. To do so, I expect them to critically read primary legal materials, like the UNFCCC, the Kyoto Protocol, and the Paris Agreement, as well as various forms of soft law. I also want students to understand the public policy concerns inherent in international environmental treaty negotiation and implementation. In the skills realm, I require students to work in groups in preparation for the workplace and in recognition of our need for teamwork when addressing complex issues within the semester’s short timeframe. This course also consciously focuses on developing students’ written and oral communication skills.

2. Find Community-Based “Clients” with Relevant Problems

In my experience, service-learning partners find law professors—not the other way around. A law school’s prominence in its local community tends to attract inquiries for help resolving legal issues. For example, because I taught a course in Environmental Health Law, questions posed to VLS clinics, my colleagues, or even our general switchboard would eventually find their way to me. This is how my first service-learning partnership with the Manchester, New Hampshire public health department and the Center for Environmental Health Sciences at Dartmouth began. The city health department was dealing with the death of a Sudanese child. She had survived civil strife in her country and refugee camps en route to the

United States, only to die of lead poisoning after eating painted plaster from the walls of an old apartment.\(^{72}\)

From this regular supply of inquiries, teachers may readily choose a service-learning project with a problem directly relating to a course’s objectives. For my international climate change law course, I drew on my personal experiences attending COPs. The uneven playing field of international negotiations is readily apparent. Delegations from the United States and China regularly exceed 100 people,\(^{73}\) which enables them to divide up and attend the simultaneous negotiation sessions. Members of these large delegations also typically develop deep and narrow expertise areas. In contrast, LDC party delegations typically number below 20 people, if not in the single digits.\(^{74}\) These vastly smaller delegations must choose which of the simultaneous negotiation sessions to attend and are thus at a disadvantage in gaining expertise in multiple substantive areas.

Myanmar, VLS’s service-learning partner, ratifies many multilateral environmental agreements and strives to implement them via their environmental ministry’s small staff and budget. Vermont Law School’s U.S.-Asia Partnerships for Environmental Law\(^{75}\) was already working with Myanmar on several natural resources governance projects. Myanmar expressed interest in our assistance with their participation in the COP negotiations. Their needs were wide ranging, from a basic understanding of the UNFCCC treaty structure and governance mechanisms, to the specifics of the evolving Paris Agreement’s impact on forestry and the potential for a loss and damage mechanism. While my students and I could not answer all of their questions in the first year, we help them with selected procedural and substantive issues on a continual basis each fall, preparing for and participating in the COP negotiations. In this way, over a multi-year period, I could help to build Myanmar’s capacity to operate within the UNFCCC while providing interesting and meaningful assignments to my students. This service-learning project has now been included in our VLS-Myanmar Memorandum of Understanding.\(^{76}\)


\(^{74}\) See id. at 30 (including Bhutan).


3. Present Problems that Directly Relate Learning Outcomes to a Client Product

Structuring service-learning assignments requires negotiation with the service-learning partner in light of course objectives. Often, our partners have pent-up research and analysis demands that can range from short Google searches to rendering legal opinions on litigation. I have observed at the COP negotiations that LDC party delegation needs may go beyond issue analysis. Needs may include logistics help with arranging foreign travel, navigating the host city and COP venue, and setting up meetings with international governmental and non-governmental organizations. While some service-learning projects may choose to include this kind of assistance, ours does not because these logistical issues do not help my students achieve the course learning outcomes.

Instead, we use our students’ developing legal knowledge and skill to Myanmar’s advantage, by structuring precise legal questions that students may research, analyze, and answer in written memoranda. For example, each year Myanmar’s delegation includes a number of new personnel who have never attended a COP. Thus, our memos outlining the UNFCCC governance structure, COP process and rules of procedure, and the major negotiation groups help to orient Myanmar’s delegation. These memos also provide invaluable learning for my students who will attend a COP for the first time at the end of the semester. We also write briefing memos on substantive negotiation issues that vary from year to year. For COP21’s focus on adopting a new agreement, we analyzed key parts of the draft agreement text that was evolving over the course of the semester. These briefing memos enabled the state party delegates to brief their government before the COP, and to engage with their negotiating groups and in the negotiation sessions during the COP. Again, these memos equally prepare the VLS student delegates to observe sessions at the COP.

77. The Parties—and my students—began with the Geneva Negotiation Text adopted in February, 2015. But, it was modified by further negotiation at the Bonn intersessional meeting, SB42, in June, 2015, and then again at special meetings of the Ad Hoc Working Group on the Durban Platform (ADP) during the fall 2015 semester, ADP2-10 in September, and ADP2-11 in October. For more background on this text negotiation, see Tracy Bach, Human Rights in a Climate Changed World: The Impact of COP21, Nationally Determined Contributions, and National Courts, 40 Vt. L. Rev. 561 (2016) (detailing background on COP21 text negotiation).

78. Myanmar is a member of the G77+China (Group of 77 and China) and the LDC (Least Developed Countries) negotiating groups active in the UNFCCC. See generally Who’s Who: Groupings and Actors, UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE, https://perma.cc/XA6N-MFME (last visited Jan. 7, 2017) (describing the various negotiating groups under the UNFCCC, including the G77+China and LDC).
teams, we are able to complete complex legal analysis and communicate it in writing in a relatively short period of time. By writing briefing memos, students refine their thinking and communication skills. Fundamentally, by structuring assignments this way, I can help produce work product that answers the service learning partner’s questions and helps the students achieve the course’s skills and knowledge learning outcomes.

4. Prepare Students by Building Knowledge, Skills, and Abilities

The organizational trick of using service-learning in the traditional law school classroom comes when sequencing student learning. It is essential to negotiate the content and structure of the deliverables or course assignments with the service-learning partner before the course begins. Having these assignments in place and paced throughout the semester allows the teacher to scaffold the learning requirements.

This is easiest when pacing the syllabus’s substantive content. For example, in order to analyze impacts of specific proposed Paris Agreement provisions, our COP21 delegation first needed to understand how the draft agreement overall differed from the UNFCCC and its Kyoto Protocol. Classroom sessions using both secondary and primary texts took place early on, followed by focused reading of the Paris Agreement drafts and then discussion of particular provisions of interest to Myanmar. To understand the profound difference between “nationally determined contributions” and the top-down commitment of the Kyoto Protocol’s emissions reduction targets, students prepared memos analyzing three or four “intended nationally determined contributions” (INDCs) submitted by UNFCCC Parties by October 1, 2015. These memos were meant more for the students’ understanding than our service learning partner’s; they allowed students to see how individual developed and developing countries had interpreted the INDC requirements. This assignment brought home the new “bottom up” treaty structure being negotiated in the Paris Agreement. It also underscored the sovereign right of parties to interpret COP decision and treaty language. Timing this assignment to take place before the pre-COP briefing memos gave the students more background when analyzing discrete sections of the Agreement’s draft text.

79 For more information on nationally determined contributions, INDCs, and the top-down versus bottom-up debate about the Paris Agreement, see Press Release, Tracy Bach et. al., Vt. Law Sch., COP21: Will a Paris Agreement [Decrease] [Solve] [Do Nothing On] Climate Change? (Dec. 8, 2015) https://perma.cc/B2MZ-279N (detailing nationally determined contributions, INDCs, and the top-down versus bottom-up debate about the Paris Agreement).
Of course, pacing the skills component of curricular goals is also important for the students’ education and the service-learning partner’s work product. Group work and legal communication, both written and oral, are the core skills stressed in this course. Given the former, all assignments are written collaboratively, and I deliberately structure group work so that students have the opportunity to work with different partners and practice their group-work skills with an array of personalities over the course of the semester. To refine students’ research, analysis, and writing skills, I time the pre-COP briefing memos in the syllabus so that they may undergo two to three rounds of drafting. Typically, my teaching assistants and I provide individualized critique on the first drafts, and then a full-class critiquing workshop provides feedback on the second drafts. Regular short class presentations are scheduled throughout the semester to develop students’ oral communication skills. Taken together, these curriculum design choices help my students develop a deep expertise in one area of the negotiations by the second half of the semester, which they share with classmates pre-COP and then with our service-learning partner onsite at the COP.

5. Use Ongoing Reflection and Assessment Practices

Serving-learning experts recommend that students reflect on their learning experience throughout the project. Weekly journal entries are the typical vehicle. Unfortunately, while I admire this approach, I have never managed to incorporate it into any of the courses where I use a service-learning project. Instead, I require students to write a short reflective memo at the end of the semester. This takes place after classroom sessions and experiential learning onsite at the COP. While I offer a number of optional prompts for this memo, students regularly choose to reflect on the experience of working with the service-learning partner. This reflection also routinely takes place in casual conversations after a day of working in person with our partner at the COP. Making this kind of reflection a more systematic part of the course is one of my goals for next year’s course.

B. Varying Course Assignments

One barrier to using service-learning in the traditional classroom can be the perception that it is all or nothing: either the entire course must be a service-learning project or none of it can be. The time and energy invested in developing a service-learning partnership can motivate one to organize the entire course around it. But, this does not have to be the case. For example, in my Environmental Health Law courses, I use a service-learning project for only one of the course assignments, which is intended to run for
six weeks of the 15-week semester. In the International Climate Change Law course, some of the short assignments are intended for me only, either because the service-learning partner does not need that information or because I want students to write on a specific topic without devoting multiple weeks to redrafting for a finished client work product. During the 15 weeks of the semester, I have found plenty of room for a variety of assignments.

C. Balancing Learning and Service Goals

Another barrier to using service-learning in the traditional classroom can be the perception that content coverage must be sacrificed to complete these work products. While integrating legal skills into the traditional law course requires some doctrinal pruning, this strikes me as a necessary step for improving legal education because of the well-observed gap in the law school curriculum. Surveys of employers have routinely shown that the skills most prized in the workplace are legal research, analysis, and writing.80 Some doctrinal knowledge can be learned at work, specific to the law in the jurisdiction.

If law professors are committed to teaching doctrine and skill together, then we will need to learn how to balance the two. Taking the next step and applying integrated teaching to problem solving in a real-word context via service learning requires little additional decrease in course coverage. In fact, working with a service-learning partner may suggest other coverage areas and lead to spending more time on some subjects than others. For example, because Myanmar has been ranked globally for three consecutive years as the second-most-vulnerable country in the world to extreme weather events,81 the topics of adaptation and loss and damage are given more time in my syllabus than they would have otherwise. Likewise, because Myanmar has the largest standing forests on mainland Southeast Asia,82 forestry and land-use issues receive more attention in my course.


Having taught this international environmental law course for four years, I want to conclude with some analysis of student responses and of my sense of the pros and cons of teaching law this way. After 20 years of teaching courses at VLS that include doctrinal and skills courses, I find myself unable to separate teaching legal doctrine from teaching legal skills. I am a firm believer that “what is learned depends on how it is learned. Separating content from context simply doesn't result in successful learning.” Likewise, I think that setting students’ coursework in the context of real-world problem solving is more interesting than devising “canned” problems, paper topics, or exam questions. I also think that it represents a smart use of legal research and analysis resources for people and organizations that lack access to legal services. Finally, my anecdotal observations affirm Professor Rhode’s sense that increased participation by law students in pro bono activities in their “regular” classrooms leads not only to a greater awareness about the need for these services, but also to a stronger interest in doing pro bono work after graduation, given the satisfaction derived from these school projects.

A. Assessing the Impact on Student Learning

“I have developed a sense of ownership of the project and I find myself working hard because my work will impact real people.” This comment on a course evaluation from 2004 has stayed with me. While I do not know whether this student went on to do more pro bono service in practice than she or he would have without my service-learning teaching, I do know that

83. I have also used service learning in other courses during the past twelve years, ranging from Environmental Health Law to Legal Writing II. These include: Torts, Health Law, Environmental Health Law, International Environmental Law, Climate Change Law and Policy, Legal Profession (Professional Responsibility), and Genocide. Faculty: Tracy Bach, VT. LAW SCH., https://perma.cc/9NAM-2MAZ (last visited Jan. 11, 2017).


85. These include: Legal Writing and Analysis II (capstone objective writing and introduction to persuasive writing) and Appellate Advocacy (capstone persuasive writing). Id.


87. See Bowman, supra note 48, at 589–90 (describing Mary Bowman’s observations about “wast[ing] potentially valuable resources”).

this technique led to high engagement in the academic work—and useful research and analysis for a local non-profit organization.89

Student comments on course evaluations from the International Climate Change Law course sound similar themes:

- “[P]articipation in the COP is invaluable as international background, and the commitment with the State Party delegation promotes social responsibility and leadership among VLS delegates.”90
- “This course was extremely worthwhile. I think more than any other of the MELP classes (and this was my last in the program), it allowed both the academic learning perspective and the real world application. And in a way that was meaningful through our service learning experience with our LDC partner.”91
- “The course allowed what the majority of courses do not: the ability to experience what you study. Working with our service learning partner gave the course a narrowed scope and context.”92
- “This class was enormously worthwhile to me. It allowed me to further my understanding of climate change law and policy, have the extraordinary opportunity to participate in the COP, and advance critical knowledge and skills needed to fulfill my dream of working in this arena. It also gave me a first-hand experience of working directly with delegates of a Least Developed Country!”93

These student comments speak volumes about the positive learning experiences outlined in the service-learning literature. Live lawyering problem solving enables students to see their developing knowledge and skills in context. The service-learning project with an LDC delegation exposes students to a developing country’s perspective on the international negotiations. Students saw our service-learning partner struggle to interact with the negotiations and legal text drafting, and reflected on their part in

89. These 1L students’ research and analysis contributed to a report that I co-authored with the Center for Environmental Health Sciences at Dartmouth. See generally BETHANY FLEISHMAN ET. AL., STATE LEGISLATION ADDRESSING PREVENTION OF CHILDHOOD LEAD POISONING: A POLICY REPORT FOR THE GREATER MANCHESTER (NH) PARTNERS AGAINST LEAD POISONING (2004) (offering examples for how the New Hampshire legislature could improve its lead poisoning prevention statute. New Hampshire amended its statute and regulations during the following five years).
that struggle. Finally, using service learning enhances students’ awareness of, and interest in, this kind of pro bono legal work post-graduation.

B. Balancing Course Preparation with Professional Development

As law schools struggle to do more with less in this era of declining enrollments and budgets,\textsuperscript{94} it is fair to ask if integrating PBSL into the law school classroom is too time consuming or expensive. As comments from service-learning advocates included in this article have frankly indicated, live problems can be messy. Given this reality, teachers must be flexible and experienced, both in the substantive area and in curriculum development. They must also want to stay on top of an area of law, for assignments will change with each service-learning partner and project. Finally, PBSL professors must hone their organization and diplomacy skills. At the same time one is flexible about course content and coverage when integrating a service-learning project, one must also be precise and firm on teaching goals with the service-learning partner. I strongly believe that the service aspect cannot become the tail that wags the learning dog.

While these potential downsides indicate the need for time and energy invested in curriculum development and substantive knowledge, in the end I do not perceive that I would have invested less in “regular” assignments. Would we not get bored repeating assignments and not adjusting course coverage from year to year? If PBSL imposes any additional teaching burden, it is easily justified by my own professional development and student-engagement goals. By integrating skills and doctrine into VLS’s International Climate Change Law course and bringing in live problem solving via a service-learning partnership, I bridge the gap between academics and practice—for me, as well as for my students.

TEACHING SUBSTANTIVE ENVIRONMENTAL LAW AND PRACTICE SKILLS THROUGH INTEREST GROUP ROLE-PLAYING

Karl S. Coplan*

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INTRODUCTION

Most law students take their first introductory course in environmental law during their second year of law school. The traditional first-year curriculum does little to prepare students for the complex statutory and regulatory models for most environmental regulation. Law students at the end of their first year often have had little exposure to statutory interpretation. Further, they often have no exposure to administrative law and regulatory implementation. These students may expect statutes to provide clear statements of rules rather than guidelines for administrative rulemaking. They also tend to view the lawmaking and interpretive process through the traditional lens of congressional legislation and common-law-style judicial interpretation in a bipolar scheme of implementation—where the regulatory agencies and the regulated industries are the only players.

In fact, environmental regulatory programs constantly evolve through a complex interaction of legislative amendment, administrative rulemaking, and judicial interpretation. Influencing these programs are the multipolar interaction of regulated industries, environmental groups, state agencies,
and federal regulators. Law students accustomed to the bipolar model of common-law legal development and who expect statutory law to consist of a simple reading of clear statutory texts can find this interest group pluralist model of law development bewildering. One way to help give context to this complex interaction is to place students in the roles of the various advocates and decision-makers in the environmental law processes. Assigning students to adopt the perspective of various distinct players in the regulatory process, such as agency lawyer, industry lawyer, and environmental NGO lawyer, helps make this complex interaction more accessible to students. This also provides an introduction into the skills of statutory interpretation and regulatory implementation.

At Pace Law School, we have had considerable success integrating this approach into an Environmental Law Skills course. This course combines a comprehensive study of the Clean Water Act (CWA) regulatory program with skills-based exercises in administrative rulemaking, judicial review, regulatory permitting, negotiation, and enforcement. The course was added to the curriculum in the 1990s in response to the growing recognition by the legal academy that the traditional case-oriented method of instruction failed to result in law graduates with basic competencies expected of lawyers. The course has been refined over the years to incorporate the Carnegie Report’s more recent critiques: the legal education’s failure to foster students’ development of their professional identities and their understanding of lawyers’ role in representing clients. By integrating role-playing, problem solving, and doctrinal instruction, the course seeks to engage students in active learning and professional identity development. The course also seeks to implement recommendations for the improvement of legal instruction contained in Professor Stuckey’s influential 2007 report, Best Practices for Legal Education. In particular, the course seeks to

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8. Id.
“teach doctrine, theory, and practice as part of a unified, coordinated program of instruction” as recommended in that report.12

This course is run, in part, as a semester-long simulation for the 30 to 50 students enrolled.13 Students volunteer for a wide variety of specific roles in the environmental law process, including: President of the United States, congressional representatives, federal judicial roles, federal and state agency decision-makers and lawyers, regulated industry, and environmental and wildlife groups. Rather than traditional essay exams or research papers, student submissions consist of professional work product, such as comments on proposed regulations or draft permits, administrative actions, and enforcement or judicial-review proceedings. The simulation is open ended. Students respond to the actions of students playing other roles, including agency actions. Learning outcomes seem to be positive. Although students find the course challenging, as they are expected to play a more active role in defining the appropriate work product for each situation, student feedback indicates that students find the course to be valuable preparation for professional internship placements and postgraduate employment in environmental law.

I. THE MULTICENTRIC, PLURALISTIC NATURE OF ENVIRONMENTAL LAW

Environmental law is multicentric and pluralistic. It is multicentric because no single institution generates all of the rules of decision for environmental law;14 it is pluralistic because the creation and implementation of environmental law standards involves multiple stakeholders from different sectors of society.15 The experience of learning the rules and practical skills of environmental law thus differs from the typical first-year law school curriculum, which focuses almost exclusively on common law legal rules generated by a single institution (the judiciary) generally resolving bilateral disputes. Criminal law, one statutory course in the standard first-year curriculum, involves relatively simple statutory provisions enacted by legislatures and interpreted by the judiciary—adding

12. Id. at 99.
15. Id.
just one lawmaking institution to the mix.\textsuperscript{16} Criminal law is similarly bilateral, always involving a government enforcement interest and a criminal defendant. Students studying environmental law in the fall semester of their second year are not prepared for the bewildering array of institutions and actors involved in the making and implementation of environmental law.\textsuperscript{17}

\textbf{A. Multiple Interactive Lawmaking Institutions}

Most environmental law standards are implemented through a system of legislative enactment, administrative implementation, and judicial interpretation.\textsuperscript{18} Cooperative federalism adds a second layer of institutions, as state legislatures and agencies play a role in the implementation of federally established standards.\textsuperscript{19} The development and implementation of environmental standards thus involves many actors: the Senate, the House of Representatives, congressional committees, the President, national and regional Environmental Protection Agency (EPA) offices, the White House Office of Management and Budget, the United States Army Corps of Engineers, administrative law judges, federal district courts, courts of appeals, the United States Supreme Court, state legislatures, and state environmental agencies.\textsuperscript{20}

\textbf{B. Pluralistic Stakeholder Involvement}

Added to this list of institutions with formal lawmaking authority are the stakeholder and advocacy institutions at the local, state, and federal levels. Environmental administrative law led the transition from the bipolar model of law administration to the pluralistic, polycentric stakeholder

\begin{footnotesize}
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\item \textsuperscript{16} One exception to the common law focus of the first year is Civil Procedure as it is generally focused on the interpretation and application of textual rules. Some schools have modified their first-year curricula to include statutory or legislative-regulatory courses. \textit{See generally} Leib, \textit{supra} note 2, at 169, 172, 173, 189 (arguing that legislation courses should be added to first-year curriculum due to a lack of statutory introduction in other courses).
\item \textsuperscript{17} \textit{See generally} Martin J. Katz, \textit{Facilitating Better Law Teaching—Now,} 62 EMORY L.J. 823, 827–28 (2013) (providing recent discussions on the role of experiential learning in developing legal skills and professional identity and solutions for how to improve legal education through experiential learning and innovation); Deborah Maranville et al., \textit{Re-Vision Quest: A Law School Guide to Designing Experiential Courses Involving Real Lawyering,} 56 N.Y. L. SCH. L. REV. 517, 519 (2011–2012) (offering a framework for law schools to consider in designing experiential programs); \textit{see also} Jessica Erickson, \textit{Experiential Education in the Lecture Hall,} 6 NE. U. L.J. 87, 96, 110 (2013) (explaining the need for doctrinal professors to use experiential education in the classroom).


\item \textsuperscript{19} \textit{PLATER, supra} note 5, at 210.

\item \textsuperscript{20} \textit{Id.} at 53–57.
\end{itemize}
\end{footnotesize}
model now prevalent.\textsuperscript{21} Under the bipolar model, agency administration of regulatory programs was seen as a bilateral negotiation between the agency and the regulated industry.\textsuperscript{22} As the administrative state evolved, this bilateral negotiation gave way to a more pluralistic, multicentric model.\textsuperscript{23} Consumers and environmental groups demanded a seat at the table for representatives of the public interest to act as a check on agency capture.\textsuperscript{24} In the modern administration of the environmental regulatory program, NGO actors affect the development of the law through their advocacy and litigation activities.\textsuperscript{25} Thus, the institutions of environmental law also include: individual industrial facilities (e.g., steel mills and power plants); national trade associations representing such industries; states; individuals; local, regional, and national environmental organizations; and wilderness and historic preservation organizations.\textsuperscript{26} Individual players in these entities include business executives, environmental managers, community organizers, activists, and, of course, attorneys.

To the second-year law student, this presents a bewildering array of institutions, most of which they have never even heard of before. Having students step into the role of the individual professional players within these institutions helps students understand the roles of, and interactions between, these institutions in the law process. This also helps students understand the tasks demanded of, and the skills needed by, the individual professionals within these institutions. Having students adopt semester-long roles within this multicentric, pluralistic universe helps demystify and uncomplicate both the environmental law process and the role lawyers and other professionals play within the process. Students also experience the interactive nature of the environmental law process first hand as they learn how each institutional actor reacts to measures taken by the others.

\textbf{II. ENVIRONMENTAL LAW SKILLS/CLEAN WATER ACT COURSE: SEMESTER-LONG ROLE-PLAYING}

The Environmental Skills/Clean Water Act course has been the core course of the Pace Law School environmental curriculum for over 20 years. It is a requirement for students seeking to graduate with the Environmental Law program.
Law Certificate.27 The course combines an in-depth study of the United States water protection law with an introduction to administrative practice and procedures, along with practical skills. I have been teaching the course since 2007.

A. Course Description and Goals

The course focuses on the legal regime, common law and statutory law, governing water pollution. This legal regime is similar to the legal regimes governing other aspects of pollution and waste control, such as the law of air pollution and waste disposal law. Because common law governed the field before it was addressed by statute, the course starts with the common law. Most of the course, however, explores the interpretation and implementation of a complex statute, the federal CWA. An integral part of its interpretation and implementation is the administrative process common to all regulatory statutes, governed by the federal Administrative Procedure Act (APA). The course addresses the role of administrative agencies and the APA before addressing the CWA. The course uses the Jeffrey Miller, Ann Powers, and Nancy Long casebook, Introduction to Environmental Law, Cases and Materials on Water Pollution Control.

The thesis of the course is that by learning to navigate one complex regulatory statute and its implementing regulations, students will be able to navigate others on their own or with minimum guidance. The CWA is a good introduction to the challenges of statutory interpretation as it is a complex statute, in-artfully drafted in some places and ambiguous in others, with a rich legislative history. EPA’s regulations implementing the CWA are similarly a good introduction to the challenges of regulatory interpretation, as they are more complex and more technical than the Internal Revenue Service (IRS) regulations implementing the Internal Revenue Code. The emphasis of this course is on learning how to solve problems using statutory and regulatory sources.

During the first week, students are assigned roles for classroom discussion and exercises—i.e., politician, environmental activist, public-interest lawyer, EPA lawyer, or lawyer for an industrial enterprise. Students are expected to analyze and argue problems and disputes based on their assigned perspectives throughout the course. Grades are based on four written projects (90%) and class participation (10%). Two major writing

and research projects count for 30% and 40% of the grade, respectively; two follow-up assignments count for 10% each.

B. Course Structure

1. Overview

The course starts with an examination of common-law remedies for water-pollution problems in the absence of any statutory controls. The course then moves on to an overview of administrative law and procedure and an introduction to, and overview of, the federal CWA. After this overview, the course examines in great detail various aspects of the CWA regime of water pollution regulation, including: the elements of the CWA permitting trigger; the derivation of water-quality-based standards; the derivation of technology-based standards; and National Pollutant Discharge Elimination System (NPDES) permit contents, procedures, and enforcement. Written assignments include public comments on a proposed rule, with a follow-up assignment consisting of a final rule and the papers involved in judicial review of the rule. Comments on a draft NPDES permit, with follow-up papers involved in review and enforcement of the final permit, are also assigned.

2. The Roles

The range of classroom roles available for students to assume demonstrates the world of human actors in the environmental law process. Government roles include legislative, administrative, executive, and judicial roles at the federal level, as well as state administrative roles. Industry roles include lawyers and executives representing various industries subject to clean water regulation. Environmentalist roles include community activists, as well as lawyers representing local, regional, and national environmental organizations.

29. An additional benefit of having students adopt unique individual roles for the entire semester is that it promotes each student’s sense that they are valued as unique individuals making an essential contribution to the course. Professor Stuckey identified this sense of individual value as a key element of an effective learning environment. STUCKEY, supra note 11, at 114 (quoting Stephen D. Brookfield, Adult Learners: Motives for Learning and Implications for Practice, in TEACHING AND LEARNING IN THE COLLEGE CLASSROOM 137, 143 (Kenneth A. Feldman & Michael B. Paulsen eds., 1993)).
On the first day of class, the students elect one student to serve as President. The President then appoints an EPA Administrator, EPA General Counsel, EPA Regional Administrator, Director of the Office of Management and Budget, as well as Supreme Court justices, a federal court of appeals judge, and a district court judge. Two students serve as Representatives in the House of Representatives and two students serve as Senators—the congressional delegation being divided between an industrialized state and a more rural state. One student serves as an Assistant Attorney General and another serves as an EPA Administrative Law Judge. Lower level EPA roles include a Senior Staff Attorney, Water Quality Engineer, Regional Counsel, Permit Writer, and Regional Water Quality Engineer. State governmental roles include environmental conservation agency personnel, such as Commissioner, General Counsel, Regional Permit Administrator, Regional Counsel, Regional Water Quality Engineer, and Fisheries Biologist.

Industry roles include both executives and attorneys for steel companies, power generation companies, petrochemical companies, mining companies, pulp and paper mills, metal finishers, agricultural interests, and real estate developers. Also included in the industry category are attorneys and environmental engineers for a city and a small town.

On the environmentalist side, roles available include lawyers and activists for local citizen groups and local environmental groups, such as a scenic preservation organization and a local chapter of Trout Unlimited. A regional waterkeeper organization is also a role. Students also adopt the role of lawyers for national environmental organizations, such as National Resources Defense Council, Environmental Defense Fund, Defenders of Wildlife, The Wilderness Society, and Sierra Club.

With the exception of the presidential appointment, student roles are assigned by the professor. Each student must request their preferred roles on the first day of class, indicating what in their background qualifies them for the requested role. By the second class of the semester, students are told to be prepared for their roles in the classroom discussion.

Anyone who has participated in public hearings, conferences, court sessions, and other places where attorneys congregate has probably observed that attorneys tend to cluster according to the interest groups they represent. That is, industry lawyers tend to cluster with other industry lawyers, lawyers for environmental groups tend to congregate with other environmentally leaning lawyers, and government lawyers tend to gravitate toward other government lawyers. In order to reflect this social reality of practice, students are asked to sit in the same part of the classroom as other students with similar interest group roles. Thus, the environmental group lawyers all sit on one side of the classroom, while their adversaries, the
industry lawyers, sit on the other side, facing off across the open center of the classroom. Students with judicial roles sit in the front seats of the center section, where they are ready to hear arguments when necessary. EPA lawyers and personnel sit together on one side of the center section, while state environmental agency personnel sit together on the other side. The interest group seating assignments not only reflect one social reality of practice, it also facilitates discussion and collaboration within interests groups during classroom problem solving and simulations.

C. The Classroom Experience: Common Law, Legislative, Statutory, and Regulatory Problem Solving

Other than the in-class simulations, class sessions are conducted in a combination of lecture and Socratic problem solving. Rather than question students about “rules,” the classroom conversation alternates between interactive problem solving based on the reading materials and close examination of the procedures and advocacy roles involved in the cases. Classroom simulation exercises include a public comment hearing on a proposed rule, presentation of the final rule, oral argument on the judicial review proceeding challenging the final rule, a negotiation, and oral argument on review of a final permit.

This section gives some examples of how the class uses role-playing to explore solutions to water-pollution issues. These problem-solving modules include common law remedies, legislative responses, an examination of the environmental law process, reading statutes, and permit effluent standards problem solving.

1. Reading and Class Discussion Modules

a. Common Law Problem Solving

The semester begins with an examination of common-law remedies for water pollution in the absence of any legislative or regulatory controls. This module is based on a hypothetical lake, Lake Between, located on the boundary between two fictional states, New Union and Progress. Around the lake are various sources of water pollution, including a coal-fired power plant, feedlot, slaughterhouse, city sewage treatment plant, apple orchard, recreational marina, small village with leaky septic fields, and pastures. The students playing community activists are asked to play the role of lawyers representing the small community suffering from the water pollution. They devise common law legal theories that might provide a remedy. Students must use the assigned case readings to: decide which defendants to sue,
articulate the elements of the causes of actions, apply the facts to the elements, and even consider what judicial fora would be available for an interstate pollution dispute. First, the plaintiffs’ lawyers choose a defendant, a cause of action, and a theory, such as public or private nuisance. Next, attorneys for the defendant, such as the power plant or the feedlot, must make arguments for why the case should be dismissed or why their client should prevail on the merits. These arguments are developed at a very basic level, \emph{ad hoc}. That is, the students were not instructed ahead of time to be ready for the specifics of the class discussion. This helps students learn how to “think on their feet,” a valuable professional skill. The student in the role of a United States District Court judge would be asked how she would rule on the arguments presented by both sides. The cases assigned in the readings are sources of rules and authority for the arguments made by both sides, without the usual Socratic examination of the facts and holding of each specific case.

In addition to teaching practical skills—like developing causes of action, applying law to facts, choice of law, and choice of forum—the module on common-law remedies illustrates the gaps in the common law when it comes to solving the water-pollution problems plaguing Lake Between. Students need to address issues of joint causation and liability, the lack of prospective remedies, municipal immunity, choice of law, and the lack of interstate remedies in formulating their claims and responses.

b. Legislative Problem Solving

Following the common-law exercise, the class is asked to consider a legislative solution to the interstate water-pollution problems on Lake Between. To introduce the possibility of legislative solutions, the student acting as the community activist attorney is asked to consider his options when the common-law judicial remedies have been dismissed or provided highly incomplete relief. Who should the environmental interests call when the law fails them? Eventually, with some gentle prodding, students in role think about calling their congressional representatives to seek legislation that would protect the water quality in Lake Between. This sparks a discussion among the four members of Congress in the classroom—what should legislation protecting water quality look like? The legislators are asked to draft statutory language to address water-pollution problems, like those on Lake Between. Legislators may create something like an administrative agency to implement a program of water-pollution regulation because of the impracticability of drafting general language that addresses the specifics of all the potential permutations of water-quality problems. This introduces the concept of the administrative branch of government, a
concept that is, for the most part, missing from students’ civics education and the standard first-year curriculum. As students have already read a general overview of the CWA, the legislative drafting exercise usually tends to gravitate toward the CWA’s structure of a strict permitting requirement with federally established standards for effluent limits. Representatives for the industrialized state and rural state must grapple with their constituents’ interests and preferences in terms of permit administration (state or federal) and effluent standard setting (water-quality-based or technology-based), among other issues. Although time does not permit the drafting of a fully conceived statute for the regulation of water pollution, students are exposed to the legislative drafting issues involved and the complexities of establishing a water regulation scheme that would apply throughout the country.

c. Environmental Law Process Simulation

The next classroom module is an introduction to administrative law and administrative processes. After reviewing provisions of the APA and cases on judicial review of administrative action, the class proceeds to examine the case of Republic Steel v. Costle. This case illustrates the complex interaction among Congress, federal and state agencies, the courts, and regulated industry in the development of environmental law rules of decision.

Republic Steel is a wonderful, if complicated, illustration of the institutional interactions that lead to environmental law rules. The actual holding of the case—that a state-issued NPDES permit may not extend the statutory deadline for achieving Best Practical Technology (BPT) based effluent limitations—is obsolete, as all such deadlines in the CWA are decades past. But, the case’s factual and procedural background provide a useful illustration of the roles that various institutions play in the creation of environmental law rules of decision. The rough chronology of the events behind Republic Steel is as follows: (1) Congress enacted the CWA, requiring EPA to publish effluent limitations guidelines (ELGs) for BPT by October 18, 1973, and requiring dischargers to achieve compliance with BPT by April 1, 1977; (2) Ohio was delegated authority over its NPDES permitting program; (3) EPA failed to publish ELGs by the statutory deadline; (4) in the absence of ELGs for the steel industry, Ohio issued a permit to Republic Steel that waived compliance with the statutory BPT

31. Id. at 1234 n.17.
As is apparent from this tortured procedural background, there is a role for nearly every player in the environmental law process in the Republic Steel saga. Classroom discussion of the case proceeds by having each student role play their part in the process, in light of the statutory scheme and their clients’ institutional interests. The EPA Administrator must read the statute and figure out what responsibilities and deadlines for ELG issuance Congress has placed on her shoulders. Attorneys for the steel company must figure out what compliance responsibilities EPA places on them and where to apply for the required permit. The state NPDES Permit Administrator must address the challenge of writing a permit for a major in-state employer, in the absence of EPA guidance on the appropriate effluent limitations. EPA personnel must decide whether it is in EPA’s institutional interest to veto the permit. The industry lawyers must formulate arguments to present to the Court of Appeals judge on judicial review of the permit veto, and the judge must decide the case. The congressional representatives must discuss how to respond to the court’s decision allowing deferral of the critical compliance deadline and consider non-legislative tools to influence the process, such as congressional hearings and committee reports. The Supreme Court justice must decide how to deal with the petition for certiorari in light of the congressional amendment (many second-year students have never heard the phrase “grant, vacate, and remand” before). The industry and EPA lawyers have to formulate arguments on remand in response to the 1977 Amendments, and the Court of Appeals judge must explain his decision.

By the end of this exercise, students’ heads are reeling. But, they have a greater understanding of the various institutions’ roles in creating the
“rules” of environmental law in the regulatory state, as well as the tasks demanded of the professionals within these institutions.

d. Statutory Interpretation Problem Solving

After the module on administrative law and the regulatory lawmaking process, the class attacks the problem of statutory interpretation in the case of a complex statute with a rich legislative history. The class’s first task is to derive the five elements of a violation of the CWA permitting scheme from the statutory text, starting with the over-generalized prohibition of CWA § 301: “Except as in compliance with this section and [permitting sections of the CWA] the discharge of any pollutant by any person shall be unlawful.”33 Students must then work through the cross-references and definitions sections of the CWA in class to discover that the statute establishes five elements for a NPDES permitting scheme violation: (1) discharge; (2) of a “pollutant”; (3) from a “point source”; (4) to “waters of the United States”; and (5) without, or in violation of, a permit issued under either § 402 or § 404 of the CWA.34 Then, the class examines regulations and judicial opinions interpreting each of these elements, relying on both the more traditional case method as well as assigned problems. As a review exercise, the class considers which of the pollution sources identified in the Lake Between hypothetical from the first class would require NPDES permits.

The course then proceeds to examine water-quality- and technology-based approaches to effluent limit setting and permitting issues. This part of the course examines each topic, first, by deriving the basic structure of the regulatory system from statutory and regulatory sources. Then, the course reviews case decisions interpreting and applying the regulatory program in exemplary cases. The statutory and regulatory interpretation examples continue to expose students to the complexities of implementing a statutory regulatory program.

The course’s use of water-quality-based, effluent standard setting provides a good example of this approach. We might start by having the student in the role of the state Water Quality Engineer explain the intuitively necessary steps to establish a system of water-quality-based effluent limits. The five basic steps that states must take to establish water-quality-based effluent limitations under the CWA are: (1) designate desired uses of various water bodies; (2) establish water quality criteria to ensure

34. Id. §§ 1342(a), 1344(a), 1362(7), (12).
sufficient water quality to support such uses; (3) determine which water bodies within the state fail to meet the criteria for their designated use, so-called impaired waters; (4) establish the maximum pollutant loadings permissible on such impaired waters as necessary to allow them to meet the criteria; and (5) allocate the permissible loadings among pollution sources. While these steps may be easy to state (and perhaps a little less easy to intuit), they are very difficult to find in the applicable statutory and regulatory texts. The class thus focuses on finding the authority for each of these steps in the regulatory program, starting first with CWA § 303.35 This section specifically calls for waterbody use designations, water quality criteria, designation of impaired waters, and establishment of total maximum daily loads; however, it provides very little guidance for allocating the wasteload among sources and incorporating these limits into permits (at least for conventional pollutants). Discovering authority for the wasteload allocation and implementation parts of the water-quality-limits process requires synthesis of other statutory sections, such as the CWA § 301(b)(1)(C), which mandates effluent limits sufficient to achieve water-quality standards,36 and EPA regulatory definitions, such as 40 C.F.R. § 130.2(i),37 which defines a Total Maximum Daily Load (TMDL) to include a wasteload allocation designating the permissible loading among point sources.38 Once the class derives the parameters of the statutory and regulatory approach, it considers specific examples that apply these standards, largely through consideration of reported judicial decisions. Individual students are expected to be well versed in the cases involving their specific clients, such as the National Resources Defense Council or their industry, such as the pulp and paper industry.

c. Permit Writing Problem Solving

In the course of examining the NPDES permits’ drafting process and establishing effluent limitations for individual dischargers, students are required to calculate the appropriate numerical effluent limits for a hypothetical wool scouring plant discharger. This assignment requires students first to determine the correct industry category and whether the plant would be considered a new source subject to New Source Performance Standards or an existing discharger subject to Best Practicable

35. Id. § 1313(c)(2)(A), (d)(1)(C).
36. Id. § 1311(b)(1)(C).
37. 40 C.F.R. § 130.2(g)-(i) (2015).
Control Technology for conventional pollutants. Students must then find the appropriate effluent limitation ratios in EPA’s Industrial Effluent Guidelines and apply these ratios to determine a numerical effluent limit stated both in mass-based limits (pounds per day) and concentration-based limits (milligrams per liter). Although the assignment does not require math skills beyond multiplication, division, and conversion of units of measurement, the prospect of being required to perform any mathematical analysis intimidates many law students. The assignment is graded pass/fail, and we spend most of a class session going over the calculations in detail to give the students some comfort with the quantitative aspects of environmental law practice.

2. Written and In-Class Simulations

In addition to the regular classroom discussion, there are four written assignments and two in-class oral exercises. The first written assignment is a public comment on a notice of proposed rulemaking, usually for a regulation. The first oral assignment is, for most of the students, to present at a public-comment hearing on the proposed rule. The second written assignment is a follow up to the first, in which students prepare papers involved in judicial review of the final rule. The third written assignment consists of comments on a draft NPDES permit, usually for an industrial facility. The fourth written assignment is a follow up to the third, consisting of papers involved with either obtaining review of the final permit or enforcement proceedings for violations of the final permit. The final oral exercise is, for most students, a negotiation session in the context of the enforcement proceedings. The follow-up writing exercises become an interactive simulation, as students must respond to the strategic choices and arguments made by students representing other institutions and interest groups.

a. Rulemaking Simulation: NPR, Comments, Final Rule, Papers
   Challenging Final Rule, Argument, and Decision

The first written exercise, which counts for 30% of the final grade, is to draft public comments on a proposed EPA rule implementing the CWA. The idea of administrative rulemaking is a new concept to most second-year students, as is the concept of informal—notice and comment—rulemaking under § 553 of the APA.39 The proposed-rule exercise usually

involves a proposal to either amend a definitional section of the NPDES permitting program or to add or remove one of the regulatory exemptions contained in 40 C.F.R. § 122.3. 40 Because the assignment is at the beginning of the course, students are only familiar with the basic definitional elements of the NPDES permitting trigger. Thus, the assignment is keyed to the expected level of comprehension of the statutory scheme. An example of one of the proposed rules put out for student comment (contained in the first edition of the casebook) was a proposal to include marine engines as point sources subject to regulation under the NPDES program. 41

Students must write public comments on the proposed rule, generally from the perspective of the clients or interest groups they represent. All industry lawyers are expected to take the industry side of the argument: whether their specific industry is affected. Environmental lawyers must submit comments appropriate to the policy positions of their specific organizations. Students in state environmental agency roles are expected to file comments from the perspective of a state with a delegated NPDES permitting program. All government lawyers and personnel, including the classroom judges, are asked to write comments from the perspective of an EPA Staff Attorney performing an internal review of the proposal. Students are advised that their comments should include analysis of the legality of the proposed rule and the factual and policy arguments that would be expected in public comments from their respective interest groups. The problem is designed to engage students in the legal analysis of the NPDES permitting trigger elements using statutory, regulatory, and case law sources. The writing and research exercise is open ended—students are specifically advised that successful completion of the comment assignment will require both legal and policy research well beyond the materials included in the casebook. Students are also advised to refer to the EPA public-comment docket online at regulations.gov to look for examples of similar public comments on proposed rules. Elizabeth Mullin’s book on filing effective public comments on environmental decision-making, The Art of Commenting, is placed on reserve for student use. 42

As students’ comments are submitted, they are placed on a public docket (except for the “internal EPA” comments submitted by students in

40. 33 U.S.C. §§ 1316 (a)–(b), 1292.
41. Id. § 1342(r) (mooting this example is the Clean Boating Act of 2008, which specifically exempts properly functioning recreational marine engines from regulation under the NPDES program).
42. ELIZABETH MULLIN, THE ART OF COMMENTING: HOW TO INFLUENCE ENVIRONMENTAL DECISION MAKING WITH EFFECTIVE COMMENTS (2000).
federal government roles). The day after the comments are due, the EPA personnel hold two public-hearing sessions on the proposed rulemaking. Each student in an advocacy role—industry lawyers, environmental group lawyers, state environmental agency personnel, and congressional representatives—must present oral comments, limited to five minutes each. EPA personnel are charged with presenting the proposed rule at these hearings and conducting the public-hearing sessions. The professor provides short individual feedback to each student on their oral presentation. The oral presentations are video recorded so that students may view their own performance.

After the public-comment hearings, the exercise moves into its second phase, with follow-up writing assignments and oral exercises. The students in EPA roles have the responsibility of considering all public and internal comments and deciding on a final rule, as proposed or with modifications, or a decision to decline to adopt the proposed rule. The EPA students present the final rule in class. The interest groups that are dissatisfied with the EPA final action then have one week to prepare papers seeking judicial review of EPA’s final action on the rulemaking proposal. Because there is a disagreement among the circuits about whether EPA modifications to the definitional and exclusion provisions of the NPDES program must be reviewed directly in the Court of Appeals under CWA § 509(b), students must address choice of forum issues in their papers. A week after the papers challenging the final rule are submitted, EPA personnel and students representing interest groups that support the final rule must submit responsive papers defending the final rule. Oral argument is then conducted before the appropriate student judges, who then issue opinions resolving the judicial-review proceeding. All the student papers are posted on the public docket, available on the course website. Unlike the first writing assignment, which must be the individual work of each student, students are encouraged to collaborate and submit joint papers in this follow-up writing assignment—so long as each student identifies their own work product. Given the short time frames for submission of the papers and the inevitable sharing of research and analysis on the public docket, these follow-up papers are given relatively low weight in the final course grade.

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43. Compare Nat'l Cotton Council of Am. v. Envtl. Prot. Agency, 553 F.3d 927, 933 (6th Cir. 2009) (explaining that a rule exempting pesticide spraying from the NPDES permitting program was reviewable directly in the Court of Appeals), with Friends of the Everglades v. Envtl. Prot. Agency, 699 F.3d 1280, 1280 (11th Cir. 2012) (holding that CWA § 509(b) did not grant the Court of Appeals jurisdiction to hear a challenge to a rule exempting water transfers from the NPDES permitting program).

44. STUCKEY, supra note 11, at 119 (recommending and encouraging collaboration among students as another way to promote student engagement and learning).
The instructor avoids giving substantive feedback on the students’ submissions until the judicial opinions are issued. This prevents influencing the students’ thinking in advocacy or judicial roles. On the day that the final opinions are issued, the instructor reviews the problem in detail and critiques the arguments and analyses performed by the students, pointing out common errors of analysis and mistakes. The instructor returns the students’ edited comment submissions with a short responsive paragraph outlining the positive points addressed by the students and the issues and arguments that they missed.

b. Draft Permit Simulation: Draft Permit, Comments, Final Permit, and Review of Final Permit

After completing the rulemaking exercise, the substantive coverage of the course proceeds to the technical and procedural issues involved in issuing individual NPDES permits. Students work on the third written exercise of the semester, public comments on a draft NPDES permit. The draft permit is usually for an industrial facility. By design, the draft permit contains several errors in the calculations, assumptions about the regulatory status, or applicable point-source category or subcategory. In addition to the obvious errors, there are areas of ambiguity with room for argument for stricter or looser effluent limitations or other permit conditions. As with the first written assignment, students must perform out-of-class research. They submit comments on the draft permit on behalf of their assigned client interest group—the industrial facility subject to the permit, environmental groups seeking stronger environmental protection, and state environmental agencies. To make the scoring of issue spotting in the papers more fair, students are encouraged to submit a confidential memo outlining permit errors that are favorable to their clients that they choose not to mention in public comments.

Like the rulemaking comments, the student comment submissions on the draft permit are posted on the public docket, available on the course’s web page. Similar to the rulemaking exercise, EPA personnel—usually the water quality engineer and the regional permit administrator—are charged with considering the public comments, issuing a final permit, and responding to comments. In issuing the final permit, the student EPA personnel chooses how to resolve all the substantive issues raised in the

45. Id. at 187–88 (emphasizing the importance of debriefing a simulation exercise as a means to improve student learning).
comments and decides which issues raised real errors in the draft permit that require change.

As with the rulemaking exercise, EPA’s final permit becomes the basis for a review proceeding. About one-third of the class is assigned to complete the papers for review of the final permit. This means that students representing interests unhappy with the final permit (often both sides) must first figure out what form of the final permit’s initial review is appropriate: judicial review directly in federal district court or court of appeals or some form of administrative review available prior to judicial review. The students seeking review must then figure out what to file to commence a review proceeding and subsequently draft and file those papers. EPA personnel then respond and may make an appropriate motion to dismiss the review papers, if filed in the wrong forum. All the deadlines under the Federal Rules of Civil Procedure, Appellate Procedure, and EPA’s rules governing permit procedures apply. Yet, to complete the exercise before the end of the semester, simulation time runs at a ten to one ratio. That is, one “real” day counts as ten days for the purposes of procedural deadlines. Students are informed that the papers will be graded with the understanding that both the time and the page limitations are very short. The emphasis is on identifying the appropriate forum, deadline, form of papers to be filed, and a rough outline of the appropriate arguments. As with the second written assignment, students may collaborate within their interest groups in order to submit joint papers. Ultimately, the permit-review proceedings commenced by the student attorneys are submitted to the appropriate students in judicial (or administrative adjudication) roles for decision. The class jurists then decide the review proceeding and issue an opinion to satisfy their fourth writing exercise requirement.

c. Enforcement Simulation

Simultaneous with the permit-review proceedings, the remainder of the class engages, prosecutes, and defends enforcement proceedings based on the same final permit issued by the classroom EPA permitting staff. The enforcement exercise proceeds as the class completes the course materials on CWA enforcement. The instructor takes the final permit and generates factual materials based on the final permit. Some materials are selectively made available to various interest groups, but other materials (as appropriate) are available to the entire class. For example, the instructor generates monthly discharge monitoring reports (DMRs), as filed by the discharger, usually showing permit violations and errors. These DMRs are posted publicly to the class website as they would be publicly available in practice. The violations revealed in the DMRs often take advantage of
permit conditions that might be too strict for normal operation of the plant. As part of the enforcement scenario, there is usually some catastrophic environmental event, such as a fish kill or drinking water advisory due to chemical contamination. This may be due to events and operations at the permittee’s plant. A news story posted on the website reports the event. State environmental agency personnel may be provided with field investigators’ reports detailing results of investigations into possible spills at the plant and assessing possible causation for the environmental catastrophe. Student attorneys for the industrial permittee receive a detailed memorandum identifying compliance problems at the plant and may have information about spills or other unusual events at the plant. Attorneys for the local environmental group may have observations and sampling results performed by citizen watchdogs. Additional DMRs and other information are released to students as the enforcement exercise proceeds.

In the enforcement proceeding exercise, the statutory, regulatory, and civil procedure deadlines apply, with the same ten-to-one ratio of simulation days to “real” days as in the permit-review proceeding. To get the enforcement ball rolling, student attorneys representing environmental groups are given a deadline to file citizen enforcement papers. They are gently steered in the direction of serving a 60-day notice of intent to sue letter under CWA § 505, which is a condition precedent to commencement of a citizen enforcement suit. 46 What follows is entirely up to the diligence, creativity, and professional responsibility of students representing the other interest groups. The exercise is designed to allow students to synthesize what they learned in first-year Civil Procedure with what they have learned in the CWA course. EPA or the state may issue its own administrative or judicial enforcement action. The industrial permittee may negotiate and resolve an enforcement action by either the state environmental department or EPA. The permittee may also rely on government enforcement to preempt a citizen suit based on the diligent prosecution defenses contained in CWA § 505(b)(1)(B) or § 309(g)(6)(A). 47 EPA may file information requests to the discharger. Various parties may file press releases. Civil (or even, on occasion, criminal) actions are usually commenced, and the parties must serve pleadings, responsive papers, motions, and even discovery requests. Even with a ten-to-one time ratio, the semester usually ends before the enforcement proceedings have run their course. In a form of musical chairs, when the semester music stops, the record is closed. The

47. Id. §§ 1365(b)(1)(B), 1319(g)(6)(A).
class jurists are asked to decide pending motions and cases on whatever papers have been submitted. As with the other follow-up exercise, joint submissions and teamwork are encouraged and multiple submissions are often necessary. The papers are graded very leniently, with an emphasis on correctly identifying the appropriate form of lawyers’ work product for the situation. Traditional intra-office analysis memoranda (the bane of legal education) are strongly discouraged. The follow-up enforcement exercise only counts for 10% of the course grade, so the downside risks to student creativity are low. Instructor feedback on these papers consists of a relatively brief email identifying the basis of the grade, the appropriateness of the paper’s form, and a brief critique of the substantive arguments and analysis in the papers.

d. Negotiation Simulation

Toward the end of the enforcement exercise, the class also engages in a simulated negotiation. Before the exercise, the instructor presents a lecture on negotiation styles and strategy. For the simulation, students are broken up into four or five rooms containing representatives of industry, environmentalists, EPA, and state environmental agencies. The students are asked to attempt to negotiate a resolution of the pending enforcement proceedings and environmental issues based on the materials distributed during the enforcement exercise. Each room must report the results of their negotiation to the full class, regardless of whether an agreement was reached.

On the last class of the semester, students report the result of their negotiation sessions. The class jurists report their decisions on the review of the final permit, as well as their disposition of any pending motions in the enforcement litigations. The remainder of the last class session is spent going over the permitting and enforcement exercises. The instructor presents the issues raised by the draft permit, a critique of the final permit, and a discussion of the advocacy teams’ choices in the challenges to the final permit and in the prosecution and defense of enforcement proceedings. Finally, the instructor critiques the decisions of the class jurists and gives his take on the likely outcomes for the problem in the real world.

III. PEDAGOGICAL RESULTS AND STUDENT FEEDBACK

As with other skills courses, the Environmental Skills class seeks to combine the pedagogical benefits of learning from practice with the efficiency and controlled environment of a mid-sized enrollment classroom experience. Unlike many other simulation exercises, the Environmental
Skills simulation tries to be as interactive as possible—only the initial problem is defined by the instructor, while the subsequent facts are defined by the actions that the students take. Students in the course gain an understanding of the complex interactions inherent in the multicentric, pluralist universe of environmental law practice. As with any challenging second-year course, student reactions have been mixed. Many students welcome the chance to exercise problem-solving skills, but other students feel overwhelmed by the lack of direction and problem definition.

A. Student Experimentation

Experiential learning, by definition, seeks to foster self-education through an interactive process of experimentation and integration of results. As described by J.P. Ogilvy in his classic text for law externship placements, students must undergo the cycle of “plan-do-reflect-integrate” in order to learn from an active experience. Active learning engages the student in thinking about what action to take—the planning phase. The student must then execute her plan—the “do” phase. In the course of execution, she receives feedback on whether the plan she chose was successful. The final phase of practical learning is the reflection phase; the student compares her plan to the results and identifies ways to improve her planning or execution.

In the Environmental Skills simulation, the two major exercise simulations allow students to engage in the active learning cycle. Both the rulemaking comment—final rule review exercise and the permit—and the enforcement exercise allow this engagement. In the rulemaking exercise, students first plan the arguments to make in their comments. The EPA students must think about how to synthesize and respond to the conflicting comments submitted by their peers and plan to implement a final rule. The commenting students see whether their arguments were successful in persuading the EPA students, reflect on this result, and integrate the result into their plan for the next phase of the exercise—judicial review of the final rule. After students implement that plan, they get to see whether their strategies and arguments successfully convinced the student jurists who decided the final rule challenge. Students engage in the same cycle with the

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49. J.P. OGILVY ET AL., LEARNING FROM PRACTICE 5–6 (2d ed. 2007).
50. Id.
51. Id.
permitting exercise, only the range of alternative actions open to students (particularly in the enforcement exercise) is wide open. As students experiment with various legal tools of enforcement and permit review, they discover what responses each tool draws from their classroom adversaries and the tool’s success or failure in achieving results within the exercise’s framework.

Like field placements, time limits the amount of planning, doing, and reflecting that can take place in one semester. However, the accelerated timing of the classroom simulations allows for faster feedback in terms of the success or failure of the legal tools chosen by the student advocates. In addition, a classroom simulation, unlike a live-client clinic or an externship placement, allows more freedom to fail for the students. There are no real-world consequences for bad choices made by students. This allows students to experiment by choosing a course of action without the safety net and filter of an externship or clinic supervisor guarding against mistakes that might prejudice a live client. Students get to see the results of their own strategic decisions, not just those strategic decisions that their supervisors agree with.

B. Interactive Peer Review

Peer assessment promotes reflection and active learning. Students in the Environmental Skills simulation receive two forms of implicit peer review. They form their own teams and work cooperatively on the follow-up exercises (the rulemaking judicial review and the permit enforcement and review exercises). Within these teams, the students discuss and persuade each other as to the appropriate strategic decisions, legal tools, and substantive choices. Students also receive implicit peer review in the form of the reactions of classroom adversaries and jurists. Students representing the other side invariably look for the analytical weaknesses in the papers submitted and do not hesitate to point out these weaknesses in their responsive filings. The student EPA staff responds to the comments in their final rule and final permits, critiquing those student arguments they choose to reject substantively. Similarly, the student jurists provide implicit peer critique when they accept or reject the student advocates’ arguments and tools in their opinions.

This peer response takes place in an interactive setting, much like a multiplayer, role-playing game familiar to millennial law students in their

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early twenties. Students become invested in the competitive aspects of role-playing and take the assignment more seriously than warranted; the follow-up papers are only 10% of the course grade. Particularly, in the completely open-ended enforcement exercise, students must apply game theory principles to their strategic choices, anticipating the likely counter moves that their enforcement measures will provoke. This sort of strategic thinking is an important advocacy skill that few law school courses teach directly.

C. Student Response

It is very difficult to come up with an objective measure of outcomes in skills-based learning. Perhaps the best, if imperfect, outcome measurement consists of the students’ responses to the Environmental Skills course. These responses take the form of occasional anecdotal responses, alumni response to surveys, and student course evaluations.

Anecdotally, recent alumni often thank the Environmental Skills instructors for the course. In one typical example, a student with a job at EPA credited the Environmental Skills course for preparing her for her job: “I also wanted to say thank you- I’m currently working at the EPA Office of Water, and without everything I learned in Skills, I would have been dead in the water (pun sort of intended).” Needless to say, such anecdotal responses from alumni are hardly a scientific measure of the success of the Environmental Skills course in preparing students for practice.

Another source of alumni assessment is a survey that Pace Law School performed in 2011. Alumni were asked to identify the courses that best prepared them for practice. The Environmental Skills course ranked first among the 64 respondents to the survey. However, many of the respondents had taken an earlier iteration of the Environmental Skills course, which included the statutory and administrative law components and the skills-based exercises but lacked the semester long role-playing aspect of the course as it is currently taught.

Finally, student course evaluation comments represent a form of student self-assessment. Because the written assignments, constituting 80% of the semester grade, were already returned to students before the students completed their evaluations, student evaluations may reflect frustration at not receiving a higher grade. Overall, student evaluations are about evenly split between positive and negative evaluations of the course. Among


54. Email from Gillian Lyons (Apr. 11, 2011, 12:59 PM) (on file with author).
students who mentioned the role-playing and simulation exercises specifically, students tended to comment negatively. However, these comments did not criticize the structure of the practice-oriented assignments as much as they complained about the lack of individual coaching and guidance. Only one student commented negatively about the semester-long, role-playing aspect of the course. Though, many students complained that particular roles (primarily students in EPA roles) were called on more often in class because EPA had a greater likelihood of being responsible for the materials discussed.

A typical negative comment on the open-ended simulation exercise was:

Either lower expectations of student work product or supply more guidance. We are not professional attorneys yet, we have no experience with the subject-- we are paying our professors to teach and train us, not to make us teach ourselves and not reward growth and progress. Be more of a professor than a judge. 55

Other students recognized that the lack of specific direction and the need for self-education reflected the realities of the practice of law:

Professor refused to answer questions on approaches to answering the problems. It seems that professor wanted students to understand that nothing is clear cut in the ‘real world’ and you have to just figure things out. Point taken, however, as an introductory environmental law course, this class turned a number of students off.

There were moments when I wished that I had more guidance on the assignments, but I do understand why we were not given more. While I do think I learned a great deal from having to figure things out on our own, I also think that this might add more stress than what its worth.

55. Although obviously intended as a criticism of the course, this student evaluation might be better understood as a failure of the professor to communicate (at least to the student) the purpose of the course. As noted by Professor Stuckey, a context-based, problem-oriented approach to legal education aims not at the transfer of knowledge from the professor to the student, but rather at training students to solve problems by teaching themselves—learning how to learn. STUCKEY, supra note 11, at 141–46. The Stuckey Report also contains a specific recommendation that teachers should have high expectations. Id. at 116–18.
At least one student had a very positive reaction to the open-ended enforcement exercise: “The litigation simulations were also fantastic. I learned more about civil procedure in this class than in 1L. You really learn so much more in a skills class than a typical exam course.”

Nearly all of the negative comments about the semester-long, role-playing aspect of the course were based on the perceived unfairness that students in EPA and environmentalist roles were called on more frequently and at greater depth during class due to the active participation of these institutions in the cases and materials considered during the class lectures. A few students complained that they did not have a sufficient understanding of the roles when they signed up. On the other hand, several students commented favorably on how the semester-long role playing helped them understand the complexities of the statutory–regulatory system of water pollution control. A representative favorable comment was: “One of the reasons I felt that I learned so much in this class was because I felt challenged to come to class not only prepared with the material, but to understand the material in the context of my role in the simulation.”

Quite a few students commented that they felt the course was one of the best preparations for practice that they received in law school. Representative comments include the following:

It was a unique experience in terms of the learning format. The skills taught are invaluable to a young lawyer.

The simulation setting is an effective tool for learning what to expect in practice. The assignments were great learning tools and really put the statute/regulation/case law into perspective.

I was impressed by how much we learned about the CWA by role playing and filing papers.

The course structure and materials immerses students into the CWA in a unique way that not only prepares us to be better independent researchers, but also (I suspect) does more to prepare us for confronting real legal questions as litigators.

It is difficult to generalize from student course evaluations as such evaluations may reflect individual student personalities and success or failure in meeting their own course expectations. However, student feedback on the Environmental Skills course indicates that at least some of the students recognize the practical value of a semester-long, interactive simulation course.
CONCLUSION

The world of environmental regulation is multicentric, with multiple institutions at both the federal and state level involved in creating rules of environmental protection. It is pluralistic, with diverse groups vying to protect their interests before the institutions that generate and administer environmental law. Second-year law students may be bewildered by the multiple institutions, multiple players, and role of administrative agencies in the formulation and application of environmental regulation. Giving these students semester-long roles within the institutions and interest groups of the environmental law world helps to demystify the cases and problems presented in the class. Engaging students in interactive exercises of real-world environmental law professionals gives students a greater understanding of the disparate roles lawyers play in the administration of environmental regulation. These exercises also give students a chance to develop and hone practical skills, such as strategic thinking; advocacy and responsibility to clients; practical application of procedural devices and rules; and the drafting and preparation of the lawyer’s work product.
THE VIRTUES OF UNCERTAINTY: LESSONS FROM THE LEGAL BATTLES OVER THE KEYSTONE XL PIPELINE

Ted Hamilton *

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INTRODUCTION

The seven-year fight over the Keystone XL Pipeline (KXL), which would have brought crude oil from the tar sands of Alberta to refineries in Oklahoma and the Gulf Coast, ended in November of 2015 with the federal government’s rejection of the pipeline’s permit application.¹ This decision, practically unimaginable at the outset of the conflict, was unsurprising by its end. It concluded a diverse and multifaceted conflict over both the future of energy infrastructure in the United States and the causes and consequences of climate change. To the winners and losers in the fight over the pipeline, its defeat represented the first major political victory for the climate movement. The practical and symbolic significance of this victory remains unclear.²

This article focuses on the legal aspects of the KXL conflict: how struggles over the pipeline manifested themselves in legal action, and how legal action contributed to the final outcome. This focus is intended to provide lessons for the study of climate-change law, a nascent field whose contours and direction are much in doubt. The article also offers insight into how legal ideas and assumptions influence battles in the climate-change movement. In essence, this article treats law as a mode of political conflict, distinguishable from other movement strategies by its particular method of practice, its antagonists, and its possibilities for success. What follows is not a social-movement analysis, and the Article does not claim that outcomes determined through legal action were more important than other

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¹ Barack Obama, President of the U.S., Statement on the Keystone XL Pipeline (Nov. 6 2015), https://perma.cc/9VJN-DMQD.
² Coral Davenport, Citing Climate Change, Obama Rejects Construction of Keystone XL Oil Pipeline, N.Y. TIMES (Nov. 6, 2015), https://perma.cc/HJW8-29LC.
types of struggle. In fact, considering the legal aspects of the KXL conflict is particularly compelling because of what the law did not do: it did not win rejection of the pipeline in a courtroom, it did not set any precedent against future projects, and it did not even provide a unified strategy through which anti-pipeline lawyers could combine efforts.

Instead, the legal efforts of the anti-pipeline movement contributed to the most important factor in the KXL’s rejection—delay. By creating reasons for government decision-makers to defer approval and by helping to reframe the KXL debate in terms of uncertainty and risk, these efforts made rejecting the pipeline more politically palatable. Ironically, deflecting the legal battle away from direct judicial deliberation on the harms of climate change toward more peripheral pipeline issues proved the most effective strategy for combating the KXL—a fact with significant implications for the use of law to address global warming.

The potential global-warming consequences of the KXL, and how much global warming is already locked into the earth’s atmosphere, are ongoing matters of debate. This article will not offer the customary preface summarizing the latest climate science and the dire state of the planet’s increasing emissions; suffice it to say that under every projection, current and predicted rates of fossil fuel development, extraction, and combustion leave the planet beyond recognized limits of manageable warming.3

The law of climate change has mostly been reactionary rather than precautionary. Climate scientist James Hansen’s 1988 congressional testimony on the risks of global warming is often cited as the inaugural moment of serious attention to the phenomenon of climate change;4 although, Lyndon Johnson warned of the warming effects of carbon pollution in 1965.5 In any event, major legal efforts to address climate change only arose after the turn of the twenty-first century. To date, legal efforts have accomplished little in terms of actually reducing greenhouse-gas emissions or setting major laws, precedents, or principles that encourage a shift away from our fossil-fuel economy and the legal licenses and assumptions that support it.


4. NAOMI KLEIN, THIS CHANGES EVERYTHING: CAPITALISM VS. THE CLIMATE 22 (2014) (“In the face of an absolutely unprecedented emergency, society has no choice but to take dramatic action to avert a collapse of civilization. Either we will change our ways and build an entirely new kind of global society, or they will be changed for us.”).

For the purposes of this article, “the law of climate change” means legal action intended to reduce greenhouse-gas emissions. Furthermore, this article divides the law of climate change into legal action that takes place at its “core” and at its “periphery.”

The climate core is where global warming’s causes and effects are directly confronted, in the sense that the science, economics, and politics of climate change provide the factual material upon which legal claims are based. Legal action at the core usually seeks government intervention to stop public or private contributions to warming or to provide relief from climate-change harms.

The climate periphery is where issues indirectly related to global warming form the substance of legal conflict. Legal action here usually seeks outcomes that do not themselves reduce greenhouse-gas emissions but rather lead to further legal, political, or economic consequences that will have that effect, such as the siting of pipeline routes.

It should be stressed that the distinction between the core and periphery is deliberately artificial. The distinction does not correspond to any real difference between direct and indirect causes of climate change or its more- and less-immediate effects. Instead, it corresponds to legal and social category-making. What happens at the periphery may be more important to the future of the climate than what happens at the core. The KXL conflict, with its many peripheral battles, suggests just that. Despite its constructed nature, the distinction is justified by common-sense understandings about priority and hierarchy within the field of climate law. For example, the main American compendium of climate-change cases presents Statutory Claims as its first category, followed by Common Law Claims and Public International Law Claims. Within the first category, the first subset is Force Government to Act, and this first subset’s first division is Clean Air Act.6

This scheme roughly corresponds to the core and periphery distinctions described below.

As a first step to analyzing the peripheral nature of the KXL legal struggle, this article argues that legal action at the climate core has mostly failed. This is due to the structural incompatibility between the phenomenon of global warming and the resources of public and private law. Additionally, certain judicial attitudes hinder administrative and judicial action on climate change. Both structure and attitude protect the political and economic status quo that produced global warming through frictionless

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approval of projects similar to the KXL. Courts thus operate against an ostensibly neutral background that climate legal actions seek to disturb.

In this unfriendly legal environment, judges are less receptive to legal claims that demand action and more receptive to legal claims that invite inaction. Whether claims are seen to demand action or invite inaction is not a given and significantly depends on each claimant’s legal strategy.

Action is generally chosen in an atmosphere of certainty, where judges or other government decision-makers understand the legal, political, and economic consequences of their decisions. Inaction is more often the result of uncertainty. At the climate core, the trend is for judges to signal their discomfort with the degree of uncertainty involved in the claims and remedies before them and to choose inaction because of the uncertainty.

The core-uncertainty-inaction association is a persistent problem in climate politics. The fossil-fuel industry has spent millions of dollars maintaining the perception that scientific and economic uncertainty surrounds global warming and that any climate-friendly action is unpredictable and dangerous. Meanwhile, climate activists can only fall back upon their certainty of the impending climate crisis, and their calls to action necessarily provoke fear and doubt from established interests. In an effort to strategize ways to use the core-periphery, certainty-uncertainty, and action-inaction distinctions to the climate movement’s benefit, this article uses the case study of the KXL conflict to reimagine their alignments in the context of climate legal action.

The first step, then, is a review of climate-change litigation and an analysis of the problems of climate legal action at the core.

I. REVIEW OF THE LAW OF CLIMATE CHANGE: CORE-PERIPHERY, CERTAINTY-UNCERTAINTY, ACTION-INACTION

A. The Poor Fit Between Public Environmental Law (The Super-Core) and Climate Change

The most obvious place to turn for legal relief from climate-change harms would appear to be public environmental law. The classic suite of environmental statutes passed in the 1970s, including the National Environmental Policy Act and the Endangered Species Act, remains the lodestar of environmental legal action. The professional field of environmental law, which grew up with and around these statutes, still

7. See generally NAOMI ORESKES & ERIK M. CONWAY, MERCHANTS OF DOUBT (2010) (illustrating that extractive industries have continually used money and influence to spurious a peer reviewed scientific findings).
draws upon them as its primary practical and imaginative resources. As such, these laws form the “super-core” of legal treatment of the environment. Both pro-environmental skeptics of the laws, who view them as inadequate, co-opted, and in need of serious revision, and pro-environmental admirers, who view the statutes as a model success, accept this social understanding of public law as core. Unsurprisingly, the most significant legal struggles over climate change have occurred here, reflecting the common-sense identification of climate change as an environmental issue regulable under one of the major statutes. But, the overarching lesson of these statutory efforts is that public environmental law is ill-suited to deal with the political and economic problems posed by climate change and that direct confrontation with the consequences of global warming may in fact hamper climate legal strategy.

1. The Clean Air Act

Climate law’s natural home would seem to be the Clean Air Act. Passed in 1970 and significantly amended in 1977 and 1990, the Act proposes “to protect and enhance the quality of the Nation’s air resources so as to promote the public health and welfare and the productive capacity of its population.” The statute directs the Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for “criteria pollutants.” Permitting agencies, usually at the state level, then issue permits reflecting these standards to power plants, factories, and other stationary sources. Mobile sources are more directly regulated by the EPA. Reading the Act, the most straightforward method for regulating greenhouse gases would appear to be setting a NAAQS for carbon dioxide, thus forcing major emitters like coal plants to cap their emissions. This approach has worked for other atmospheric pollutants like carbon monoxide. A direct link exists between the government’s “harm-based” understanding of how much nationwide pollution is acceptable and the amount of emissions allowed under a given permit. Yet, the EPA has not listed carbon dioxide or any other greenhouse gas as a criteria pollutant.

8. MARY C. WOOD, NATURE’S TRUST: ENVIRONMENTAL LAW FOR A NEW ECOLOGICAL AGE 9 (2014); see, e.g., Richard Lazarus, Judging Environmental Law, 18 TULANE ENVTL. L.J. 201, 201 (2004) (“My thesis is that environmental law is one the law’s great success stories of the twentieth century.”).
10. Id. § 7408.
11. Id. § 7410.
12. Id. § 7521.
despite a standing 2009 petition by the Center for Biological Diversity to do so. The difficulties surrounding the EPA’s more indirect attempts to deal with climate change under the Clean Air Act, discussed below, likely explain this reluctance to tackle the issue. Greenhouse-gas emissions remain unregulated under the most obvious public-law tool for addressing them.

But, the Clean Air Act is expansive enough that the EPA cannot escape all demands for greenhouse-gas regulation simply by withholding criteria pollutant status. *Massachusetts v. EPA*, still the seminal American climate-change case, finally applied minimal public law oversight to the problem of climate change, decades after the issue was first brought to the attention of the federal government. Under the Bush Administration, the EPA had refused to consider the question of whether greenhouses gases contributed to climate change, arguing that its regulatory mandate did not allow it to regulate the gases. In an opinion by Justice Stevens, the Supreme Court held that the EPA must at least decide whether greenhouse gases qualified as “air pollutants” under §202(a)(1) of the Clean Air Act, which regulates motor-vehicle emissions. This was a major moment for legal treatment of climate change at the core, involving a major piece of environmental legislation and a direct encounter with the questions of climate-change science, harm, and responsibility. The Court acknowledged the reality of climate change and granted standing to states suffering sea-level rise: finding it immaterial that global-warming injuries are “widely shared”; that agency inaction was only one cause of harm among many; and that EPA regulation by itself would not reverse global warming. Significantly for future litigation, the Court also held that the EPA could not rely on *Food & Drug Administration v. Brown & Williamson Tobacco Corp.* to claim that Congress never intended §202(a)(1) provisions to create such broad regulatory authority over the automobile industry.

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16. *Id.* at 511–13.
17. *Id.* at 534–35.
20. *Id.* at 522.
21. *Id.* at 523–24.
22. *Id.* at 525.
23. *Id.* at 530–31.
This was an auspicious beginning for direct judicial treatment of climate change: the problem of global warming was faced head-on, the science was accepted, and the main arguments for why climate change could not be dealt with by traditional agency action or judicial review—widely-shared harms, attenuated causation, minimal redressability—were rejected. The Court’s ultimate holding was admittedly rather narrow. The EPA had to explain why it found greenhouse gases insufficiently dangerous to warrant regulation, but it was not ordered to make an endangerment finding or take any anti-warming action. Still, the EPA’s excuses for not bringing global warming under the aegis of the Clean Air Act had been defeated, and the Court’s broad language boded well for the application of public environmental law to climate change.

Chief Justice Roberts’s dissent raised serious objections to such an application, however, and in retrospect, his opinion seems like a warning bell of what was to come for environmental climate lawyers. The Chief Justice found that the petitioners were “[a]pparently dissatisfied with the pace of progress on this issue in the elected branches” and had jumped the gun by bringing their problems to court. In expansive language, he argued that climate change and Article III’s particularized standing requirements were incompatible: “The very concept of global warming seems inconsistent with this particularization requirement. Global warming is a phenomenon ‘harmful to humanity at large,’ and the redress petitioners seek is focused no more on them than on the public generally—it is literally to change the atmosphere around the world.” The Chief Justice chastised the majority for “ignor[ing] the complexities of global warming,” which in his mind presented an insurmountable obstacle to proof of causation or redressability and claimed that there was an “evident mismatch between the source of [the petitioners’] alleged injury—catastrophic global warming—and the narrow subject matter of the Clean Air Act provision at issue in this suit.”

This “evident mismatch”—whether based in some real incompatibility between statutory provisions and global warming or in regulators’ and judges’ unwillingness to extend existing remedies to climate-change harms—continues to haunt legal attempts to directly confront global

24. Id. at 534–35.
25. See id. (holding that the EPA has existing authority under the Clean Air Act to address climate change).
26. See id. at 540–42 (Roberts, J., dissenting) (attacking the majority’s holding that standing is present).
27. Id. at 535–36.
28. Id. at 541 (internal citation omitted).
29. Id. at 543, 546.
warming, despite the promise of *Massachusetts v. EPA*.\(^{30}\) Two years after the decision, the EPA finally released an endangerment finding for greenhouse gases.\(^{31}\) This finding provided the basis for warming regulations, including the 2010 Tailpipe Rule, which imposed higher gas-mileage standards on new vehicles.\(^{32}\) The New York Times noted this as the federal government’s “first formal step to regulate global warming pollution.”\(^{33}\)

Obama’s EPA next turned to regulating stationary sources\(^{34}\) but found its statutory resources inadequate for dealing with the large volume of greenhouse gases emitted by such sources. The Clean Air Act’s Prevention of Significant Deterioration Program, which covers areas of the country that have satisfied NAAQS for one or more criteria pollutants, requires permits and technology standards for major stationary sources that emit 100 or 250 tons per year (tpy) of “any air pollutant,” depending on industrial category.\(^{35}\) Applying these standards would allow regulation of carbon dioxide even without a separate criteria-pollutant designation, but due to the nature of greenhouse gases—which are emitted in much higher volumes than other pollutants—nearly six million facilities (including churches and schools) would have been required to meet the new limits, drastically expanding the statute’s reach.\(^{36}\) To avoid this result, the EPA released the Tailoring Rule, adjusting these thresholds to 100,000 tpy of carbon-dioxide equivalent.\(^{37}\) This put the EPA in the odd position of arguing that the greenhouse-gas endangerment finding triggered the “any air pollutant” provisions of the Clean Air Act but that those provisions would produce absurd results; therefore, the provisions had to be specially adjusted to the realities of carbon emissions.

The Supreme Court did not look favorably upon this statutory tweaking, even as it let the EPA’s program survive. In *Utility Air Regulatory Group v. EPA* (UARG), the Court held that the EPA was wrong to conclude that its endangerment finding “triggered” the absurd regulatory

\(^{30}\) *Massachusetts v. Envtl. Prot. Agency*, 549 U.S. at 525 (finding that individuals did have standing to bring claims for climate change).


\(^{34}\) *Reconsideration of Interpretation of Regulations that Determine Pollutants Covered by Clean Air Act Permitting Programs*, 75 Fed. Reg. 17,004 (Apr. 2, 2010).


consequences of the Clean Air Act’s stationary-source provisions.38 Greenhouse gases, the Court argued, are simply too different in kind and degree from other regulated pollutants to warrant regulation under the same scheme, even with the Tailoring Rule.39 However, the Court allowed the EPA to use an indirect approach to save its stationary-source regulations, tweaking the definition of “any air pollutant” to mean any criteria pollutant—those with NAAQS, as discussed above.40 Thus, only those stationary sources already emitting a criteria pollutant could be further regulated for greenhouse-gas emissions, according to the limits imposed by the Tailoring Rule.41 In practice, this meant that the EPA was able to regulate 83% of stationary-source, greenhouse-gas emissions rather than the 86% it would have regulated under its preferred rule.42

But, even while the warming regulatory program survived, the Court raised red flags about such further efforts to apply the Clean Air Act to global warming.43 As Jody Freeman has argued, the Court’s intense scrutiny of the EPA’s creative methods to make the statute fit the crisis suggests that future regulations will be strictly evaluated on a program-by-program basis, with little leeway for the particular difficulties of climate change.44 The majority cited Brown & Williamson for the claim that “enormous and transformative expansion in EPA’s regulatory authority without clear congressional authorization” made its “trigger” idea unreasonable.45 In the ongoing absence of such congressional authorization, because the EPA is working off environmental statutes crafted before widespread climate-change awareness, any serious administrative treatment of global warming will have to stretch the limits of regulatory authority. The UARG decision signaled that, despite the Court’s opening of the Clean Air Act to climate-change applications in Massachusetts v. EPA, the necessarily broad extent and impact of such applications would face serious judicial scrutiny and possible reversal.46

The EPA’s latest and most ambitious climate-change regulation, the Clean Power Plan, has already faced such scrutiny. The Plan targets power plants running on fossil fuels and requires states to develop plans to cap

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39.  Id. at 2444–45.
40.  Id. at 2449.
41.  Id.
42.  Id. at 2438–39.
43.  Id. at 2440.
46.  See Freeman, supra note 44, at 16–17 (stating that subsequent EPA regulations will be subject to judicial scrutiny to ensure that EPA’s regulatory authority is not inordinately expanded in scope or degree).
power-plant emissions below a state-specific limit set by the EPA. Should these caps be met, the Plan will reduce power-sector emissions 32% by 2030 from 2005 levels. The primary statutory authority for the Plan is § 111(d) of the Clean Air Act, which allows state-specific regulation of pollutants that are neither criteria nor hazardous, like greenhouse gases. But, § 111(d) has seldom been used, exposing the EPA to overreaching attacks similar to those offered in the UARG case. More troublingly, the Plan relies heavily upon so-called “outside the fenceline” measures to reach its emissions targets, including improvements in electrical grid efficiency, transitions to natural gas from coal, and other techniques that require state action beyond the specifically regulated facilities. Twenty-four states filed suit against the Plan, objecting particularly to expanded regulation of the energy grid and the Plan’s ramifications for the coal industry.

Given the UARG Court’s skepticism toward creative or non-traditional use of the Clean Air Act to address climate change, the novel regulatory approach of the Clean Power Plan might be too ambitious for the Court. In a sure sign that the current state of public environmental law is ill-prepared to deal with climate change—whether because of statutory deficiencies, regulatory inertia, judicial reactionism, or all three—the Court issued an extraordinary stay of the Clean Power Plan in February of 2016, pending review in the D.C. Circuit Court of Appeals. Such stays are extremely rare; the Court provided no justification for its action, though the stay itself spoke volumes about the Court’s enthusiasm for climate-change regulation. With Justice Scalia’s death and the balance of the Court undecided, it is difficult to predict the legal fate of the Plan.

What is clear, however, is that efforts to deal with climate change through the Clean Air Act have been at best tardy and insufficient. Using the nation’s major statute on air pollution as a means to limit greenhouse-gas emissions makes intuitive sense. But, without political support, this

48. Id. at 64,665.
54. See Adam Liptak & Coral Davenport, Supreme Court Deals Blow to Obama’s Efforts to Regulate Coal Emissions, N.Y. TIMES (Feb. 9, 2016), https://perma.cc/9U5W-9K3Z (“[T]he Supreme Court had never before granted a request to halt a regulation before review by a federal appeals court.”).
statute could not even be deployed for climate-change purposes until the Supreme Court directs the EPA to make the obvious finding that greenhouse gases are dangerous to human health. Were the regulatory wheels set in motion, judicial hesitation and reaction toward the prospect of what effective climate regulation would require—disruption of the existing fossil-fuel economy and expansive agency powers in the absence of legislative guidance—would serve as a brake on ambition and effectiveness. The Court’s reliance on Brown & Williamson in the UARG decision is symptomatic of a judicial tendency to recognize a problem that cannot be ignored, while insisting that the solutions must lie elsewhere: in the legislature, private industry, or at the global level, wherever the courts will not be implicated. Should the Clean Power Plan survive judicial review, it would do much to lower power-sector emissions, but the United States would still fall well short of its Paris Agreement commitment to reduce emissions between 26% and 28% by 2025 from 2005 levels.\footnote{55} The Clean Power Plan, along with other regulations, would result in 17% lower emissions by 2020.\footnote{56} While much remains undecided regarding climate regulation under the Clean Air Act, it remains, at best, a square peg for the round hole of the climate crisis.\footnote{57}

2. Public Environmental Avenues to Address Climate Change Outside the “Super-Core”

Greenhouse-gas regulation is possible under other parts of the public environmental law system. Because climate change causes a panoply of environmental harms, legal efforts have been launched based on the mandates of the Endangered Species Act, the Alternative Motor Fuels Act, and the Energy Policy Act.\footnote{58} Since the first climate legal efforts were

\footnote{55} What Is the U.S. Commitment in Paris?, EARTH INST. COLUMBIA UNIV. (Dec. 11, 2015), https://perma.cc/TZ8C-6B44.
\footnote{56} Id.
\footnote{57} A major exception to this trend is the Sierra Club’s “Beyond Coal” campaign, which has relied in part upon the Clean Air Act to shut down or prevent 232 coal plants. Beyond Coal, SIERRA CLUB, (last visited Nov. 28, 2016).The legal strategy of “Beyond Coal” often involves uncovering Clean Air Act permit violations or, where pre-Act plants were “grandfathered in” with statutory exemptions, forcing disclosure of the price disparities between coal and renewable energy sources. Id.; see also Michael Grunwald, Inside the War on Coal, POLITICO (May 26, 2015), http://www.politico.com/agenda/story/2015/05/inside-war-on-coal-000002 (discussing climate-oriented legal strategy that operates without directly confronting global warming—proposed plants are rejected because of minor permitting violations, not because of their predicted harm to the climate—further supporting this article’s thesis about the relative success of climate legal action at the periphery as opposed to the core).
\footnote{58} See, e.g., Gerrard et al., supra note 6 (listing statutory claims under NEPA and other statutes); see Zero Zone, Inc. v. U.S. Dep’t of Energy, 832 F.3d 654, 677 (7th Cir. 2016) (approving, for
launched over two decades ago, the most significant alternative to the Clean Air Act has been the National Environmental Policy Act (NEPA). NEPA, passed in 1970, requires federal agencies to consider the environmental impacts of projects that they undertake or approve.\(^5^9\) The primary method for doing so is the Environmental Impact Statement (EIS), which details environmental impacts and potential action alternatives.\(^6^0\) As early as 1990, cities, states, and environmental organizations sued the National Highway Traffic Safety Administration (NHTSA) for failing to issue an EIS considering the global-warming effects of its new vehicle emissions standards.\(^6^1\) Although the citizens lost on the merits, the D.C. Court of Appeals recognized the petitioners’ standing claims in part because the “new and potentially catastrophic phenomenon” of global warming deserved attention under NEPA.\(^6^2\) Later, in *Mid States Coalition for Progress v. Surface Transportation Board*, an EIS for a project to expand rail access to a coal mine was found insufficient because it did not take into account the fact that the project would incentivize coal consumption, thus contributing to global warming.\(^6^3\) The Court refused to allow the agency to rely upon the uncertainty of the project’s warming consequences in order to ignore those consequences altogether, holding, “when the nature of the effect is reasonably foreseeable but its extent is not, we think that the agency may not simply ignore the effect.”\(^6^4\) More recently, the Ninth Circuit upheld another challenge to NHTSA vehicle emission standards because the agency assigned a zero value to the potential benefits of reduced carbon emissions resulting from the standards.\(^6^5\) The Court also rejected the argument that because climate change is a global phenomenon with many contributors, the agency did not need to consider its own relatively minor contribution.\(^6^6\) This evasion of responsibility was likewise

\(^{62}\) *Id.* at 492.
\(^{64}\) *Id.*
\(^{65}\) Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin., 538 F.3d 1172, 1199 (9th Cir. 2008).
\(^{66}\) *Id.* at 1217.
frowned upon in *Massachusetts v. EPA*. In 2014, the Council on Environmental Quality, which administers many of NEPA’s provisions, built on these decisions and released its Revised Draft Guidance for Greenhouse Gas Emissions and Climate Change Impacts, directing agencies to consider both direct and indirect global-warming implications of their projects.

These cases underscore the federal administrative state and judiciary’s long-standing encounter with climate change under the aegis of public environmental law. By forcing agencies to consider their own contributions to global warming when disclosing environmental impacts, courts reviewing NEPA challenges have reinforced the idea that climate change fits within the purview of environmental policymaking, despite the difficulties of proving causation and redressability. But, judicial attention to climate change in the NEPA context may be only as aspirational and programmatic as the strong language in *Massachusetts v. EPA*, recognizing that global warming deserves to be dealt with without much regulatory consequence. Mandates to seriously consider climate change in agency decision-making require only procedural measures. Even the limited information-gathering, disclosure, and administrative benefits of including climate change in NEPA processes may be limited by continued agency defiance, judicial reluctance, and the lack of signals from Congress that such climate consideration is important. These exact issues came to the fore in the fight over the Keystone XL pipeline, where a series of State Department EISs survived NEPA challenges, despite finding no adverse global-warming effects from the proposed pipeline.

3. The Lessons of Public-Law Litigation at the Core

A pattern of judicial recognition and reluctance emerges from these public-law cases and represents part of the legal core where courts directly consider the problem of global warming. When this encounter is staged in such a way that courts need only address the certainties of climate-change.

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70. *See id. at 498–500* (suggesting that Petitioners need only question the rulemaking process).

science and the failure of agencies to acknowledge them, courts are quite comfortable making pro-climate rulings: Massachusetts v. EPA, Mid States Coalition v. Surface Transportation Board, and CBD v. NHTSA are part of this high-rhetoric, low-outcome trend. But, where this encounter with climate change runs the risk of uncertain economic, political, or doctrinal consequences, the core proves a hostile place to climate advocates: the progression from Massachusetts v. EPA through UARG to the extraordinary stay of the Clean Power Plan can best be read as the Supreme Court’s raising of the drawbridge to protect itself from the coming climate storm. With the Court already split on the question of whether climate should come into the courtroom at all—recall Chief Justice Roberts’s forceful argument that standing doctrine excludes global-warming claims—legal and political arguments that would require disruption of the status quo face a hostile bench.

But, thus far, only statute-based litigation has been considered. Clearly, with Congress having failed to pass a major environmental statute for nearly three decades, the laws on the books are not up to the task of curbing greenhouse-gas emissions. Perhaps, even at the core, where global warming is directly confronted, prospects are better in private law.

B. Judicial Resistance to Private Law Climate Claims

To date, private-law claims related to climate change have mainly consisted of tort actions against private fossil-fuel extractors and carbon emitters. One of the first cases of this sort was American Electric Power Co. v. Connecticut, (AEP), in which eight states, New York City, and three land trusts sued large power plant operators under a theory of public-nuisance liability for climate-change harms. Citing damage to public rights, including health, infrastructure, and public lands, the plaintiffs sought reduced annual greenhouse-gas emissions caps for each defendant. Although litigation in the lower court involved complex disputes over standing—the District Court dismissed the claims as non-justiciable, while the Second Circuit reversed and found that the claims could stand under the federal common law of nuisance—the Supreme Court’s treatment of the

72. See Massachusetts v. Envtl. Prot. Agency, 549 U.S. at 534–35 (finding that Petitioner’s had standing to sue for climate change); Ctr. for Biological Diversity, 538 F.3d at 1227; Mid States Coal. for Progress, 345 F.3d at 550 (8th Cir. 2003).
75. Id. at 2534.
76. Id.
case was straightforward. Prior to the related suits in 2004, the Court had ruled that greenhouse gases were “air pollutants” under the Clean Air Act, and the EPA had released an endangerment finding to that effect.\(^77\) With emissions harms now a matter of statutory and administrative remedy, there no longer existed “any federal common law right to seek abatement of carbon-dioxide emissions from fossil-fuel fired power plants.”\(^78\) In other words, climate-based, common-law harms against power-plant emitters were fully displaced from federal court. The Court even held that it was immaterial whether the EPA regulated the particular plants or companies accused of public nuisance: as soon as Congress delegated the hypothetical power to do so, the matter was removed from the federal common law.\(^79\) In reaching these conclusions, the Court relied heavily upon notions of judicial (in)expertise and separation of powers, holding that because regulating greenhouse-gas emitters is so complex, the judiciary should defer to expert administrative agencies.\(^80\)

The broad sweep of the *AEP* Court’s displacement holding was reiterated in *Native Village of Kivalina v. ExxonMobil*, in which an Alaskan village north of the Arctic Circle sought damages from various energy producers for emissions that caused melting sea ice and coastline erosion, threatening the village’s existence.\(^81\) The Ninth Circuit relied solely upon the recent *AEP* Court’s precedent to hold that the village’s federal common-law claims were displaced, despite the difference in relief sought.\(^82\) The Court did not address the lower court’s holding that the claims were non-justiciable under the political question doctrine—the idea that any decision would require the court to inappropriately intervene in climate politics, which is the legislature’s purview—and that the plaintiffs lacked Article III standing due to lack of causation.\(^83\) Both the *AEP* and *Kivalina* decisions thus demonstrated the danger that public environmental law posed to private plaintiffs seeking remedies for climate-change injuries. Just a few short years after the Supreme Court finally compelled the EPA to deal with the severity of global warming, that very attention to the issue was used to prevent any serious judicial accounting of global-warming responsibility and harms. The decisions were paradigmatic of judicial reaction at the core. Relying on the doctrine of legislative displacement, both the Supreme Court

\(^77\) See supra Part I.A.1.
\(^79\) See id. at 2538 (“[T]he relevant question for purposes of displacement is ‘whether the field has been occupied, not whether it has been occupied in a particular manner.’”).
\(^81\) *Native Vill. of Kivalina v. ExxonMobil Corp.*, 696 F.3d 849, 853 (9th Cir. 2012).
\(^82\) Id. at 856.
\(^83\) Id. at 854, 858.
and the Ninth Circuit washed their hands of any responsibility for the continued legal license held by large corporations to damage the climate.  

A final glimmer of hope was snuffed out in the tortuous litigation of *Comer v. Murphy Oil USA*. In 2005, a class of Gulf Coast residents sued various oil and chemical companies in the Southern District of Mississippi for nuisance, trespass, negligence, and other torts for contributing to the severity of Hurricane Katrina and its damage to property. In its initial decision, the Fifth Circuit overturned the lower court’s dismissal on standing grounds, finding that, at the pleading stage, it was reasonable to suggest that a “chain of causation” could link the defendants’ emissions to the plaintiffs’ global-warming harms. The Court also held that the political question did not bar its consideration of the claims, as courts are not simply free to “abstain from deciding politically charged cases.” Furthermore, the Clean Air Act did not displace the state claims at issue. Nevertheless, these legal victories, which had the potential to prevent the *AEP* and *Kivalina* decisions from barring future climate tort actions at the federal level, were short-lived. As the case was reheard *en banc*, several recusals caused the Fifth Circuit to miss a quorum and the case was dismissed. When the plaintiffs refiled, the Southern District Court of Mississippi dismissed again, on *res judicata* grounds, and a finding that, despite the favorable language in *Massachusetts v. EPA* and the Fifth Circuit’s opinion, the plaintiffs lacked standing because they could not prove that “the defendants’ particular emissions led to their property damage.” The Fifth Circuit affirmed this decision.

Tort law, with its balancing of rights, duties, and obligations and its ability to hold the more powerful accountable for injuring the weak, would seem to be one of the few social arenas in which the real consequences of global warming could be investigated and accounted. But, judges have repeatedly denied climate-based claims by appealing to alleged doctrinal pitfalls; direct causation between specific emissions and a victim’s harms is impossible to prove, harms are diffuse and often somewhat speculative, and laying blame for the global problem of climate change on a single tortfeasor

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84. *Id.* at 858.  
85. *Comer v. Murphy Oil USA*, 585 F.3d 855, 859–60 (5th Cir. 2009).  
86. *Id.* at 865.  
87. *Id.* at 873.  
88. *Id.* at 878.  
89. *Comer v. Murphy Oil USA*, 607 F.3d 1049, 1053–54 (5th Cir. 2010).  
91. *Comer v. Murphy Oil USA*, 718 F.3d 460, 469 (5th Cir. 2013).
does not square with traditional notions of fault and culpability. These conceptual difficulties are not natural or irresolvable. In fact, the history of tort law is one of modification and expansion in response to social need. For example, the direct causation requirement has long been relaxed or eliminated in environmental cases involving toxic and long-term pollution, giving rise to the use of “substantial factor” or “increased risk” causation theories. Strict and absolute liability emerged in the middle of the twentieth century to shift the burden of care from relatively helpless individuals to powerful corporations and producers. Tort scholars and litigants have elaborated many doctrinal fixes to accommodate climate change. This includes a precautionary principle that would hold individual carbon polluters liable unless they could prove an absence of injury. Clearly, then, courts could, at their discretion, marshal the resources of tort law to directly address climate-change harms.

This intransigence represents a second plane of uncertainty that closely parallels the uncertainties of climate change and climate politics. Like public environmental law, where core climate legal strategies face serious resistance as soon as they call upon the courts to disturb established economic and political arrangements in favor of uncertain regulatory strategies, private law proves an inhospitable field for dealing directly with the causes and effects of global warming because any relief requires some resolution of climate-change uncertainties. Chief Justice Roberts’s solution to the problem of standing in climate-change cases, that no one has standing, seems wholly inadequate for legal treatment of the climate crisis. Even though Roberts’s view did not win out in Massachusetts v. EPA, his rationale for withholding relief continues to pervade the law of climate change.

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94. Id. at 512; Steven P. Croley & Jon D. Hanson, Rescuing the Revolution: The Revived Case for Enterprise Liability, 91 MICH. L. REV. 683, 697–701 (1993).
96. Butti, supra note 92, at 33.
97. See Massachusetts v. Envtl. Prot. Agency, 549 U.S. at 535 (Roberts, J., dissenting) (arguing that claims challenging the EPA’s failure to regulate greenhouse gases should be dismissed as nonjusticiable).
98. See id. at 547 (Roberts, J., dissenting) (illustrating the problems with applying traditional standing to climate-change claims).
C. A New Core? Public Trust and Constitutional Claims

The recent wave of public-trust and constitutional litigation linked to climate-change harms is a major potential exception to this pattern. The public trust doctrine holds that certain natural resources, traditionally coastlines and navigable rivers, are held by the government in trust for the benefits of its citizens. In *Illinois Central Railroad Co. v. Illinois*, the Supreme Court recognized that the doctrine limits the ability of governments to degrade or alienate such resources, holding that the city of Chicago could not sell off a large part of its lakefront to a private party. Since Joseph Sax’s article, the doctrine has been a constant recourse for environmentalists. In *National Audubon Society v. Superior Court of Alpine County*, for example, plaintiffs successfully argued that the public trust required the state to ensure that Mono Lake would not be irreparably harmed by Los Angeles’s water diversion program. Mary Wood has notably argued for the extension of the public trust doctrine to the atmosphere, claiming that “all nations owe a primary fiduciary obligation toward their citizen beneficiaries to restore atmospheric health.”

Litigation advocating the “atmospheric trust” doctrine has achieved some success. In 2014, the D.C. Court of Appeals summarily dismissed a public-trust action against the EPA, which alleged that the agency is a “trustee[ ] of essential natural resources pursuant to various provisions of the Constitution, and that the defendants have abdicated their trust duty to protect the atmosphere from irreparable harm.” The Court ruled that the public trust doctrine was purely a matter of state law and that there was no subject-matter jurisdiction over the case. In an ongoing case in the state of Washington, youth plaintiffs appealed the state Department of Ecology’s denial of their petition to issue new rules limiting greenhouse-gas emissions. A Superior Court judge ruled in November that the agency has legal obligations under the public trust doctrine to protect at least the state’s navigable waters, which are intertwined with the atmosphere and likewise

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100. *Id.* at 455–56.
102. See Nat’l Audubon Soc’y v. Superior Court of Alpine Cty., 658 P.2d 709, 732 (Cal. 1983) (stating that the human and environmental uses of Mono Lake are protected by the public trust doctrine and should be taken into account by the state).
103. WOOD, supra note 8, at 221.
105. *Id.*
harm by global warming. After the agency withdrew its rulemaking, the judge ordered it to promulgate new rules in consultation with the plaintiffs and in accordance with its public-trust duties.

Another ongoing case, Juliana v. United States, suggests that the story at the climate core may be changing. In 2015, several youth plaintiffs brought public-trust, equal-protection, due-process, and Ninth-Amendment claims against the President, the EPA, and other federal actors. They alleged climate-change injuries caused by the defendants’ exercise of sovereign authority over the nation’s fossil-fuel reserves, in the form of permitting, subsidizing, and promoting fossil-fuel extraction and combustion. In November of 2016, Judge Aiken of the District of Oregon denied motions to dismiss by the federal defendants and fossil-fuel industry intervenors, issuing an opinion that is by far the strongest pro-climate judicial pronouncement to date.

In finding that the political question doctrine did not preclude judicial consideration of the claims, the court noted that the subject matter was not clearly reserved for the executive or legislature: “[T]he Constitution does not mention environmental policy, atmospheric emissions, or global warming.” Similar, “logistical difficulties” would not preclude the court from engaging in a discussion of appropriate emissions levels, and the plaintiffs’ general request for a declaration requiring a climate-action plan meant that the court would not need to meddle inappropriately in the specifics of agency action. The court noted that any potential difficulty in crafting a remedy was insufficient to support dismissal at an early stage.

Most importantly, the plaintiffs had cleverly avoided the pitfalls of the public environmental core and its “technical regulatory violations” by instead asserting broad constitutional claims—the classic purview of federal

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107. See Press Release, Our Children’s Trust, Youth Secure Second Win in Washington State Climate Lawsuit (Apr. 29, 2016), https://perma.cc/5PLR-WXHT. Several other public trust cases have been brought in other states. See Gerrard et al., supra note 6 (listing public trust actions under “Common Law Claims”).
109. Id.
110. Id. at 54.
111. Id. at 10.
112. Id. at 12.
113. Id. at 13.
114. Id. at 17.
115. Id. at 13–14.
courts. The court stated: “There is no need to step outside the core role of the judiciary to decide this case.”\textsuperscript{116}

The court’s standing analysis likewise represented a strong step forward in judicial treatment of climate change. Following \textit{Massachusetts v. EPA}, the court held that standing could be based on generalized harms so long as they were also concrete and particularized.\textsuperscript{117} The plaintiffs could adequately demonstrate causation of these harms, given that the United States is responsible for approximately a quarter of historical greenhouse-gas emissions.\textsuperscript{118} Remarkably, the court was not intimidated by the difficulty in predicting whether its remedy might actually reduce global emissions: “redressability does not require certainty.”\textsuperscript{119}

Most importantly, the court’s acceptance of the plaintiffs’ theory of the intersection between climate, the Constitution, and public trust suggest an opening for direct judicial treatment of climate change outside of statutory environmental law. Judge Aiken granted that the Constitution forbids government-caused degradation of the atmosphere, citing the Supreme Court’s recent expansion of the notion of fundamental rights in the same-sex marriage case, \textit{Obergefell v. Hodges}.\textsuperscript{120}

\begin{quote}
I have no doubt that the right to a climate system capable of sustaining human life is fundamental to a free and ordered society. To hold otherwise would be to say that the Constitution affords no protection against a government’s knowing decision to poison the air its citizens breathe or the water its citizens drink. Plaintiffs have adequately alleged infringement of a fundamental right.\textsuperscript{121}
\end{quote}

The court went on to withhold judgment on whether the public trust extends to the atmosphere, given that the plaintiffs had alleged global-warming harms to the territorial sea, which is clearly protected.\textsuperscript{122} However, the court parted ways with the D.C. Circuit’s decision in \textit{Alex L.} in finding

\begin{footnotes}
\item[116] \textit{Id.} at 16 (reiterating the wisdom of choosing a cause of action outside of classic environmental law: “[The defendants] are correct that plaintiffs likely could not obtain the relief they seek through citizen suits brought under the Clean Air Act, the Clean Water Act, or other environmental laws. But that argument misses the point. This action is of a different order than the typical environmental case.”)
\item[117] \textit{Id.} at 21.
\item[118] \textit{Id.} at 23–24.
\item[119] \textit{Id.} at 27.
\item[121] \textit{Complaint}, supra note 108, at 32–33.
\item[122] \textit{Id.} at 40.
\end{footnotes}
that a federal public-trust duty exists, and denied the defendants’ argument that AEP v. Connecticut compelled displacement of the claims: “A defining feature of [the public-trust] obligation is that it cannot be legislated away.”

In an auspicious move for climate litigators, Judge Aiken devoted the conclusion of her opinion to chastising the federal judiciary for failing to confront climate change. Noting that “a deep resistance to change runs through defendants’ and intervenors’ arguments for dismissal” and that “[t]his lawsuit may be groundbreaking, but that fact does not alter the legal standards governing the motions to dismiss,” Judge Aiken wrote that “[f]ederal courts too often have been cautious and overly deferential in the arena of environmental law, and the world has suffered for it.” She quoted Judge Alfred T. Goodwin to the effect that “the third branch can, and should, take another long and careful look at the barriers to litigation created by modern doctrines of subject-matter jurisdiction and deference to the legislative and administrative branches of government” and stressed that “[e]ven when a case implicates hotly contested political issues, the judiciary must not shrink from its role as a coequal branch of government.”

Juliana and the other public-trust cases belong at the core of climate-change litigation because they ask courts to confront global warming and its implications for government duties. Ideally, such a confrontation will result in wide-ranging mandates to correct government policy in accordance with climate science. This result was achieved in the recent Urgenda Foundation v. Kingdom of the Netherlands case, where a Dutch court ruled that the government had to reduce the country’s emissions by 25% from 1990 levels by 2020. The Court relied upon a variety of legal sources, including the national constitution and the government’s reduction commitments under European Union (EU) and international law. The government has appealed the ruling. If public-trust and constitutional actions in the United States result in similar holdings, this will be a significant climate-legal victory at the core. However, much depends on what relief such a

123. Id. at 46.
124. Id. at 49.
125. Id. at 52.
126. Id. (quoting Alfred T. Goodwin, A Wake-Up Call for Judges, 2015 Wis. L. Rev. 785, 785–86, 788 (2015)).
129. Id.
ruling would provide. The *Urgenda* case is the strongest example of judicial action on climate change, with a direct mandate to cap emissions.\(^{131}\) In the public-trust and constitutional context, relief could vary from equally strong mandates to much weaker declaratory judgments recognizing a public-trust duty, a recognition that, in the past, has done little to provide the environmental relief plaintiffs seek.\(^{132}\) *Juliana*, with its strong endorsement of public-trust and constitutional claims, suggests that courts may respond favorably to a reframing of the climate core that addresses the federal judiciary’s traditional competencies. This core confrontation could produce dramatic judicial intervention premised on a new understanding of the public trust and the constitutional implications of government inaction on climate change. This understanding would bypass the administrative and legal uncertainties of Clean Air Act regulation and the private law uncertainties of tort actions, while embracing the economic and political uncertainties of comprehensive national emissions reductions. Alternatively, this core confrontation could produce another judicial recognition of climate change along the lines of *Massachusetts v. EPA*—acknowledgment without action, avoidance of uncertainty, and abdication of scrutiny in favor of the status quo.

**D. Legal Structure and Strategy at the Climate Law Core**

This review of climate legal action at the core demonstrates how, when legal claims force courts to deal with the phenomenon of global warming, the preferred judicial response is to force as little action as possible and to avoid the legal, political, and economic uncertainties that would result from climate-favorable rulings. Two important observations flow from this point. First, judicial inaction premised on uncertainty favors the status quo of the fossil-fuel economy. Although there is nothing natural or inevitable about societal reliance on coal, oil, and gas, this situation is treated as the background against which climate legal interventions are staged. When agency action to alter this background is treated as potentially disruptive or illegitimate (as in *UARG* and the Clean Power Plan challenges) or when tort claims that would introduce fault and entitlement into the fossil-fuel status quo are deemed unsuitable for judicial resolution, the status quo is legitimized and reinforced. This judicial externalization of climate change

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mirrors—and perpetuates—the externalization of human and environmental costs accomplished by the major beneficiaries of the fossil-fuel *status quo*, including oil companies and individuals with carbon-intensive lifestyles. In both instances, the best way to deal with the threat to settled arrangements posed by climate change is to call it someone else’s problem.

It is hardly surprising that courts, and the federal bench in particular, would protect business as usual and prove unwilling to outpace legislatures in dealing with climate change. In aid of this unwillingness, the legal avenues employed by climate advocates in the cases above are structurally ill-suited to climate claims. By “structure” I simply mean the non-climate-related legal authority, precedent, and common sense that climate advocates must work with and through to seek relief. This structure is hardly natural; it is the outcome of social conflicts, played out through the law, which predated the climate-change era, and of environmental policies designed before global warming was well understood. When climate advocates enter the legal system, they encounter rules and procedures that were either designed to favor the sorts of actors who oppose action on climate change—namely big business—or were made in ignorance of the special exigencies of climate change. In the public-law context, examples of this structurally poor fit include Clean Air Act § 111 emissions limits far too low for reasonable greenhouse-gas caps, state common carrier laws envisioning the government’s primary role as encouraging rather than monitoring (let alone limiting) infrastructure expansion, and agency procedural requirements incentivizing administrative disclosure rather than action. 133 In private law, structural impediments include: tort standing, causation and redressability standards, the concept of legislative displacement, and the political question doctrine. At a more general level, these obstacles are part of an American judicial culture that frowns upon regulatory “interference” with the market (especially where unsanctioned by Congress) and relies on an adversarial mode of dispute resolution that is incapable of capturing the diffuse, widely shared injuries caused by global warming and its many unequally responsible contributors. Benjamin Ewing and Douglas A. Kysar attribute judicial inaction on climate change to a widespread understanding that the American “limited government” system of checks and balances simply cannot bring regulatory power to bear on enormous societal threats like global warming. 134 Judges therefore take advantage of the “malleable escape hatches” that tort law offers to avoid disruptive rulings in the sorts

of climate nuisance actions discussed above. Although these attitudes and norms pre-date the climate-change era, they are symptomatic of an individualistic, free-market ideology that impedes action on, if not actively encourages, global warming.

As important as these structural problems are, they must be qualified by the second observation flowing from the preceding discussion: nothing in the law at the climate core, even when it is ideologically biased and climate-unfriendly, determines climate-unfavorable results. This is more than just the legal realist claim that the law is indeterminate. The favorable standing language of Massachusetts v. EPA, the initial climate-tort-friendly Fifth Circuit opinion in Comer v. Murphy Oil USA, and the very recent public-trust and constitutional opinions in Washington and Oregon demonstrate that petitioners can use the public and the private law to reach climate-favorable results. These are also exemplary instances of the “prodding and pleading” that Ewing and Kysar argue judges should practice in global-warming cases. This signals to the other branches that action is needed on global warming, even when the merits of a particular case do not warrant climate-favorable rulings. Should the Clean Power Plan survive judicial review, it will be clearer than ever that the fate of climate litigation at the core depends as much on structure as it does on political change, public attitudes, and even judicial personality. Like global warming, judicial resistance at the core is not a fact of nature but rather a temporary arrangement of forces that can be undone—Juliana suggests that this may already be happening. Although it is already too late to reverse the harms that both have caused, much greater damage can still be prevented.

Understanding the legal difficulties that climate advocates encounter when they bring global warming into the courtroom is important to strategizing how the climate movement can best use the law to reach its goals. It is also important to account for the variety of ways in which resistance to the fossil-fuel economy is practiced. If climate change is a prism through which traditional legal problems like blame, causation, and government intervention are refracted, then the main lesson of climate law at the core is that courts do not want to follow the light through the prism. They do not want to see its odd, diffracted outcomes; they prefer to dutifully marvel at the prism’s properties, then hand it off to someone else.

135. Id. at 355.
to deal with. But, if courts’ attention is directed to the resulting refractions rather than to the prism itself—to the indirect social causes and effects of global warming, rather than to the atmospheric phenomenon—then new possibilities of legal action open up. These new legal possibilities are tightly connected to different modes of climate resistance. As the story of the Keystone XL Pipeline demonstrates, this alternative model of climate legal action and resistance offers some promise of more climate-favorable outcomes, even as its actual effect on greenhouse-gas emissions remains unclear.

II. LEGAL RESISTANCE TO THE KEYSTONE XL PIPELINE

The movement to stop the Keystone XL Pipeline was always primarily about climate change. But, whereas other climate movement efforts, like the legal efforts discussed above or the push to pass the Waxman-Markey bill, sought legislative, regulatory, or judicial action squarely addressing global warming, the KXL resistance adopted a much more diffuse and multifaceted approach. While attempts were launched to secure rejection of the pipeline based on climate concerns, many legal strategies implicated global warming only indirectly: battles over the right of a pipeline company to appropriate private lands, challenges to collusion between industry players and administrative decision-makers, and criminal defense of anti-pipeline activists. These efforts shifted judicial attention away from climate-change harms and toward various supports, effects, and causes of the fossil-fuel economy. Linked by their overall goal of preventing pipeline construction, the success of these legal actions was measured less by individual courtroom victories than by contributions to the lengthy delay and the ultimate, decidedly political rejection of the pipeline.

The importance of delay in the defeat of the KXL cannot be understated. Over the course of seven years, the pipeline went from an acknowledged fait accompli to the first major fossil fuel extraction development to be defeated by the climate movement. The movement’s strategic use of delay employed a tactic that had long been used by fossil-fuel advocates to prevent government action on climate change, whether by postponing an EPA finding on the dangers of greenhouse gases or by bogging the Clean Power Plan down in judicial review. But this was not the only important reversal of tactics in the legal fight against the KXL.

138. Bryan Walsh, Why the Climate Bill Died, TIME (July 26, 2010), https://perma.cc/Q8L2-TCBP.

139. See infra Part II.B (discussing the fraught history of delay in environmental conflicts).
As discussed above, legal efforts at the climate core are stymied by judicial fear of uncertainty and a preference for inaction when uncertainties arise. The legal fight against KXL largely abandoned the core to focus on the climate periphery. Not incidentally, this periphery is where many of the more concrete and immediate effects of the fossil-fuel economy and global warming are discernible. It is also where uncertainty works for, rather than against, climate advocates. Uncertainty at the core is linked to the effects of climate-change regulations; uncertainty at the periphery, in this instance, is linked to the economic, legal, and diplomatic effects of approving a pipeline. As the ability of the KXL to survive its various legal and political challenges became less and less certain—and crucially, as the pipeline’s economic benefits grew ever more questionable—rejection of the pipeline became an increasingly defensible decision based on the certainty of an unchanging background. Indeed, the final permit denial was justified largely on the grounds that the pipeline’s economic benefits and even its eventual construction were difficult to determine. Whereas at the climate legal core the movement sought proactive government action to stop global warming, anti-KXL campaigners at the periphery pushed for government inaction to maintain the status quo: a world without the pipeline. By pushing uncertainty to the periphery and flipping the action–no-action alternative, the legal resistance to the KXL was able to frame the pipeline issue in such a way as to make rejection politically palatable. Fossil-fuel proponents in turn were forced to argue for government intervention and for the certainty of the pipeline’s benefits—a reversal of their prior reliance on the tropes of inaction and uncertainty.

In a certain sense, the anti-KXL movement’s legal strategy in this context mirrored judicial reaction to the climate core by obscuring or avoiding the core issue of climate change. For example, the lead lawsuit over pipeline siting authority in Nebraska, which served a crucial delaying and uncertainty-making role, made no mention of global warming. Bracketing the issue made it possible for courts, perhaps inadvertently, to serve the climate-favorable purposes of the litigants. It is tempting to say that, even when global warming was not mentioned, everybody knew that these legal efforts were really about the pipeline’s effect on climate change. But, this is likely untrue; some observers considered the KXL primarily about the rights of indigenous peoples and landowners. Part of what

140. See Thompson v. Heineman, 857 N.W.2d 731 (Neb. 2015) (failing to mention “global warming” or “climate change”).
141. See Rebecca Adamson, The Corruption of Keystone: Congressional Permits to Drill Don’t Change Public Opinion, TRUTHOUT (Mar. 27, 2016), https://perma.cc/X5Q4-6S3Q (“The
made the diffuse legal efforts to stop the pipeline so effective was that this diversity of intent simply did not matter; a confluence of interests arose such that the climate movement could defeat the KXL without having to make climate change a universally shared concern of activists and decision-makers. This distinguishes the anti-pipeline strategy from legal action at the core, where the only relevant consideration is one’s contribution to, or concern about, global warming, and it accounts for the value of action at the periphery.

To clarify, because the pipeline crossed a border, final approval authority rested with the State Department; thus, the primary climate policy decision-makers were the President and State Department officials, whereas the relevant decision-makers in the discussion above were federal judges. This distinction clearly had ramifications for how climate legal activists framed arguments about discretion and legal authority and for how the certainty–uncertainty and action–inaction distinction operated. For example, the importance of precedent was diminished, while the timing of elections was crucial. But, inaction in the face of uncertainty and allegiance to the status quo were still the major institutional dispositions with which activists had to contend. The pipeline opposition’s move from the core to the periphery in its legal action was thus successful even though, and perhaps because, the final result was decided in an executive agency rather than a federal courtroom. This strategy is an ironic instance of the “prodding and pleading” that Ewing and Kysar envision for judicial action on climate,142 with the legal outcomes here serving not so much as a clarion call as an excuse for executive climate (in)action. This strategy certainly helped to secure a dramatic public victory for the climate movement. Whether the anti-KXL effort is a suitable model for future climate legal action remains, however, a live question and one that will be addressed at the end of the article.

A. The Proposed Pipeline and the (Un)certainty of its Benefits

In 2008, TransCanada, a Canadian oil services company, applied to the United States Department of State for a permit to build the KXL across the U.S.-Canadian border.143 The pipeline represented the third phase of

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142. Ewing & Kysar, supra note 95, at 354, 356.
TransCanada’s Keystone project, which aimed to carry crude oil extracted from the tar sands of northern Alberta through a 36-inch-diameter pipeline approximately 2,000 miles to the Gulf Coast. The first two phases of the project, which required conversion of natural-gas pipelines and reinforcement of existing connections between Steele City, Nebraska and Cushing, Oklahoma, were already complete. The Alberta tar sands were a newly exploitable resource thanks to developments in energy-intensive in situ mining, which usually involves the use of steam to heat trapped oil for extraction. Of the estimated 170 billion barrels of tar sands oil in Alberta, the KXL would have transported approximately 830,000 barrels a day, or 300 million barrels a year; by comparison, 420 million barrels of Canadian synthetic crude were shipped to the United States in 2013.

Because of the tremendous amounts of energy involved in extraction, a given barrel of Alberta tar sands oil is estimated to cause 17% more “lifetime” greenhouse-gas emissions than other crude oil. TransCanada claimed that the KXL, which would join a network of other cross-border oil pipelines, would enhance United States energy security and provide economic benefits in the form of jobs and lower gas prices.

At first, the pipeline appeared to have an easy path to approval. The State Department approved a preliminary, smaller part of the project, and TransCanada began acquiring land along the pipeline route in anticipation of its final permit. The company and its supporters cited a promised 2,500 to 4,650 new construction jobs resulting from the pipeline. Canadian provincial and federal support was lined up, and conventional Washington wisdom saw no reason for rejection. Initially, even many environmental groups lambasted attempts to stop the pipeline, citing the

144.  Id.
147.  Id. at 5.
148.  Id. at 13.
149.  Id. at 26–27.
151.  O’Rourke, supra note 145, at 152–53.
152.  CORNELL UNIV. GLOB. LABOR INST., PIPE DREAM?: JOBS GAINED, JOBS LOST BY THE CONSTRUCTION OF KEYSTONE XL 7 (2011) [hereinafter PIPE DREAM?].
153.  See Jeff Goodell, Obama’s Last Shot, ROLLING STONE (Apr. 23, 2014), https://perma.cc/T3QA-SCNA (“Five years ago, it would have gone through without comment.”).
issue’s obscurity with the American public, lack of established political support, and ambivalence over the anti-pipeline campaign’s strategic value to the broader climate movement.\(^\text{154}\)

Nonetheless, pipeline opponents were able to quickly organize resistance while the State Department considered TransCanada’s permit application. In early 2009, climate scientist, James Hansen, argued in a widely distributed op-ed that “[t]he horrendously carbon-intensive unconventional fossil fuels, tar shale in the US and tar sands in Canada, cannot be developed” because of their relative dirtiness and the threat that their development posed to the Northern Boreal Forest, a crucial “carbon sink” that helps to offset global warming.\(^\text{155}\) Seeking to capitalize on newly inaugurated President Obama’s pledges to take action on climate change, climate activists staged several protests, culminating in massive sit-ins around the White House in the summer of 2011 that resulted in over 1,000 arrests.\(^\text{156}\) Meanwhile, organizing drives and litigation drives were launched along the pipeline route in Nebraska, Texas, and various native communities,\(^\text{157}\) and the democratically controlled House Energy and Commerce Committee recommended that the State Department reject the pipeline in June of 2010.\(^\text{158}\)

The core issue for anti-pipeline activists was the actual and symbolic contributions that the KXL would make to global warming. James Hansen’s oft-cited calculations predicted that full extraction of the tar sands would add 120 parts per million of carbon dioxide to the atmosphere, at a time when the world was already moving well beyond the maximum of 350 parts per million, widely recognized as the limit beyond which warming would spin out of control.\(^\text{159}\) Moreover, in response to local resistance along the pipeline route, public calls to resistance by climate activist, Bill McKibben, and growing frustration with President Obama’s lack of action on global warming, the climate movement began to present the KXL fight as a referendum on the future of the fossil-fuel economy and “business as

\(^{154}\) See Jane Kleeb, Guest Post by Kenny Bruno: Lessons from Behind the Scenes of KXL Campaign, BOLD NEBRASKA (Nov. 10, 2015), https://perma.cc/W5PX-W477 (“When we started work on KXL, virtually no one in the US had even heard of it.”).


\(^{157}\) See Kleeb, supra note 154 (stating that a tribal organizer traveled up and down the route calling attention to the KXL project in South Dakota and Oklahoma).

\(^{158}\) O’Rourke, supra note 145, at 153–54.

\(^{159}\) James Hansen, Game Over for the Climate, N.Y. TIMES (May 9, 2012), https://perma.cc/H8CC-DKEY.
usual”; if serious efforts were ever going to be undertaken to mitigate climate change, then the first step had to be preventing expanded oil infrastructure. The implication of this movement message was that pipeline approval would push the planet past a tipping point into an uncertain, environmentally disastrous future.

Pipeline supporters, meanwhile, caught off guard by the size and spirit of the resistance, doubled down on their claims of the KXL’s beneficial effects on employment and energy security. The weakness of these claims proved disastrous for the pipeline’s prospects. A 2011 Cornell University study found that TransCanada had overstated the amount it would spend on the pipeline in the United States by at least $3 billion, and that only 50 permanent jobs would remain after the pipeline had been completed, a figure later confirmed by the State Department. Furthermore, KXL supporters stressed the importance of exploiting fossil fuels as close to the United States as possible in order to avoid supply interruptions. But, this concern was in many ways a hangover from the days of the Organization of the Petroleum Exporting Countries (OPEC) crises and “peak oil” paranoia in the 1970s. By the time the pipeline was proposed, the bigger problem for the global energy economy was how much oil to let onto the market, rather than the prospect of its exhaustion, and the United States stood at no serious risk of being choked off from foreign energy supplies. Just as importantly, the extraction of North American shale oil and natural gas has increased exponentially over the past decade, including inside the United States, therefore, as the strength and viability of United States domestic supply became clear, the argument that KXL was needed to lock in safe, stable energy lost much of its force. Incidentally, so too did the environmentalists’ contention that KXL represented a point of no return for continued fossil-fuel combustion. More damningly, the promise that the pipeline would produce lower gas prices for years to come proved to be the precise opposite of what would occur. According to TransCanada’s own


161. PIPE DREAM?, supra note 152, at 2, 25.


163. Sam Kalen, Thirst for Oil and the Keystone XL Pipeline, 46 CREIGHTON L. REV. 1, 12–14 (2012).

164. Id.


profit estimates used to justify its investment in pipeline construction, the KXL and its partner, Gulf Coast Pipeline, (discussed below) would allow more oil to move quickly from Cushing, Oklahoma—the major Midwestern refining hub—to refineries in and around Port Arthur and Houston, relieving a glut of crude oil that had developed in the Midwest. With supply opened up, the crude oil could then be quickly refined (mostly as diesel) and shipped for export. Any remaining surplus would then be shipped back to Cushing for domestic shipment—eliminating any savings from the reduced costs of shipping via the KXL and securing TransCanada and its partners a profit margin superior to that currently available. In other words, TransCanada and the oil industry would use the KXL to raise gas prices. This projection was consistent with experts’ analysis of the global crude market, where profits are determined by the global crude price point rather than domestic supply and demand. Whereas KXL opponents were able to present a convincing picture of the pipeline’s risks, supporters were then left with little to show in terms of convincing benefits for the nation’s security or economy.

B. The KXL’s Legal Context and the Mixed History of Delay

The KXL proved an ideal target for the climate movement thanks to the apparent lack of project benefits and the multifarious opportunities for direct action and legal resistance that the pipeline presented. Equally important was the pipeline’s unique legal setting, which channeled final decision-making power over the project to the State Department and allowed for an entirely discretionary National Interest Determination (NID) of whether a permit was warranted. With the pipeline requiring affirmative executive action for its approval and only vague foreign policy justifications for its denial, anti-KXL legal action had the modest aim of generating as many reasons for inaction as possible.

The federal government generally has no regulatory power over oil pipelines. However, pipelines crossing national borders are matters of foreign policy, and since 1968, the authority to determine whether a given border-crossing project is in the national interest has been delegated to the

168. Id.
170. NID, supra note 162.
171. See infra Part II.D.
State Department. Executive Order 13337, the most recent presidential statement on pipeline approval authority, grants the State Department wide latitude in making this decision, although consultation with various department and agency heads and the preparation of a Record of Decision is required. In essence, the executive branch is free to consider cross-border pipeline projects in the manner and at the speed it chooses.

As late as the fall of 2010, State Department approval of the KXL seemed imminent, as then-Secretary of State Hillary Clinton remarked that her Department was “inclined” to approve the project. Activist reaction to this comment was swift; with the Administration hoping to avoid alienating both KXL supporters and opponents until after the midterm elections, and with ongoing legal and political battles over the pipeline in Nebraska providing a convenient reason for delay, the State Department announced that it would defer a decision on its NID. In late 2011, Congress attempted to force the President’s hand, passing legislation requiring action on the application within two months. The State Department stated that this was insufficient time to complete its environmental review, and President Obama subsequently rejected the permit with the understanding that it would be resubmitted. In turn, TransCanada decided to adjust its proposal: in 2012, it resubmitted its permit application, splitting the nearly 2,000-mile long pipeline project into two parts. TransCanada now sought executive permission only for an 875-mile long pipeline from Alberta to Cushing; the southern leg of the pipeline, from Cushing to the Gulf Coast, was renamed the “Gulf Coast Project” and did not require State Department approval because it crossed no borders. Together, the pipelines would still transport 830,000 barrels of crude per day. In March of 2012, President Obama ordered expedited environmental review of the Gulf Coast pipeline; legal challenges from groups like the Sierra Club were unsuccessful.

After 2012, the KXL fight changed drastically. In its new application for the shortened northern KXL project, TransCanada proposed an

175.  See infra Part II.D.
177.  Id. at 4.
178.  Id. at 5.
179.  Id.
180.  Id.
181.  Id.
182.  Id. at 5–6.
alternative route around the Nebraska Sand Hills region—a clear concession to environmentalists who had expressed concern over the disastrous consequences that an oil spill would cause in the ecologically sensitive region.\textsuperscript{183} Meanwhile, removal of the southern segment of the pipeline (which TransCanada had determined had “independent economic utility”)\textsuperscript{184} from the process of discretionary executive decision-making gave the company the upper hand over movement activists. While construction of the Gulf Coast pipeline concentrated political resistance on fights over eminent domain and civil disobedience in East Texas, TransCanada aggressively acquired land alongside the pipeline route, defeating blockades and lawsuits and successfully completing construction of the pipeline in 2014.\textsuperscript{185} As discussed below, this result casts serious doubt on the extent of the climate movement’s victory in the KXL conflict and demonstrates the risks of climate legal action at the periphery.

Meanwhile, the State Department continued to review the new KXL permit application, granting further delays as litigation in Nebraska called the pipeline route into question.\textsuperscript{186} Congress tried several times, including as late as 2014, to force the executive branch’s hand and grant immediate approval, without success.\textsuperscript{187} By that time—six years after the initial application—political insiders had concluded that President Obama would reject KXL due to concerns about his legacy, and that he was only postponing a decision so as not to harm Democrats in the 2014 midterm elections in states with significant KXL support.\textsuperscript{188} Throughout this delay, TransCanada had continued to pursue eminent domain actions against landowners in Nebraska and elsewhere in anticipation of pipeline construction, but in November 2015, the company asked the State Department to suspend its three-year-long review of the KXL permit application.\textsuperscript{189} This was widely seen as a political calculation: TransCanada likely hoped to defer any decision in the hope that a Republican president would take office in early 2017.\textsuperscript{190} The request was denied.\textsuperscript{191} Finally, on

\textsuperscript{183} N.D., supra note 162, at 8.
\textsuperscript{184} Id.
\textsuperscript{185} Parfomak et al., supra note 143, at 2 n.4; Bernard L. Weinstein et al., The Keystone/Gulf Coast Pipeline System: A Catalyst for American Jobs and Energy Security 28 (2014).
\textsuperscript{186} Id. at 6.
\textsuperscript{187} Id. at 7.
\textsuperscript{188} See Goodell, supra note 153 (stating that Obama was getting letters from Democratic senators in tough re-election fights arguing that if he delays approving the pipeline, it could cost them the election).
\textsuperscript{190} Id.
\textsuperscript{191} Id.
November 6, the State Department released its NID with the recommendation that the KXL be rejected. President Obama formally denied the permit that same day, reiterating the State Department’s finding that, regardless of KXL’s actual effect on greenhouse-gas emissions, rejection of the project was essential to the United States’s international prestige and bargaining power in climate negotiations. As the NID inartfully put it: “How the U.S. is viewed as addressing climate change may affect U.S. relationships with many...countries, especially those that are vulnerable to climate change impacts, across a range of foreign policy priorities.”

Was the rejection of the KXL a climate movement victory? The answer depends on the standard used to evaluate movement success. One standard—the commonly understood “core” standard—is how many tons of greenhouse gases were prevented from entering the atmosphere. As discussed below, it remains unclear whether the absence of the KXL will prevent the Alberta tar sands from being exploited or slow down North American fossil-fuel infrastructure development. In the long run, it appears unlikely that the rejection of the KXL will in itself block a large amount of emissions. Another standard of success is the change in media attention and public opinion regarding climate change and the fossil-fuel industry. The anti-KXL activists were definitively successful in this regard, keeping a struggle over fossil-fuel infrastructure in the headlines for many years and emerging victorious in the public narrative. Yet, another standard is the growth of the climate movement and advances in activist expertise, capacity, and solidarity. This again was a certain success for pipeline opponents, considering that the anti-KXL struggle continues to serve as a model for climate-change battles. A final standard of success is the degree to which the politics of fossil fuels has shifted in climate-favorable ways, whether by undermining the presumptive validity of fossil-fuel infrastructure projects or by creating political incentives for decision-makers to act aggressively in reducing emissions. The KXL was the first climate political question to achieve major national prominence, and the question was resolved in favor of climate activists. The mere fact that fossil fuels became a question at all—pre-KXL infrastructure projects, though eminently political, were generally not perceived as such—was a victory in itself. Even if all the barrels of oil that would have flowed through the

192. NID, supra note 162, at 2–3.
194. NID, supra note 162, at 26–27.
195. See infra CONCLUSION.
pipeline will be burned anyway and even if the pipeline resistance fails to survive as an effective constituency, the climate movement is certainly better off than it was before the KXL conflict. To win on the issue of climate change, climate change must be an issue and it must be winnable. The KXL resistance achieved the former to a greater degree than any past campaign, and it delivered at least the possibility of the latter.

But, several factors besides the climate movement’s successful strategies contributed to the pipeline’s defeat. First and most problematically, North American oil transport infrastructure, including the Gulf Coast pipeline, grew tremendously in the seven years between the pipeline’s proposal and its rejection. By the end of 2015, any additional capacity that the KXL would have provided was already in place, and the status quo against which the pipeline was rejected more closely resembled the “game over for climate” that James Hansen had warned about than the KXL-less context of 2008. Second, oil prices had plummeted, weakening support for the fossil-fuel industry and leaving investors skeptical about additional capital investment in infrastructure, particularly for expensive tar sands. Third, oil spills in Michigan and Montana had raised public awareness about the pipeline risks. Finally, the defeat of KXL supporter Tim Harper and the election of Canada’s liberal Prime Minister Justin Trudeau made pipeline rejection more diplomatically palatable.

However, these factors were effective in encouraging rejection only because the climate movement, in part through legal action, had managed to delay the permit decision for so long. The discussion below does not analyze the various political developments (such as President Obama’s re-embrace of climate policy after the 2012 election) or non-legal movement efforts (such as repeated protests at the White House) that contributed to this delay. Instead, it focuses on legal action that contributed to a particular and strategic perception of the KXL: a project that would require

198. Emma Graves Fitzsimmons, Michigan Governor Warns of Oil Spill Threat, N.Y. TIMES (July 28, 2010), https://perma.cc/Q6Z6-4NFM.
201. See generally Barack Obama, President of the U.S., Remarks by the President on Climate Change (June 25, 2013), https://perma.cc/G2UN-NWA6 (discussing the effects of climate change and how to fight them).
affirmative government action in the face of legal, political, and economic uncertainty. Having succeeded in imposing this political framework, activists’ overarching strategy was to drag the fight out as long as possible so as to hinder the otherwise straightforward process of approval and construction.

This delay strategy was advisable only because climate advocates were opposing infrastructure development. A similar emphasis on dragged-out litigation, extensive agency study and consultation, and multiple rounds of administrative and judicial review—all with the goal of raising political resistance or exhausting the opponent—has been a mainstay of other environmental struggles, in particular under NEPA. An illustrative example is the 1992 blocking of a proposed highway through the middle of Puerto Rico’s El Yunque rainforest, a project that would have destroyed fragile ecosystems and was prevented when a court found the Federal Highway Administration had to account for its environmental consequences. Where harmful projects depend on quick and uncontroversial approval, interruptions of the process are almost always useful for environmental advocates.

Often, however, delay is the preferred tool of anti-environmentalists, for the simple reason that development—with its concomitant permits, procedures, and processes—may further environmentalists’ goals. The most striking recent example of this strategy is the effort to prevent the Cape Wind turbine project off the coast of Cape Cod, which is opposed by local landowners and opponents of renewable energy. After a decade of effort, lawsuits, political pressure, and financing difficulties led to the termination of contracts for the proposed energy project in 2015. Oil billionaire Bill Koch, a prominent opponent of the project, made the overarching strategy clear in a 2013 interview: “delay, delay, delay.”

Given this mixed history of the tactic of delay for environmentalists, it is certainly no magic bullet for advancing the agenda of climate activists. It works when construction of fossil-fuel infrastructure is presumptively guaranteed and its opponents need time to change public opinion and increase political pressure; it is harmful when protective measures or pro-climate development needs to be implemented, often with the support of a

204. *Id.*
206. *Id.*
government agency. In other words, much depends on who is seen to be taking action and what this action will accomplish. The context of this (in)action and the wisdom of delay, turns on how certainty and uncertainty are allocated among the various policy options.

The significant lessons of the legal struggles over the KXL thus have less to do with whether delay is a useful tactic—in this particular instance, it clearly was—than with how advocates may navigate and exploit discussions over and perceptions of (in)action and (un)certainty. As seen in the discussion above, the judiciary’s direct encounters with climate change have been typified by a fear of uncertainty and a preference for inaction. Therefore, KXL legal action that avoided direct engagement with climate change proved most successful in advancing movement goals. On the other hand, legal efforts that dealt directly with global warming—bringing the pipeline into the climate core—had more mixed results and thus serve as a valuable starting point for comparison of core and periphery strategies.

C. Administrative Review of the KXL’s Climate Consequences

Legal action that directly confronted the global warming effects of the proposed pipeline took the form of challenges to the State Department’s findings of environmental impacts under NEPA. As discussed above, since 1990, federal courts have recognized that NEPA may require consideration of the climate-change implications of agency action, including indirect emissions resulting from the availability of more fuels. But, whether NEPA even applied to the State Department’s discretionary review of the KXL permit application remains a matter of debate. Throughout the process, the State Department maintained that “presidential” review of the project made the statute inapplicable, even though the Department decided to release NEPA EISs as a matter of policy. Observers and climate advocates disagreed, maintaining that NEPA analysis was required by law.

The Southern District of California had previously found NEPA applicable to a cross-boundary power line project, but the agency action

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209. See supra Part I.A.2.


212. NID, supra note 162, at 5.

under review there involved traditional Department of Energy and Bureau of Land Management permitting rather than a discretionary State Department NID.\textsuperscript{214} In 2008, the National Resources Defense Council sued the Bush-era State Department over its NEPA review of the previous, more minor Keystone pipeline, claiming that the Department’s decision to not even consider the pipeline’s global-warming consequences was a NEPA violation.\textsuperscript{215} The District Court of the District of Columbia disagreed, finding that the State Department was “acting solely on behalf of the President” and therefore, was not answerable to congressional requirements of environmental review.\textsuperscript{216} A similar lawsuit filed by the Sisseton-Wahpeton Oyate and other tribes—which also made treaty claims—\textsuperscript{217}—was dismissed on identical grounds by the federal District Court of South Dakota.\textsuperscript{218}

Despite the uncertainty, the State Department continued to act under NEPA in reviewing the KXL. This decision was intended to allay public concern by making the Department’s decision-making process more transparent; although climate-based challenges to the process were unsuccessful, the fact that the State Department imposed upon itself two cycles of project review—NEPA and the NID—extended the project’s delay and gave the climate movement more time to muster opposition. The Department released its first Draft EIS (DEIS) in 2010.\textsuperscript{219} Completed after consultation with ten federal agencies, including the EPA and the Montana Department of Environmental Quality, and after 20 public scoping meetings along the pipeline route and review of submitted comments, the DEIS found that the KXL would have “limited adverse environmental impacts during both construction and operation.”\textsuperscript{220} In a very brief review of the climate-change effects of the project, including emissions from construction and the crude oil supplied by the pipeline, the DEIS concluded: “Assuming constant demand for refined oil products, the incremental impact of the Project on GHG emissions would be minor.”\textsuperscript{221}

\textsuperscript{217} See infra Part I.E.
\textsuperscript{220} Id. at 22.
\textsuperscript{221} Id. at 21.
The Department received over 1,500 comments on the DEIS, mostly negative.\footnote{222} a public letter from the EPA was particularly damning, pointing out that the Department had failed to consider whether the KXL would encourage increased extraction of emissions-heavy tar sands oil.\footnote{223} In response, the Department released a supplemental DEIS, which again failed to consider the pipeline’s effect on increased extraction; this statement received more than 280,000 comments,\footnote{224} including another EPA letter that objected to the Department’s reliance on the fact that global warming would continue regardless of the KXL and its failure to “discuss opportunities to mitigate the entire suite of GHG emissions associated with constructing the proposed Project.”\footnote{225} Shortly thereafter, the Department released its Final EIS on the initially proposed pipeline, again finding that “even if the proposed action does not proceed, production from the oil sands in Canada would likely continue at a similar rate.”\footnote{226}

Pipeline opponents did not have much time to file legal challenges to these statements.\footnote{227} In response to local opposition, the Department decided in November of 2011 to review alternative pipeline routes around the Nebraska Sand Hills, a process to which TransCanada assented.\footnote{228} Shortly thereafter, the permit was denied in response to Congress’s attempt to immediately force approval, and TransCanada decided to split the project into the northern KXL and southern Gulf Coast pipelines.\footnote{229} The existing EISs were thus out of date, and the NEPA process began afresh, this time for the much shorter northern segment only. In 2013, the State Department again concluded, “approval or denial of the proposed Project is unlikely to have a substantial impact on the rate of development in the oil sands, or on

\footnotesize{\bibliography{references}}
the amount of heavy crude oil refined in the Gulf Coast area."230 The final NEPA analysis of the KXL was released in 2014—six years after the initial permit application—and, albeit with more thorough consideration, reiterated these conclusions. 231 Again, there was not much time or motivation to file legal challenges; by the time of the final NEPA analysis, rumors were already circulating that the Obama Administration was inclined to reject the project.232

The only other significant litigation to challenge administrative approval of the combined pipeline came in Sierra Club v. Bostick, where plaintiffs sued the Army Corps of Engineers over its approval of the Gulf Coast project in 2012.233 The plaintiffs alleged that the Corps had failed to strike the correct balance between development and conservation in granting TransCanada dredge-and-fill permits under the Clean Water Act; the Tenth Circuit ruled in favor of the Corps in 2015, by which time the pipeline was already fully operational.234 Thus, the strange timing and bifurcation of the pipeline’s disjointed parts, in tandem with judicial reluctance to overturn agency action, worked to prevent much opportunity for pipeline opponents to litigate, much less litigate successfully, the question of the KXL’s climate impacts.

Nonetheless, the initial litigation over the first Keystone pipeline—which likely discouraged further attempts to challenge the State Department’s NID based on NEPA violations, even had there been time to do so235—as well as the ample participation of major environmental groups in the NEPA comment process, presented the core question of the KXL’s global-warming impacts to judicial and executive decision-makers. As in the climate cases discussed in Part II, this confrontation provoked a fear of uncertainty and a reliance on inaction as a way to escape the difficult problems posed by climate change.236 Consistently from its first Draft EIS in 2010 to its NID in 2015, the State Department insisted that, while global

231. See generally U.S. DEP’T OF STATE, BUREAU OF OCEANS & INT’L ENVTL. & SCI. AFFAIRS, FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT FOR THE KEYSTONE XL PROJECT (Jan. 2014) (discussing the detailed consideration of the conclusion regarding the unlikely potential for a substantial impact on the rate of development in the oil sands or on heavy crude oil refined in the Gulf).
232. See Goodell, supra note 153 (stating that two sources in the Obama administration informed Goodell that the president “has all but decided to deny the permit for the pipeline”).
233. Sierra Club v. Bostick, 787 F.3d 1043, 1046 (10th Cir. 2015).
234. Id. at 1046, 1049.
236. See supra Part II.
warming is real, the KXL had nothing to do with it—business would continue as usual, tar sands oil would be extracted with or without the pipeline, and the Department need not do anything in particular in response to the climate concerns of pipeline opponents.\textsuperscript{237} Nothing could be further from Hansen’s “game over for climate” narrative. Crucially, however, the Department’s seeming certainty that the KXL would have no effect on global warming did not lead to approval, as logic would suggest. In this instance, thanks to action on the periphery, the confrontation at the core was not determinative of the final decision. Instead, complaints about climate change served, at best, to sap enthusiasm for the project and at worst, to detract from what turned out to be more promising avenues of resistance. In any event, legal and non-legal recourse to the obvious public law methods of bringing global-warming objections did not produce the direct result desired: rejection based on concern for the climate.

\textit{D. Eminent Domain and the Fight Against Fossil-Fuel Infrastructure}

The State Department retained complete decision-making authority over TransCanada’s right to build its pipeline across the U.S.–Canada border. Once inside the United States, however, the company faced an array of different legal regimes governing pipeline siting.\textsuperscript{238} While TransCanada waited for its Presidential Permit, it used these regimes to acquire land along the KXL route.\textsuperscript{239} Along the pipeline’s northern segment, the resulting legal battles proved invaluable to delaying approval of the project and to providing cover for its ultimate rejection;\textsuperscript{240} along the southern Gulf Coast segment, however, TransCanada was able to successfully acquire the land it needed under favorable laws of eminent domain that granted it “common carrier” status—the ability to seize land for the purported benefit of the public.\textsuperscript{241}

In 1906, after years of conflict over oil pipelines in Pennsylvania and Texas, Congress passed the Hepburn Act, which for the first time granted oil pipelines common carrier status (so long as owners sold access to the pipelines on a nondiscriminatory basis) and delegated regulation of rates

\textsuperscript{237} NID, \textit{supra} note 162, at 11.
\textsuperscript{238} Klass & Meinhardt, \textit{supra} note 165, at 976–78.
\textsuperscript{239} Kate Sheppard, \textit{TransCanada Uses Eminent Domain to Finish Nebraska Land Acquisition}, HUFFINGTON POST (Jan. 20, 2015, 7:18 PM), https://perma.cc/DJ7W-H9WJ.
\textsuperscript{240} Russ Girling, President & Chief Exec. Officer, TransCanada, Statement Regarding KXL Delay (Apr. 21, 2014), https://perma.cc/M429-UYYV.
and shippers to the Interstate Commerce Commission.\textsuperscript{242} Eight years later, the Standard Oil monopoly over pipelines was dealt a fatal blow in the “Pipeline Cases,” in which the Supreme Court found that the company had violated its public duties by conditioning use of its pipelines upon sale of the transported oil to Standard.\textsuperscript{243} For a brief moment during World War II, the federal government exercised eminent domain power to seize land for oil pipelines in order to replace tanker shipment capacity destroyed by German ships in the Atlantic; since 1943, however, the power to delegate and regulate pipelines’ power of eminent domain has rested with the states.\textsuperscript{244} This distinguishes oil from gas pipelines, whose construction and operation (when crossing state lines) is regulated by the Federal Energy Regulatory Commission (FERC).\textsuperscript{245} The federal government still exercises some control over oil pipelines’ rates, conditions of services, and safety standards through FERC and the Pipeline and Hazardous Materials Safety Administration;\textsuperscript{246} siting, construction, and expansion or abandonment are the purview of the states.\textsuperscript{247}

The ability of pipeline owners to acquire the land necessary for their routes depends on whether they can acquire common carrier status and thereby exercise the eminent domain power to seize private land for value. State laws on this front vary widely. For example, Colorado does not grant any eminent domain authority to oil pipelines;\textsuperscript{248} Texas, on the other hand, had a system prior to the KXL in which pipeline operators merely had to attest to their common carrier status in order to begin seizing land, with no need for prior approval.\textsuperscript{249} The Montana Department of Environmental Quality, which exercises oversight over eminent domain actions, decided to withhold approval of TransCanada’s takings until the State Department had released an NID in favor of the project.\textsuperscript{250} In response to the proposed KXL, Nebraska began transitioning from lax regulatory oversight of oil pipelines

\begin{itemize}
\item Klass & Meinhardt, supra note 165, at 960.
\item United States v. Ohio Oil Co. (Pipeline Cases), 234 U.S. 548, 562 (1914).
\item Klass & Meinhardt, supra note 165, at 963.
\item BRANDON J. MURRILL, CONG. RESEARCH SERV., R44432, PIPELINE TRANSPORTATION OF NATURAL GAS AND CRUDE OIL: FEDERAL AND STATE REGULATORY AUTHORITY 2 (2016).
\item Klass & Meinhardt, supra note 165, at 981.
\item Id. at 1029.
\item Id. at 984; Cf. Crawford Family Farm P’ship v. Transcanada Keystone Pipeline, L.P., 409 S.W.3d 908, 911 (Tex. App. 2013) (showing how TransCanada’s use of this power was challenged).
\item See O’Rourke, supra note 145, at 171–72 (explaining how Montana prevented oil companies from filing eminent domain actions before the Department of Environmental Quality approved the project, and how the Department of Environmental Quality had to approve TransCanada before it accepted).
\end{itemize}
to much stricter rules of eminent domain, a battle that was crucial to State Department delay. In each instance, the fight over TransCanada’s common carrier status represented a struggle over the rights of corporations to dictate public policy and the social benefits and harms of fossil-fuel infrastructure—some landowners were forced to give up land so that the public could reap the (questionable) rewards of the pipeline. While the struggles were highly relevant to climate politics in that the expansion of fossil-fuel infrastructure is a necessary condition of increased emissions, the legal fight over eminent domain was not ever directly about the KXL’s impact on global warming.

As with the reversal of tactics over delay, (un)certainty, and (in)action, the pipeline siting conflict saw pipeline supporters and opponents adopting positions on eminent domain contrary to their expected political alignments. In the years immediately prior to the KXL fight, pro-business conservatives had loudly objected to relaxed eminent domain rules that allowed private companies to seize land for ostensibly public purposes; the perceived excess of the landmark decision in New London v. Kelo, which approved seizure of homes by a private developer, became a rallying cry for property-rights activists. Thanks to Kelo, conventional wisdom held that TransCanada’s seizure of land along the pipeline route would face no serious legal challenges. Ironically, many of the same players who had decried the seizure of private land for a pharmaceutical headquarters in Kelo supported seizure of private land for an oil pipeline in the KXL conflict; the Institute for Justice, for example, which had represented Susette Kelo against the City of New London, took no position on the pipeline, while conservative advocacy groups like the Heartland Institute, the Heritage Foundation, and the American Conservative Union—all supported by significant amounts of private oil money—abandoned their prior objections to private eminent domain authority and supported TransCanada’s efforts. Similarly, pipeline opponents embraced property rights agendas that were previously viewed as antithetical to effective environmental regulation.
Of particular interest on this front of the KXL struggle were the battles over eminent domain that raged in Texas and Nebraska. TransCanada began approaching Texan landowners along the original pipeline route shortly after submitting its 2008 permit application, but its efforts accelerated once the Gulf Coast project was split off in 2012. With ostensible common carrier status (gained through attestation), the company negotiated payments with hundreds of landowners and brought eminent domain actions against many who refused payment. By mid-2012, the company had sued over one hundred landowners, nearly 10% of all those in the pipeline’s path. Initially, pipeline opponents were emboldened by a legal challenge to a similar pipeline. In Texas Rice Land Partners, Ltd. v. Denbury Green Pipeline-Texas, the Texas Supreme Court held that merely registering as a common carrier was not sufficient to warrant the exercise of eminent domain authority; the state Railroad Commission, which regulated pipelines, had to exercise at least some review of the pipeline company’s applications. In response, the Commission proposed new regulations in 2014 that required significantly more documentation and proof to obtain common carrier status. However, this heightened review proved largely procedural, and TransCanada was easily able to succeed in its efforts to take private land.

In Bishop v. TransCanada Keystone Pipeline, L.P., the company survived several challenges from a landowner who alleged that TransCanada had coerced him into selling his land and that state agencies had violated his property rights in granting the company common carrier status; the landowner’s consent, though allegedly coerced, was deemed dispositive. A related battle over the company’s attempts to take land from rancher Julia Trigg Crawford inspired years of protests and significant media attention. Relying in part on the Denbury Green decision, Crawford fought against TransCanada’s condemnation action by alleging that the KXL did not fit the meaning of “public use” required for eminent

258. Id.
domain authority. Her argument relied in part on a theme often repeated by opponents of the company’s land seizures: TransCanada was a foreign corporation seizing state land merely for the purpose of exporting oil through the state, with no benefits to the Texas public that bore the burden of the pipeline project. The case was closely watched as a barometer of how easily TransCanada would be able to secure eminent domain. Ultimately, a state appeals court found that the state’s delegation of eminent domain authority was proper simply because “TransCanada . . . engages in the business of transporting crude petroleum in Texas by a pipeline . . . Therefore[,] . . . TransCanada is a common carrier.” The decision foreclosed any further legal challenges in the state.

While these struggles in Texas maintained resistance to the idea that the KXL was inevitable and served as focal points of movement activism, the land battle in Nebraska proved more significant to the ultimate rejection of TransCanada’s permit for the northern segment of the project. Nebraska’s deferential process for granting common carrier status and eminent domain authority, which originally resembled the process in Texas, came under attack after the initially proposed pipeline route raised concerns about damage to the Sand Hills and Ogallala Aquifer. In response to this outcry, the Governor called a special session of the legislature in 2011 to rewrite the state’s eminent domain laws. The resulting Major Oil Pipeline Siting Act required pipeline owners to apply to and receive approval from the Public Service Commission before construction, while a 2012 amendment, LB 1161, gave the Governor and the state Department of Environmental Quality (DEQ) additional powers of environmental review and ultimate decision-making power over whether to grant eminent domain authority. This legislative victory was largely attributable to the organizing drive of the citizen group, Bold Nebraska, which convinced many landowners to refuse negotiated payments with TransCanada; by 2014, over 100 had declined monetary offers from the company, representing a quarter of all property owners along the route. Nonetheless, the Governor used his new statutory authority to approve a revised pipeline route that avoided the Sand Hills.
Meanwhile, a group of landowners challenged LB1161 on the grounds that delegating the authority to determine common carrier status to the Governor and state DEQ violated the state constitution by insulating the decision-making process from judicial review. Although a district court agreed with this assessment in 2014, the case was dismissed by the Nebraska Supreme Court in January of 2015 thanks to a unique state rule requiring a supermajority for constitutional invalidation of legislation. Many of the same litigants immediately refiled, again narrowly focusing their claims on unconstitutional delegation of authority.

It is important to note how distant these legal efforts were from climate change, at least in framing and vocabulary; “global warming” and “climate change” do not appear in the pleadings or opinion, and following the litigants’ lead, the Nebraska Supreme Court noted that “[t]his appeal is not about the wisdom or necessity of constructing an oil pipeline but instead is limited to the issues of great public concern raised here: which entity has constitutional authority to determine a pipeline carrier’s route.” Nonetheless, the Nebraska lawsuits proved essential to the delay strategy of the climate movement. Citing the ongoing litigation in Thompson, the State Department suspended interagency comments on its new EIS from April of 2014 until February of 2015. After the district court’s ruling in favor of the landowners, White House spokesman Jay Carney explained that “action by a state court had an impact on the process itself” and that the “route itself may be in doubt because of a state Supreme Court decision.”

In its amicus brief to the Nebraska Supreme Court, TransCanada stressed the significance of the debate about the company’s common carrier status: “This appeal presents the opportunity for this Court to reestablish the legal certainty that had surrounded the regulation of interstate oil pipelines in Nebraska.” Nonetheless, on September 29, 2015, TransCanada decided to drop its eminent domain actions against Nebraska landowners, instead electing to go through the state Public Service Commission (PSC).
The precise, immediate result that the Thompson and Dunovan litigants had sought, and the company’s move was likely a response to both its poor chances in the Nebraska Supreme Court and its fear that a presidential rejection was imminent. Commenting on the decision, TransCanada’s CEO stated that “going through the PSC process is the clearest path to achieving route certainty for the Keystone XL Project in Nebraska.”

In summary, legal action on the constitutional rights of landowners and the proper delegation of eminent domain authority created an atmosphere of legal and political uncertainty that encouraged continued government inaction on the pipeline. While many of the landowners engaged in the anti-KXL effort may have been motivated in part by concern for the climate, this strategically successful litigation took place on the climate periphery, with government decision-makers commenting only indirectly on the value of the pipeline and not at all on the importance of global warming. While this shift in focus provided a welcome supplement to the more traditional environmental themes of climate resistance, it also introduced a note of the property rights ideology normally associated with anti-regulatory libertarianism—the mirror image of conservatives’ reversal on the issue of private eminent domain authority. Though effective in the short run, this shift in emphasis may only have deflected and delayed, rather than avoided, the environmental consequences of the pipeline.

E. Tribal Sovereignty and the Pipeline

Another front in the resistance to KXL came in native communities. In Alberta and elsewhere in Canada, tar sands extraction and transport, which have caused serious damage to native lands, have provoked confrontations between First Nations and the government, including suits against the company for failure to seek prior consultation. For brevity, this article will not address the important legal and non-legal efforts taking place there. South of the border, the pipeline route crossed lands belonging to the Oglala Sioux, Rosebud Sioux, Cheyenne River Sioux, and many other tribes from South Dakota through Nebraska and Oklahoma. Much of this land contained sensitive sacred sites and burial grounds, while Cushing, Oklahoma, the major refining hub and starting point of the Gulf Coast


281. See, e.g., Tar Sands and Indigenous Rights, INDIGENOUS ENVTL. NETWORK (2010), https://perma.cc/3GNJ-PC5B (stating that First Nations in Canada are taking the lead to stop tar sands development and that resistance is growing).

282. POLARIS INST., supra note 259, at 25.

283. Id. at 81.
pipeline, itself lies within the boundaries of the Sac and Fox Nations. TransCanada used two methods to avoid anticipated native resistance: first, the pipeline route was designed to avoid tribal lands, although this proved difficult; second, the company claimed that tribal input on pipeline siting was unnecessary—TransCanada’s Native American liaison announced that “[t]here is no legal obligation to work with the tribes”—and attempted to secure land for the pipeline route by approaching individual landowners rather than tribal governments. The response was a public outcry. The National Congress of American Indians formally opposed the KXL; the Pine Ridge Oglala Sioux banned TransCanada personnel from its reservation; and the president of the Rosebud Sioux declared that State Department permit approval would be tantamount to “an act of war against our people.” Numerous native encampments were established along the pipeline route, including one abutting Rosebud Sioux lands. Memorably, native activists joined with non-native landowners in the “Cowboy and Indian Alliance,” which staged protests along the pipeline route and in Washington, D.C. Tribes were also heavily involved in the EIS comment process. Later, in its NID Record of Decision, the State Department claimed to have contacted 84 tribes, 67 of which indicated that they wanted to have further consultations with the state or were undecided. Interestingly, the state claimed only to have discussed “cultural” issues with the tribes—not environmental or climate-change concerns.

In 2009, four tribes sued the State Department over its approval of the initial Keystone pipeline project. In addition to allegations of NEPA violations, the tribes claimed that they would suffer environmental and cultural injuries from the pipeline and that treaties with the United States government gave them power to independently vet the project. The United States District Court of South Dakota rejected all their claims.

285. Id.
286. Id.
287. Id.
288. POLARIS INST., supra note 259, at 81.
292. NID, supra note 162, at 5.
293. Id.
finding that the Presidential Permit was immune to judicial scrutiny and that, despite the tribes’ claim to the contrary, the federal government owed no trust duties to the plaintiffs regarding development on the land under consideration:

The proposed pipeline, although running, in part, through lands previously ceded to the United States will be located exclusively on land that was restored to the public domain. . . . Plaintiffs have not identified any treaty language that imposes, on the government, a specific duty regarding preservation of historic resources. 296

Legal action related to tribal sovereignty questions was not very successful in impeding TransCanada’s plans to build the pipeline across native lands, at least not in the United States. Much more important was organized direct action and media messaging against the KXL’s interference with tribal rights. This highly visible resistance, like other grassroots campaigns against the KXL, made pipeline approval a matter of controversy rather than of course and shifted the burden of persuasion onto pipeline opponents. As with other action on the periphery, these efforts, whether legal or not, helped both to buttress the climate goals of the anti-KXL movement and to draw attention to often ignored aspects of the global-warming crisis, including the unequal burden of fossil-fuel infrastructure development that indigenous populations bear and their lack of input on energy policymaking.

A sequel to tribal resistance to the KXL occurred with the Standing Rock Sioux’s 2016 campaign against the Dakota Access Pipeline (DAPL). Built by Energy Transfer Partners, the 570,000-barrel-capacity pipeline is intended to run crude oil from the Bakken fields of North Dakota to a transfer point in Illinois, where it could be shipped by rail to the East Coast or by pipeline to the Gulf Coast. 297 In July of 2016, the Standing Rock Sioux, who occupy a reservation in North Dakota, filed suit against the Army Corps for approving pipeline construction without negotiating with the tribe and despite alleged violations of NEPA, the Clean Water Act, and the National Historic Preservation Act. 298 The tribe’s specific grievances focused on the pipeline’s proposed route beneath the Missouri River, which could pose risks to both the reservation’s drinking water supply and to

296. Id.
several sites of historic and religious significance. When litigation did not immediately halt construction near the reservation, the tribe organized a large encampment along the pipeline route, blocking further work.

Throughout the fall, the Standing Rock confrontation turned into one of the largest Native American political mobilizations and the focal point of climate movement organizing. Thousands of people joined the protest encampment, leading to several violent encounters with police. The legacy of the KXL struggle was explicitly invoked, even as tribal sovereignty and water protection tended to take precedence over climate issues. As of the writing of this article, the tribe and its supporters had scored major political victories, first with the federal government’s suspension of construction below the Missouri River and then with the Army Corps of Engineers’s preliminary denial of Dakota Access’s easement to build there, which cited the uncertain risks and consequences of spills. However, the possibility that the Corps might ultimately approve the project after a new round of EISs, the company’s ability to seek alternative routes, and uncertainty over how the Trump Administration will handle the controversy make the ultimate outcome unclear.

What is clear is that the intersection between tribal sovereignty and the expansion of the fossil-fuel economy remains politically rife and that legal action on the climate periphery remains a key site of political conflict in the controversy. Beyond the regulatory battles over the Corps’s pipeline permit,

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300. Id.
304. Press Release, Dep’t of Justice, Joint Statement from the Dep’t of Justice, the Dep’t of the Army, and the Dep’t of the Interior Regarding Standing Rock Sioux Tribe v. U.S. Army Corps of Engineers (Sept. 9, 2016), https://perma.cc/M4VB-8CXD.
305. Memorandum from Jo-Ellen Darcy, Assistant Sec’y of the Army, U.S. Army Corps of Eng’rs to the Commander, U.S. Army Corps of Eng’rs 3 (Dec. 4, 2016), https://perma.cc/3226-ZASF. As in the KXL conflict, anti-DAPL activists took advantage of a special situation that gave a federal decision-maker authority over the future of an oil pipeline: the company’s request to build under waterways of the United States, within the jurisdiction of the Army Corps of Engineers. Id.
the criminal defense of protestors\textsuperscript{307} and civil rights litigation against state law enforcement officials\textsuperscript{308} have been important to sustaining the Standing Rock camp’s capacity to interfere with pipeline construction. Repeating the success of the KXL opposition (albeit on a much shorter time scale), the anti-DAPL resistance delayed pipeline progress long enough to provoke regulatory, scientific, and political uncertainty, achieving what direct environmental law challenges could not.

\textit{F. Reaction to Government and Corporation Collusion in the KXL Approval Process}

Peripheral action to prevent the KXL also targeted alleged improprieties in the State Department permit review process. Following a common practice among federal agencies, the State Department hired outside consultants to perform its EISs on the KXL.\textsuperscript{309} It quickly became clear that this process was dominated by TransCanada and by contractors with close ties to the fossil-fuel industry. Hillary Clinton, the Secretary of State at the time, had previously employed TransCanada’s main American lobbyist as a campaign staffer.\textsuperscript{310} TransCanada was allowed to manage the bidding process for the contract to write the first EIS, and it recommended and even paid the bill for the winning contractor, the environmental engineering firm Cardno Entrix.\textsuperscript{311} Cardno Entrix listed TransCanada as a “major client” and in the past had conducted environmental reviews for the company,\textsuperscript{312} but it failed to mention this relationship on its disclosure statement to the Department.\textsuperscript{313} Cardno Entrix was delegated the task of writing the initial EIS and conducted public hearings on the NID in 2011.\textsuperscript{314} During the public comment period on the initial DEIS, activists discovered that the Department had based its Cardno-written, global-warming findings—that the KXL would have no impact on climate change—on a single report by the consulting firm, EnSys Energy, which in the past had worked with the Koch brothers, ExxonMobil, and the American Petroleum

\textsuperscript{307}. See \textsc{WATER PROTECTOR LEGAL COLLECTIVE} (Dec. 11 2016), https://perma.cc/38GL-BTBD (providing legal assistance for those resisting the pipeline).
\textsuperscript{309}. \textsc{U.S. DEP’T OF STATE, DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED KEYSTONE XL PROJECT, APPENDIX U 1} (2010), https://perma.cc/N54W-SFGV.
\textsuperscript{310}. John M. Broder & Dan Frosch, \textit{Watchdog Clears State Department of Impropriety in Review of Pipeline Project}, \textsc{N.Y. TIMES} (Feb. 9, 2012), https://perma.cc/7Q9B-KHCN.
\textsuperscript{311}. Brown, supra note 222, at 527; \textsc{POLARIS INST.}, supra note 259, at 58.
\textsuperscript{312}. Broder & Frosch, supra note 310.
\textsuperscript{313}. Brown, supra note 222, at 527.
\textsuperscript{314}. \textit{Id.}
In response to revelations of these ties, a group of Democratic congress-people, led by Senator Bernie Sanders, asked the Office of the Inspector General to investigate. The resulting 2012 report found no conflicts of interest or improper influence, though these conclusions relied heavily on the fact that TransCanada had already withdrawn its permit application—meaning that TransCanada no longer had anything to gain from collusion. However, the report did recommend that the Department redesign its conflict of interest screening procedures. Nonetheless, the State Department’s findings on the pipeline’s climate-change effects were clearly influenced by TransCanada and other fossil-fuel players, demonstrating the extent to which government consideration of the KXL’s climate-change harms was determined by an industry-friendly attitude that considered expansion of infrastructure to be business as usual.

Litigation related to this collusion took the form of Freedom of Information Act requests, filed by Friends of the Earth, the Sierra Club, and others. Although the State Department replaced Cardno Entrix as a consultant during the second series of EISs, conflicts of interest persisted, including the fact that a member of the American Petroleum Institute wrote one of the EISs. Industry interference in environmental regulation is not new, and the corruption evident in the KXL review process forms part of the status quo in which approval of such projects is presumed. Even as direct challenges to the Department’s climate-change findings in the form of NEPA lawsuits were rejected, legal efforts that uncovered collusion in the environmental review process led to unwanted media attention and congressional rebukes of a normally unchallenged process, further dampening political enthusiasm for the project. This disruption of a normally frictionless procedure increased uncertainty about the pipeline’s benefits and forced decision-makers to continue grappling with the KXL’s global-warming consequences, even if only tangentially.

315. Id. at 521.
316. Id. at 527.
318. Id. at 4.
320. Six Years, Eight Months, Twenty Days..., supra note 319.
A final area of peripheral legal action concerned courtroom battles over the rights of anti-pipeline protesters. Direct action—civil disobedience taking the form of blockades, sit-ins, lockdowns, and other obstructive tactics—against the KXL was conducted on a massive, long-term scale and was likely the most important strategy for delaying State Department permit approval—not least because protesters represented a mostly young, liberal constituency that the Democratic administration was eager not to alienate. 322 There were two main loci of civil disobedience against the KXL: East Texas during construction of the Gulf Coast pipeline from 2012 to 2014 and Washington, D.C. from 2011 to 2015. 323 In East Texas, protesters, often organized under the Tar Sands Blockade umbrella coalition, staged a series of sit-ins, tree sits, and equipment lockdowns to delay and harass TransCanada construction crews. 324 Far from the KXL route, over 1,000 protesters were arrested in front of the White House over the course of two months after the State Department released its initial EIS that found no significant impact on global warming, 325 and protests continued in Washington throughout the conflict. 326 Actions also cropped up elsewhere in the country; in 2013, for example, the Tar Sands Blockade coordinated a nationwide Tar Sands Profiteers Week of Action featuring blockades, occupations, and sit-ins at the offices of KXL investors and beneficiaries like TD Bank, John Hancock, and Valero. 327

The primary contribution of lawyers on this front was the criminal defense of arrested demonstrators, which both made continued protest feasible and gave anti-KXL activists increased opportunities to share their climate concerns with the public and to build movement solidarity. 328 One case in particular is worth noting for its attempt to bring criminal law into the climate core. In 2013, Alec Johnson was arrested in Tushka, Oklahoma after locking himself to a TransCanada excavator along the Gulf Coast.

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324. POLARIS INST., supra note 259, at 78.
325. Guarino, supra note 156.
326. Goodell, supra note 153.
pipeline route.\textsuperscript{329} He attempted to bring a “climate necessity” defense, arguing that his trespassing violation was justified given the serious climate-change harms that would result from not breaking the law and allowing pipeline construction to proceed.\textsuperscript{330} The judge refused to allow Johnson to present the defense to the jury, however, as in the few other attempts to argue climate necessity, the effort itself garnered significant publicity and helped to dramatize the state’s role in furthering the pipeline.\textsuperscript{331}

TransCanada likewise used the courts to resolve protests over pipeline construction. In 2012, it brought a so-called SLAPP (strategic lawsuit against public participation) action in Wood County, Texas against several anti-pipeline organizers and groups, including Tar Sands Blockade and Rising Tide North America, seeking $5 million in damages for lost profits resulting from construction delays on the Gulf Coast project.\textsuperscript{332} The award (and likely the costs of litigation) would have been so great that some of the defendants would have had to sell their homes; in January of 2013, the activists agreed to refrain from further interference with the pipeline and from trespassing on its route in exchange for dismissal of the suit.\textsuperscript{333} This was not TransCanada’s only effort to shut down the pipeline resistance. The pipeline company and its contractor, Michels Corporation, hired large numbers of off-duty sheriffs and deputies to patrol the pipeline route in Texas, at one point posting lookouts outside the home of noted activist and litigant, Susan Crawford.\textsuperscript{334} TransCanada and the Federal Bureau of Investigation (FBI) also held several meetings at which TransCanada employees suggested possible criminal charges that could be brought against anti-pipeline activists.\textsuperscript{335} This strategy bore fruit in 2013, when protesters who had unfurled a banner covered in glitter at the Oklahoma
headquarters of TransCanada contractor, Devon Energy, were charged with a “terrorism hoax.”

In 2015, the FBI admitted to breaking its own rules in its tracking of anti-KXL protests, improperly coordinating with local law enforcement and using informants to spy on the movement. In internal documents, the FBI declared that “[t]he Keystone pipeline, as part of the oil and natural gas industry, is vital to the security and economy of the United States.” However, the agency failed to receive proper approval for its investigations from headquarters or its own lawyers and ended up closing the matter with no evidence of “extremist activity.”

While more of a reactive than an affirmative legal strategy, criminal defense of anti-pipeline protesters and legal attention to corporate and federal malfeasance helped to maintain the organizational strength of the resistance and to frame the KXL conflict as a decidedly political confrontation rather than as a scientific or administrative issue. This activity was peripheral in the sense that no resolution of climate-change issues was sought from a judicial or government decision-maker, although Alec Johnson’s attempted climate-necessity defense did seek acquittal based on an evaluation of global-warming consequences. Like the other action on the periphery discussed here, the main contribution of protest-related legal activity was to maintain an atmosphere of uncertainty around the pipeline and to send a message to the Obama Administration that action on the KXL (approval) would be met with aggressive resistance, whereas inaction (rejection) would pacify an important constituency. As with the debates over the pipeline’s security and economic benefits, the struggles over eminent domain and the focused attention on the State Department’s contracting practices, this pressure provoked overreaction from TransCanada and other pipeline supporters. The result was public discussion of the costs of fossil-fuel infrastructure—and a growing lists of excuses by which the President could justify denial of the KXL permit.

338. Id.
339. Id.
H. The National Interest Determination and the KXL’s Afterlife

1. The National Interest Determination: Credibility over Climate

In June of 2013, shortly after his second inauguration, President Obama gave a speech at Georgetown University in which he announced a newly robust climate policy, including a preview of the Clean Power Plan, and he indicated for the first time that the KXL might be rejected solely due to its effects on global warming: “[O]ur national interest will be served only if this project does not significantly exacerbate the problem of carbon pollution. The net effects of the pipeline’s impact on our climate will be absolutely critical to determining whether this project goes forward.” 340 These remarks were a rare admission that the KXL conflict was essentially about climate change. Even as the EPA continued to press the State Department to adjust its findings on the pipeline’s emissions effects—a June 2015 letter from the EPA Assistant Administrator stressed that “[t]he foundational fact from which all of the other analysis on Keystone XL proceeds is that oil sands crudes have significantly higher lifecycle greenhouse gas emissions than other crudes,” 341—the Department continued to resist pressure to condition pipeline approval on climate-change concerns. In April of 2014, referring to the pipeline’s effects on the environment and the national interest, a State Department spokesman insisted that it is “important to keep these issues separate.” 342 And in the final NID, climate was allowed in only through the guise of international bargaining power and the question of what other countries perceived the United States to be doing about global warming.

The NID’s assessments of the KXL’s climate effects were more qualified than the denials in the EISs. For example, the NID suggested that “the actual increase in GHG emissions attributable to the proposed Project depends on whether or how much approval and use of the pipeline would cause an increase in oil sands production.” 343 But, the Department withheld judgment on this crucial question, deciding that the market was too unpredictable to forecast price changes. 344 Instead, it reiterated its prior findings that the KXL was “unlikely to significantly impact the rate of

340. Obama, supra note 201.
343. NID, supra note 162, at 10.
344. Id. at 11.
extraction in the oil sands.” 345 The Department noted how important uncertainty was to its decision, finding that “uncertainty underlies a number of key variables critical to projecting Canadian production growth” and that “recent price drops highlight the uncertainty recognized in the Supplemental EIS of the long-term estimates.” 346 This uncertainty was one reason why the NID adopted what the EISs had termed a “No Action Alternative”—permit rejection. 347

While emphasizing that “[t]his is a critical time for action on climate change,” the Department disavowed any explicit concern for warming in its final, eminently pragmatic reason for rejection:

The decision to approve or deny a Presidential Permit for the proposed Project will be understood by many foreign governments and their citizens as a test of U.S. resolve to undertake significant and difficult decisions as part of a broader effort to address climate change. In the judgment of the Secretary of State, the general understanding of the international community is that a decision to approve the proposed Project would precipitate the extraction and increased consumption of GHG-intensive crude oil. 348

This emphasis on “understanding” and perception is tied closely to uncertainty about the pipeline’s emissions effects. Rather than basing its decision on the unclear environmental or economic effects of the pipeline, the State Department simply relied on what other people thought those effects would be. 349 In a press conference the day that the NID was released, the White House press secretary reiterated that the executive branch still had no official position on the KXL’s direct relationship to climate change:

The one significant impact we know that the project would have is in undermining the ability of the President of the United States and other senior U.S. officials who have enjoyed great success in going around the world and convincing other countries to follow the lead of the United States in making a significant commitment to fight climate change. 350

345. Id.
346. Id. at 11–12.
347. Id. at 21.
348. Id. at 30–31.
349. Id. at 28.
With the Paris climate negotiations around the corner, the decision was thus presented as a reasonable way to buttress the country’s diplomatic credibility. As the climate movement celebrated, the KXL was rejected—not as a threat to the global environment but as a threat to political standing.

2. Post-Rejection Legal Challenges

While the NID was widely acknowledged as the end of the KXL conflict, TransCanada has not yet ended efforts to build the pipeline as of the writing of this article. On January 6, 2016, the company sued the federal government, alleging that the President had interfered with congressional commerce authority by rejecting its permit application.351 This complaint was accompanied by a notice of intent to seek remedies under the North American Free Trade Agreement (NAFTA), alleging that denial of the permit constituted discrimination under NAFTA given prior approval of similar projects.352 Accurately describing the status quo at the time of the permit application and the State Department’s stated reasons for rejection, the company claimed that “there was nothing unusual about the proposed pipeline or the oil it was intended to carry”353 and that “the Administration concluded multiple times that the pipeline would have no significant impact on climate change. The Administration sought to explain [its] perverse decision by saying that the pipeline was perceived to be bad for the environment.”354 The day prior to these filings, the South Dakota Public Utilities Commission granted TransCanada construction permits for its proposed route through the state, ostensibly keeping administrative channels open should the next administration revive the project.355 This possibility remained in play as of the writing of this article, President Trump having made a campaign promise to revive the KXL despite several logistical obstacles.356

While success in these efforts seems unlikely given past judicial deference to the presidential permitting process, TransCanada’s factual allegations are significant for one main reason: their truth. Despite the State


353. Id. at 3.

354. Id. at 1 (emphasis omitted).


Department’s professions to the contrary, everyone understood the final decision on the pipeline to be determined by an assessment of its climate consequences. In retrospect, the many rounds of environmental review thus appear pointless because nothing in their conclusions could justify rejection of the pipeline. TransCanada’s claims center on the precise point that made the anti-KXL’s movement of delay and uncertainty-mongering so successful: the government killed a climate-unfavorable project without seriously confronting climate change.

CONCLUSION: THE RISKS AND REWARDS OF ACTION ON THE PERIPHERY

To review: climate legal action at the core, which seeks direct judicial action on the risks and dangers of global warming, has so far proven largely unsuccessful. The experience of the KXL resistance and its various legal fights suggests that action on the periphery—where issues related to fossil-fuel infrastructure take precedence over the direct effects of climate change—may be more helpful in securing political victories for the climate movement. Public environmental law strategies were not able to secure any rulings or decisions that the pipeline was bad for the climate, though they may have contributed to agency delay. Actions challenging TransCanada’s eminent domain authority and state grants of common carrier status, however, were effective in casting an air of legal uncertainty over the pipeline siting process. Legal work supplementing tribal resistance to the pipeline highlighted the bad distributive effects of the pipeline. Investigation of government-corporate collusion in the environmental review process contributed to the perception that permit approval would be a conflict of interest and contrary to the best climate science. Finally, criminal defense work helped to maintain movement opposition and to underscore the political consequences that would flow from permit approval. The State Department’s NID, in rejecting the pipeline for discretionary political reasons, reflected the success of a strategy that had cultivated uncertainty and encouraged the government to view KXL rejection as inaction against a stable status quo.

The extent to which such an approach to climate legal action is warranted outside the KXL context is debatable for two reasons. First, delay is as often harmful as it is useful for environmental and climate advocates. Second, it is still unclear just how beneficial rejection of the pipeline was to the effort to slow climate change with regards to the various

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357. See supra Part II.B.
standards of success. Certainly, the KXL conflict was a major success for the climate movement. As a cause with no obvious constituency, no easy targets, and an invisible physical process at its heart, the push to curb global warming has long struggled to maintain momentum and credibility. The KXL fight not only proved that the climate movement could win a long, difficult political battle, it also expanded the movement’s ranks dramatically, including among populations such as rural landowners who had previously been indifferent at best. The defeat of the KXL also had a dramatic effect on the “business as usual” of infrastructure development: never before had a major project targeted for its climate impact been defeated. Whatever the real effect of the pipeline’s rejection on crude supplies, the conflict has undermined the assumption that available fossil fuels will continue to be mined so long as they remain profitable.

The continued extraction and combustion of tar sands crude is, however, the most immediate problem in any evaluation of the KXL’s defeat. Thanks to TransCanada’s successful isolation and completion of the Gulf Coast pipeline, 700,000 barrels a day of crude may now be shipped from Cushing to southern refineries. As the NID made clear, plans are in place to develop pipelines to the Pacific to carry more Albertan crude. In total, proposed infrastructure in the Pacific Northwest would allow an additional 540,000 barrels per day of Canadian crude to be shipped by rail to Washington and Oregon, encouraging continued investment in tar sands extraction. Such rail imports began only in 2010, in the middle of the fight over the KXL; shipments reached 140,000 barrels per day in 2014 but have since declined. Crude shipments by rail—often termed “bomb trains” by activists—are notoriously dangerous, with much higher rates of spills, accidents, infrastructure breakdown, and greenhouse-gas emissions

358. See supra Part II.B.
359. Observers have credited the cancellation of several large fossil fuel infrastructure projects (including the Cherry Point coal export terminal in Washington, which was challenged by the Lummi Nation, and a Kinder Morgan gas pipeline to New England) to grass-roots activism, among other factors, and have noted the influence of the anti-KXL effort on these campaigns. Amy Harder & Erin Allworth, Fossil Fuels’ Unpopularity Leaves a Mark, WALL STREET J. (June 2, 2016), https://perma.cc/HH67-AZFV.
360. Scott Hagget & Nina Williams, TransCanada Activates Gulf Coast Project Pipeline, Delivering Crude Oil from Oklahoma to Texas, HUFFINGTON POST (Jan. 22, 2014), https://perma.cc/K3X4-HKVX.
361. See NID, supra note 162, at 12 (stating that some companies indicated that they plan to move forward with projects under construction).
The 2013 oil train explosion in Lac-Mégantic, Québec, which killed 47 people, is emblematic of the dangers represented by the 50-fold increase in oil train volume since 2008. However, it remains unclear just how much Canadian crude will be imported into the United States in the absence of the KXL. After $200 billion of investment in the Alberta oil fields over 15 years, an extended depression in global oil prices (benchmark crude oil dropped from $98.23 a barrel in January of 2014 to $38.24 per barrel in August of 2015 and has since recovered somewhat) has hit the province and its industry hard, resulting in layoffs and economic uncertainty. Given the massive investment required for the heavy machinery that extracts tar sands and the resulting multi-decade investment cycle, companies have continued to expand infrastructure and drilling in order to grow their operations, even as these operations post large losses. Whatever the global crude market, then, tar sands oil continues to be extracted for export.

In order to move this oil to market, pipeline operator, Enbridge, has undertaken a cross-border pipeline project that would in many ways replicate the purpose and capacity of the KXL. The so-called Alberta Clipper project was first proposed in 2007 and was initially intended to ship 450,000 barrels per day of tar sands crude across the border, with an ultimate destination of Cushing. The pipeline quickly received a presidential permit with little public reaction, and a Sierra Club NEPA challenge failed based on the District of Minnesota’s conclusion that the pipeline would not increase tar sands production or cause greater emissions. Opponents maintained, however, that the Clipper was always intended to carry a greater quantity of oil, and shortly after the initial project became operational, Enbridge secured a permit from the Canadian government to increase its capacity to 800,000 barrels per day. In light of the KXL controversy, Enbridge decided not to seek an additional presidential permit for the new capacity in the United States, instead deciding to channel the oil through Line 3, a smaller cross-border pipeline

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365. Id.
366. NID, supra note 162, at 12.
367. Austen, supra note 197.
368. Id.
371. Marcetic, supra note 369.
that had received State Department approval in 1968. A lawsuit by the native White Earth Nation and environmental groups challenged the Department’s cursory NEPA review, but their motion for summary judgment was denied on the same basis as prior challenges to Department pipeline approvals—presidential permits are immune from judicial review—and because the decision not to require a new permit was within the Department’s discretion. Although there has been some activist attention on the Clipper, this pipeline, in conjunction with other Enbridge projects, could allow twice the amount of crude that the KXL would have carried to flow from Alberta to the Gulf by 2017, with nowhere near the amount of resistance faced by TransCanada.

As suggested by the NID, and in light of these ongoing industry efforts, much remains undecided about the future infrastructure development, profitability, and political profile of the Alberta tar sands and other oil fields, making predictions about final greenhouse-gas emissions difficult. It is simply too early to tell whether the KXL defeat will have a net-positive effect on curbing global warming or whether, as the State Department consistently maintained, the oil that would have traveled through the KXL will be burned regardless—or even whether a shift from pipelines to crude will cause greater environmental harms.

Another remaining question from the KXL conflict is whether the diverse coalition of anti-pipeline activists can be organized for future climate struggles. Many of the most important groups in the resistance, like property rights activists, may not find a place in future campaigns for government action on climate. This risk is linked to the nature of action on the periphery; by focusing conflict away from the central issue of global warming, global warming became obscured and may lack motivating force in future fights. Relatedly, with regards to legal action, the KXL conflict produced no significant precedent that climate lawyers might use going forward. If anything, the outcome of anti-pipeline NEPA challenges solidified the judicial trend to accept agency arguments that no individual project can have much impact on global warming on its own.

As discussed above, the Standing Rock resistance to the Dakota Access Pipeline—which would run Bakken oil from North Dakota, rather than tar

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373. Marcetic, supra note 369.
375. Marcetic, supra note 369.
sands oil from Alberta—suggests that the anti-KXL coalition has in fact remained strong enough to block further infrastructure projects.\textsuperscript{376} Standing Rock’s climate-peripheral focus on Native American rights and clean water underscores the importance of non-core strategies in combating fossil-fuel development, and the successful use of delay once again shows that the creation of uncertainty may be crucial to achieving political success.

Whatever the scattershot approach of peripheral action might lack in terms of identifiable, substantive tools for the next engagement, it makes up for in its disruption of conventional wisdom regarding the nature, causes, and consequences of global warming. One upshot of this disruption has been emphasized: the KXL resistance drew attention to the widespread abuse of eminent domain authority by infrastructure owners, the unequal burden of environmental risks borne by indigenous communities, the whitewashing of agency environmental reviews by corporate contractors, and many other issues not normally defined under the rubric of climate change. What the NID separated into distinct categories—environment, culture, energy security, and foreign policy\textsuperscript{377}—the KXL resistance brought together in one campaign.

This article has so far referred to these disparate fields of struggle as the “periphery.” But, in keeping with the spirit of the anti-KXL movement, it is perhaps more appropriate to deny the core–periphery distinction altogether or, at least, to stress the distinction’s artificial character and to seek paths beyond it. After all, in considering the full social consequences of climate change, there is no obvious reason to place greater emphasis on a “core” issue like nationwide, stationary-source, greenhouse-gas emission standards than on a “peripheral” issue like state delegation of eminent domain authority. Working through the structure of laws that implicate global warming, climate legal advocates should not allow that structure to channel their efforts into the existing remedies of environmental law.

This resistance to core–periphery thinking is especially appropriate in the context of climate change. Many scholars have noted that the diffuse, temporally extended, and unpredictable nature of climate change poses special problems to legal and political thought;\textsuperscript{378} as this article has tried to demonstrate, these difficulties are especially pronounced in legal practice. Awareness of the multifarious legal implications of global warming and the

\textsuperscript{376} See supra Part II.E.
\textsuperscript{377} NID, supra note 162, at 5.
\textsuperscript{378} JEDEDIAH PURDY, AFTER NATURE: A POLITICS FOR THE ANTHROPOCENE 251 (2015) ("Both the attempt and the failure [to use environmentalist tropes to address global warming] reinforce the thought that climate change ties deed and result together by threads that are too numerous, long, tangled, and obscure to fit familiar ideas of victim, harm, and responsibility that have been central to the ecological era of environmental lawmaking.").
fossil-fuel economy might lead to legal resistance that more closely resembles the very phenomenon it responds to—disparate, difficult to predict, and defiant of categorization. As the anti-KXL movement demonstrates, this new disposition of climate legal action should seek to remake, rather than accept, the background against which it operates. In a word, it should disrupt.
DIRECTOR DUTY OF CARE IN CHINA AND THE UNITED STATES: WHAT LIABILITY FOR CLIMATE CHANGE?

By Carissa Wong*

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INTRODUCTION

For the last half century, the Anglo-American model of corporate law has been vaunted as the most appropriate model for developing the global economy. Economic development, its proponents argued, would bring greater security and improve overall human wellbeing. Corporations are now the dominant form to organize the production of goods and services in the world in terms of revenue, many having revenues larger than nation-states. Despite the lofty aspirations for the role of corporations and economic development in improving human wellbeing, the “asocial corporation,” geared solely at augmenting shareholder value, has become pervasive. In the wake of the 2008 financial crisis, the Organization for Economic Cooperation and Development (OECD) developed a set of recommendations to improve corporate governance practices, covering remuneration, risk management, and board practices. All of these recommendations bring into question the fiduciary duty of corporate directors.

During the same time period, global ecological change—including climate change—has accelerated. Humans are interfering with the climate, and “it is extremely likely that human influence has been the dominant cause of the observed warming since the mid-20th century.” Today, economic activity across all sectors contributes to greenhouse gas emissions. In light of these developments, how does liability under the corporate director duty of care in the two largest national economies, the United States and China, compare in addressing greenhouse gas pollution? This article argues that, despite divergent history and culture as well as

5. See generally UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT: CORPORATE GOVERNANCE IN THE WAKE OF THE FINANCIAL CRISIS (2010) (detailing the recommendations that the UN created after the financial crisis).
contrasting approaches to many corporate issues, the different laws in
China and the United States pose insignificant, functional differences in the
duty of care regarding director liability for climate change. To those
striving for social change, this functional similarity suggests that the
historical and cultural differences between the United States and China do
not affect the potential for legal action on climate change. Instead, it creates
more similar, homogenous opportunities for challenges among distinct
nations. Particularly, this article looks at increasing the equity and
effectiveness of public participation in climate governance. Such an
increase would exploit solidarity and commonalities that individuals in the
globalized, modern-industrialized economies face in making personal
decisions that affect carbon emissions in their daily lives. Through value-
based organizations (VBOs), such as climate “eco-teams” that include
participants from both jurisdictions, individuals may connect, share their
progress and challenges, and broaden their engagement with others in
facing the necessary but difficult changes to the status quo.

I. HISTORICAL DEVELOPMENTS: COMPARING WESTERN AND CHINESE
CIVIL LAW

A. The Power of the Individual Versus Power of the State

The Western legal tradition of civil law originated from Roman law.
Roman law arose in the 4th Century B.C.E., and it focused on resolving
conflicts between private individuals (e.g. tort, simple contract, or
succession). At the time, populations were small, isolated, and
predominantly agricultural, and the government did not exercise strong
control over local affairs. Due to this lack of control, basic Roman law, or
civil law, approached society from the viewpoint of individuals. As a
result, Western civil law is concerned at its core with the notion of a
person’s individual rights. In contrast, “by the time the legal system was
formalized” in China, society was organized around a central government
“headed by an absolute ruler.”

The primary objective of every Chinese person was “to fulfill the duties assigned him by the emperor.”

9. Id. at 11–12.
10. Id. at 12.
11. Id.
12. Id.
13. Id. at 13.
the performance of duties, rather than on the activities of ordinary people’s private lives. Law was not concerned with the contracts, property, or succession that did not involve the emperor. Indeed, Chinese law dealt with subjects as opposed to the individual rights of citizens. As it arose, the Chinese code was analogous to the Western notion of a penal code that dealt exclusively with enforcement and criminal sanctions for breaches in the performance of duties assigned by the emperor. In China, private law was historically excluded from the notion of law. Instead, Chinese law was built around privileging and legitimizing the power of the state. Disputes at an individual level were resolved by mediators, village communities, and guilds but were distinct from the legal system. In addition, the distinction between public and private law is different in the West and China. The only law that existed in China was administrative and public; however, it dealt with matters that, in Western law, would be understood as private.

Traditionally in China, the law did not address the production and sale of goods and services. Any commercial breach related to the quality of goods, for example, was the purview of non-legal institutions, such as village mediation; thus, there was no commercial law per se. In contrast, Western civil law did cover commercial breaches related to the production and sale of goods.

B. Common Core Analysis

Although the categories in Western law are not directly analogous with their Chinese counterparts, applying a common core analysis reveals that a degree of functional similarities exist between the Chinese and Western civil systems. Prior to the 20th century, the black-letter law belied the actual functional similarities between Western and Chinese law. Still, in Western civil law, the balance of power is given to the individual, whereas

14. Id.
15. Id.
16. Id. at 14.
17. Id. at 12–13.
19. Id.
21. Id. at 14.
22. Id. at 13–14.
23. Id. at 13.
24. Id.
25. MATTEI ET AL., supra note 18, at 95.
in China it remains with the State. However, a corporate director’s duty of care is similar in both jurisdictions. This functional similarity creates shared opportunities for public participation in climate governance in both China and the Western world.

II. ORIGINS AND FOUNDATIONS OF AMERICAN AND CHINESE CORPORATE LAW

A. Company Law

As China developed its legal system under the communist regime and opened its economy to the West in the late 1970s, its corporate law began to reflect the spirit and the letter of Anglo-American corporate law. Although modern Chinese corporate law, which began in 1904, consists of transplanted Western corporate law and had little impact on Chinese economic and industrial organization, today, there is much greater confluence. The dominant model of corporate law in both countries authorizes director agency, where the right to run corporations is severed from ownership. Today, the controlling law in China is the 2005 Company Law. In contrast, the Delaware General Corporation Law is the leading corporate law in the United States. Today in China and the United States, corporations share the following characteristics: (1) independent legal personality, (2) formation by the controlling domestic law, and (3) creation with the goal of monetary profit. Additionally, they both share the benefits of incorporation, including the limited liability of shareholders and directors as well as creating capital through an initial public offering of stock. Still, differences between the countries persist based on historical

29. Id. at 1603.
33. Id. at 74, 254.
and cultural influences. These differences may play out in assigning liability for climate change damage, but it has yet to be tested. Particularly, China’s collectivist orientation of corporations lead to the strong presence of State-owned enterprises, and the mandatory nature of directorship creates a potentially stronger avenue for climate-change litigation.34 In contrast, avenues for climate-change litigation remain limited in the United States based on recent jurisprudence from the Supreme Court.35 Despite this difference, however, the implementation of laws in China remains a critical challenge.36

B. Individualism and Collectivism

As noted, the common law of the United States is based on the Western legal tradition with its primary focus on individual rights, but its distinctions between private and public law are similar to those of continental Europe.37 In the modern United States legal system, the contract is the paradigmatic form of private law ordering.38 Thus, corporate law is formed around the notion of voluntary contract, where a group of citizens voluntarily form and invest in a corporation.39 As a form of contract, corporate law leaves the arena of inherent social responsibilities vacant. In addition, in the United States, corporate law is distinctly state-driven rather than federal.40 “Each state has the right to promulgate its own corporate law,”41 which reflects again the greater emphasis on the individualized and contract-based notion of corporate law. Additionally, there are a few permanent, federally-owned corporations in the United States, however, the majority of federally-owned corporations are designed to eventually become private firms.42

By contrast, traditional law in China does not address contracts,43 and the “family [is] the ideological paradigm of traditional Chinese private

34. Id. at 38.
38. Ruskola, supra note 28, at 1608.
39. Id.
40. MINKANG, supra note 32, at 15.
41. Id.
42. See generally KEVIN R. KOSAR, CONG. RESEARCH SERV., RL30365, FEDERAL GOVERNMENT CORPORATIONS: AN OVERVIEW (2011) (showing the existence of federally-owned state corporations of temporary nature).
43. Jones, supra note 8, at 13.
In China, members of a clan stayed together “not merely out of affection [for one another], but . . . to accumulate capital and pursue profit more effectively.” 44 In late Imperial China, many clans were commercial enterprises structured around the “idiom of family.” 45 Indeed, through marriage, adoption, and a strict observance of Confucian relations, which imputed that everyone share an “interest in the family’s well-being as a whole,” the ideology of kinship was often a legal fiction serving to justify and hide inequity among members of the corporation. 46 Still, under the legal philosophy of Confucianism, one’s role in the corporation was clan-based. 47 Further, this role in the family and society at large was not voluntary but highly structured and prescribed. 48

“Fiduciary duty [in] Chinese family law was customary, rather than statutory,” 49 where the family created a simple model for joint-ownership of property and the cultivation of financial capital through the ancestral trust. 50 According to Confucianism, father and son are a “continuum of the same personality,” and without a son, a man lacked testimonial property. 51 Thus, sons were often adopted to marry daughters upon maturity. 52 Marriage was also the single most common means of recruiting female labor into clan corporations. 53 Thus, the clan corporation was the tradition of corporate law for most of Chinese history. “The Chinese view of kinship groups and the larger sociopolitical communities as interpenetrating extended families meant that the entire clan corporation owed fiduciary obligations to other groups as well and even to the empire as a whole.” 54 This understanding of a greater duty to society creates a foundation for a potentially more inclusive corporate duty of care than exists in the American legal tradition. The significance of this will be elaborated further in a closer look at the concept of legal personality.

44. Ruskola, supra note 28, at 1608.
45. Id. at 1605.
46. Id.
47. Id. at 1607.
48. Id.
49. Id. at 1636.
50. Id. at 1628.
51. Id. at 1630.
52. Id. at 1627–28.
53. Id. at 1640.
54. Id. at 1641–42.
55. Id. at 1608.
1. Legal Personality Versus Legal Representation

Following the “Confucian view, the [family] collective was morally prior to the individual.” 56 Thus, the clan corporation took the legal status of a collective, not an individual. 57 In addition, “traditional Chinese law did not have a concept of legal personality,” and the notion of a legal person, faren, “is a by-product of the adoption of the Western commodity economy.” 58 This contrasts with the Western legal tradition, where the individual is paramount and creating individual legal personality for a corporation ensured consistency with liberal individualism. 59 For Chinese corporate law, however, the question of corporate legal personality did not arise until interactions with Western corporate law. 60

The family-oriented tradition manifests itself in modern company law, under the Communist regime in China, through the presence and importance of State-owned enterprises (SOEs). “While traditional Chinese law tend[s] to analogize everything to the family in order to promote—or impose—social and political harmony,” today, under the Marxist-Leninist-Maoist epistemology, “the people” are the collective entity. 61 As such, the “only Communist ‘corporation’ is the State, managed by the Party,” which holds a fiduciary relationship with the people who are all owners of the corporation. 62 Even though state-owned enterprises operate as corporations with distinct legal personality, in reality, they have difficulty gaining true independence from the administrative bureaucracy of the state. 63

The internal governance of SOEs in China function, purportedly, much like a family. Rather than create corporate legal personality, Chinese law authorizes a natural person, usually the chairman of the board, to be the legal representative of a corporation who may bind the company. 64 In SOEs, the State appoints the legal representative. 65 Thus, in order to maintain his/her position, the legal representative is ultimately responsible to the State supervisors, not the economic or financial priorities of the company. 66 This reflects the fact that the notion of a legal representative of

56. Id. at 1606.
57. Id. at 1616–18.
58. Id. at 1616.
59. Id. at 1652.
60. Id.
61. Id. at 1693.
62. Id.
63. Id.
64. MINKANG, supra note 32, at 199.
65. Id.
66. Id. at 199–200, 202.
an SOE arose in China at the same time as the planned economy. This State-supervisor relationship also creates a tension that does not exist in Western corporate law between a legal representative’s loyalty to the shareholders’ financial needs and the State supervisor’s non-market objectives. In contrast, following the individualistic tradition, American corporations are an aggregate of individuals in a contractual nexus. Further, the owners of an American company are the shareholders, whose financial interests are the company’s primary concern.

In addition, under Chinese Company Law, the legal representatives of SOEs are usually appointed by the government organ in charge and are responsible to this organ. In SOEs, the legal representative has almost absolute power over the enterprise. SOEs fulfil the mandatory plans of the government rather than follow the market rules or serve their own financial interests as private companies do. By giving the State authority to determine the corporate legal identity of SOEs, the law creates a body of directors that is not bound by pure fiscal and financial goals the way that private companies are. This creates an arena in which directors of SOEs are held responsible for mandates outside of pure economic interests. Theoretically, these mandates could include reductions in pollution and greenhouse gas emissions. Thus, in modern SOEs, under the guise of family affection, traditional kinship metaphors and family rhetoric still permit subordination of economic priorities and of overall possible environmental consideration.

2. Duty of Directors: Voluntary Versus Mandatory Agency

Both European common and civil law recognize directors as agents of a company, through whom the artificial personhood of a company can act. In contrast to the mandatory theory of continental jurisdictions, the common law system of the United States relies more on a pure agent or trust theory. The trust theory helps to fully explain the duty of loyalty and to avoid conflicts of interest, while the agent theory helps explain why a

67. Id. at 199.
68. Ruskola, supra note 28, at 1694.
70. MINKANG, supra note 32, at 205.
71. Id. at 206.
72. Id.
73. Ruskola, supra note 28, at 1711.
74. MINKANG, supra note 32, at 177.
75. Id. at 180.
board of directors must act on behalf of its company rather than for itself. Additionally, everyone from the chairman to the lowest-ranking employee agrees to take his/her position in the corporation voluntarily, with no obligation to a higher society structure.\textsuperscript{76} 

In contrast, China’s model is closer to the civil-law system in continental Europe.\textsuperscript{77} China adopts the civil-law approach of Japan and Taiwan, and applies the principle of agency “to explain the director’s position in a company.”\textsuperscript{78} The agent theory, however, is understood as establishing a mandatory relationship in which a person, upon appointment by supporters at an inaugural meeting, promises to be the director and to manage the affairs of the company.\textsuperscript{79} The obligatory relationship resembles the non-profit tradition, where the director legally takes the position without requiring a fee or authorization of the managed person (similar to the status of parents as legal agents of their children).\textsuperscript{80} 

The mandatory relationship of a director in China may create a greater sense of responsibility in the care of a company and its role in society with regard to greenhouse gas emissions. If the duty of care is owed to the greater society, the legal structure of mandatory directorship may create greater impetus for mandatory action on climate-change mitigation than under the American agent theory. The trust model of agency in the United States would provide a sense of responsibility that is not as great as that in a relationship of mandatory nature.

3. Honesty: A Feature of Chinese Corporate Law

Article 148 of China’s 2005 Company Law requires directors to be honest in exercising their duties.\textsuperscript{81} This is a passive duty where one need not volunteer information, unlike the fiduciary duty found in United States law.\textsuperscript{82} The fiduciary duty in United States law is a higher standard because the director must not wait to be confronted, for example, about potential conflicts of interest, but must declare these up front.\textsuperscript{83} Due to the director’s fiduciary duty to the larger community fabric, however, the duty of a director to be honest in China may be greater in scope than that of American corporate law.

\begin{itemize}
\item \textsuperscript{76} Ruskola, supra note 28, at 1608.
\item \textsuperscript{77} MINKANG, supra note 32, at 180.
\item \textsuperscript{78} Id. at 179.
\item \textsuperscript{79} Id.
\item \textsuperscript{80} Id.
\item \textsuperscript{81} Id. at 180.
\item \textsuperscript{82} Ruskola, supra note 28, at 1608.
\item \textsuperscript{83} MINKANG, supra note 32, at 180.
\end{itemize}
In China, “the secularization of Zen Buddhism and Taoism combined with Confucianism in the 16th and 18th centuries” spawned “a culture of diligence, honesty, and charity among businessmen” who realized their social significance by contributing to society. Further, with the legitimacy of business based on the ideology of kinship, businesses possessed inherent social responsibilities. These extended to not only family members but also to the broader social community and the State (political family). The fiduciary-duty statement in the Chinese Company Law suggests that “corporate officers owe a fiduciary duty to manage the corporation not only in the interests of the owners but also other constituencies.” In particular, directors owe their duties to the State, shareholders, employees, creditors, and communities. Article 148 of the 2005 Company Law states that directors owe duties to the company and shareholders. But many “Chinese scholars argue that directors may owe duties to other subjects.” “This broad scope of responsibilities” resembles the main premise of modern Corporate Social Responsibility (CSR), that “corporations [must] be accountable not only to shareholders but also [to all] stakeholders” in the local community.

In Article 5 of the new Company Law, China legislated for the first time that companies shall undertake social responsibility. This builds on the 1993 Company Law of China, which does not use the term corporate social responsibility, although Article 14(1) states that “a company engaging in business operations must abide by the law and uphold professional ethics and strengthen the construction of the socialist spiritual enlightenment under the supervision of the government and the public.” Thus, even before 2005, Article 14 of the 1993 Company Law provided that “companies should go beyond” mere legal compliance, as is commonly required in definitions of CSR. Additionally, this article requires public supervision, which may include supervision by consumers, community members, and other stakeholders. Thus, Chinese CSR, which aligns with greater director duty of care concerning greenhouse gas emissions, has

84. Lin, supra note 36, at 85.
85. Id.
86. Id.
87. Ruskola, supra note 28, at 1692.
88. MINKANG, supra note 32, at 188–92.
89. Id. at 188.
90. Id.
91. Lin, supra note 36, at 85.
92. MINKANG, supra note 32, at 192.
93. Id.
94. Lin, supra note 36, at 69.
95. Id.
foundations in the orientation toward the family and particular geographic community from which businesses arose.

Additionally, in January of 2008, the State-owned Assets Supervision and Administration Commission of the State Council (SASAC) published the Guide Opinion on the Social Responsibility Implementation for State-owned Enterprises Controlled by the Central Government. Prior to this, the legal effects of the CSR language, whether binding or simply advisory, were often unclear. For example, some scholars view Article 5 of the 2005 Company Law mandate that companies “shall undertake social responsibility” as “exhortatory rather than mandatory,” while others “interpret it as a component of fiduciary duties under company law.” Now, the 2008 Guide is an “important legal document explaining the Chinese central government’s attitude toward CSR.” It includes fundamental principles for implementing CSR, such as complying with the law honestly when conducting business, upgrading resource efficiency, protecting the environment, and actively engaging in charity. Importantly, this interpretative guide creates an understanding that the SOE director’s duty of care includes the environment and greater community.

Overall, the contrasting approaches to legal personality and representation, voluntary and mandatory agency, and the feature of “honesty” make the foundations of Chinese and American corporate law very distinct while still gradually more convergent since the 1970s through statute.

III. CORPORATE LAW INTERACTIONS WITH TORT LAW IN THE UNITED STATES AND CHINA

A. Director Duty of Care

In the United States, the director duty of care is essentially a tort law concept. The plausible theories of liability in climate-related claims include: negligence, product liability, nuisance, and public nuisance. Followed in most United States jurisdictions, the director duty of care states that a

96. Id. at 72.
97. Id. at 96.
98. Id.
99. Id. at 72.
100. Id. at 73.
“director owes a duty to his or her company to exercise proper care in managing the corporation’s affairs.” 102 In United States tort law,

[t]he word “duty” is used . . . to denote the fact that the actor is required to conduct [her/his]elf in a particular manner at the risk that if s/he does not do so s/he becomes subject to liability to another to whom the duty is owed for any injury sustained by such other, of which that actor’s conduct is a legal cause. 103

In negligence cases, the defendant owes a duty to “act reasonably under the circumstances (i.e. not to create unreasonable risk[s] [of harm]), and that duty is owed to those who are foreseeably at risk from the defendant’s behavior.” 104 To meet the duty of care requirements, the defendant’s action must not be negligent in and of itself, or alternatively, the plaintiff must not be in the zone of foreseeable risk. 105 Thus, to prove negligence in meeting this duty of care, the plaintiff must show that the defendant acted unreasonably based on an objective standard and a suite of factors. 106

In addition, under United States tort law, the burden of proof is on the plaintiff rather than on the defendant. 107 The breach of duty for public nuisance is easier to prove than negligence. Under “nuisance, the obligation is not to interfere unreasonably or knowingly with the use and enjoyment of another’s property.” 108 For public nuisance, the obligation “is not to contribute unreasonably or knowingly to an interference with the public’s resources.” 109 Reasonableness is determined in terms of risk-utility and cost-benefit through an analysis of public conduct and the foreseeable harms. 110 Unreasonableness is thus demonstrated, not by an objective standard, but in terms of whether the defendant had knowledge that his/her actions would contribute to public nuisance—such as climate change. 111 Here, a plaintiff need only prove intentional activity (e.g. pollution) leading to nuisance (e.g. interference with enjoyment of property). Thus, public nuisance offers a lower burden of proof for climate change litigants to overcome than negligence.

102. MINKANG, supra note 32, at 183.
103. Restatement (Second) of Torts § 4 (1965); Hunter & Salzman, supra note 101, at 1745.
104. Hunter & Salzman, supra note 101, at 1746.
105. Id. at 1747.
106. Id. at 1746.
107. See, e.g., State v. Tippetts-Abbett-McCarthy-Stratton, 527 A.2d 688, 691–92 (Conn. 1987) (stating that the plaintiff has the burden of proof in a nuisance action).
109. Id.
110. Id.
111. Id. at 1792.
As a result, several climate change public nuisance cases have been brought against corporations in the United States, but with little success. In *Connecticut v. American Electric Power*, the city of New York filed a suit against five large fossil-fuel-burning utilities, but the claim was dismissed as a “nonjusticiable” political question. As long as the Environmental Protection Agency has authority to regulate greenhouse gas emissions, the federal court does not have jurisdiction to decide common law public-nuisance, climate-change claims. In *Comer v. Murphy Oil*, Ned Comer and thirteen other individuals harmed by Hurricane Katrina filed nuisance claims against 31 oil companies and four chemical companies in 2006. Ultimately, the United States Supreme Court refused to grant the plaintiffs standing on such nonjusticiable political claims. Finally, in *California v. General Motors Corp.*, the California Attorney General charged General Motors and five other major automobile manufacturers with public nuisance. Relying on the District Court’s 2005 *Connecticut v. American Electric Power* decision, the District Court of Northern California dismissed the plaintiff’s claim for lack of jurisdiction, finding that the balancing of competing interests of reducing global warming emissions and advancing the interests of economic and industrial development is a “policy determination to be made by the political branches.” Thus, for different reasons, both common law public-nuisance claims and state-statute-based public nuisance claims failed to raise justiciable issues. These cases demonstrate the difficulty of successfully winning climate-change suits against corporations under current United States tort law.

In China, the duty of care is also a tort-law concept. The 2005 Company Law does not articulate a specific duty of care, even though Article 148 mentions the term “duty of loyalty and diligence to the company.” However, Article 106 of the 1986 General Principles of Civil Law in China addresses a breach of duty of care. In particular, Article 150 provides that if directors violate laws, administrative rules and regulations, or the corporate articles of association in performing their

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113. *Id.* at 267.
118. *Id.* at *12.
120. *Id.*
duties, thus causing damage to the company, they shall be liable to pay compensation for this damage.\footnote{Id.} Thus, in situations where the director is at fault and the company is successfully sued, the owners of the company may collect compensation directly from the director.\footnote{Id. at 186.} In practice, however, courts have not held directors who have violated the rules and articles of association personally liable.\footnote{Id. at 185.} Further, under the 1986 General Principles of Civil Law, a director in China is free from any personal or company tort liability caused by his or her negligence as long as he or she does not breach the duties imposed by the Company Law, administrative law, or the company’s articles of association.\footnote{Id.} This is demonstrated in the case of Jin Hua Department Store Joint Stock Company, in which the chairman of the board of directors breached his responsibility to the company by arbitrarily offering a very large capital guarantee in the company’s name for another party’s debts.\footnote{Id. at 185–86.} Although the chairman was held personally liable and faced several years in prison, directors under the authority of the chairman were not held liable.\footnote{Id. at 186.} Thus, under the General Principles of Civil Law, director duty of care is also a difficult cause to litigate.

B. New Climate Change Liability in China?

In 2010, China revised its tort law to clarify obligations under the General Principles of Civil Law. The revision is one step closer to China’s realization of a civil code, following the enactment of the 1999 Contract Law and 2007 Real Property Law, which guarantee broader protections for personal and property rights of citizens in China.\footnote{See Jones, supra note 8, at 357–59 (explaining the German model of the “General Part” civil code, a non-ideological pандectic code, with a focus on “individual responsibility”).} Following the German model of Allgemeiner Teil zum BGB, Article 124 of the 1986 General Principles of Civil Law in China created general civil liability for environmental pollution.\footnote{Barbara Pozzo & Lebing Wang, Liability for Environmental Pollution with the Framework of the New Chinese Tort Law, 19 EUR. REV. PRIV. L. 87, 87 (2011).} Building on this, China’s 2010 Tort Law of the People’s Republic of China creates strict, no-fault liability, reverses the burden of proof, and creates a cause similar to private nuisance for environmental injury.
Currently, the interpretation of the 2010 Tort Law in the context of environmental torts is under deliberation. If pollutants include greenhouse gases, this would create a stronger cause of action in litigation than what exists in basic United States tort law, which thus far in climate-change suits has focused on negligence and public nuisance. The American Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) creates a strict-liability regime for hazardous pollutants that is similar to that of China’s new Tort Law. CERCLA, however, does not apply to greenhouse gases because they are not currently defined as hazardous.

1. Strict Liability and Reverse Burden of Proof

The 2010 Tort Law of the People’s Republic of China states that “[a]nyone who assume[s] tort liability for infringing the civil right or interest of another person, regardless of whether that person is at fault or not as provided for by law, shall be subject to the tort liability inherent in these legal provisions (Article 7).” This strict-liability principle means that the plaintiff need only prove damage and causation without being required to prove evidence of the defendant’s negligence. Further, according to Article 66, polluters bear the burden to prove non-liability or mitigation of liability as well as no causal relationship between their actions and the harm. Defendants may be held liable for pollution damage even when they are within permitted pollution discharge limits. The law treats

130. Pozzo & Wang, supra note 128, at 89 (explaining strict liability provisions and the law’s protection of civil rights and interests, including property, health, and privacy, making it similar to protection against nuisance); id. at 97 (explaining burden of proof).
132. Hunter & Salzman, supra note 101, at 1752 (explaining that nuisance, negligence, and products liability are the most plausible climate-related claims).
135. Pozzo & Wang, supra note 128, at 89.
136. Id. at 90.
137. Id. at 97.
pollution similarly to other special ultra-hazardous torts, such as product liability and high risk and dangerous activities, including explosives, poisons, and radioactive material.\textsuperscript{138} China’s strict, no-fault liability and defendant burden of proof contrasts with United States tort law, where negligence must be demonstrated and the burden of proof lies with the plaintiff.\textsuperscript{139} As we see from the United States, proving negligence in climate-change litigation has been difficult. Thus, China’s tort law is a potentially strong step in the direction of director liability for climate change under the breach of duty of care.

In China, judicial interpretations are a key source of law in the Chinese civil system.\textsuperscript{140} However, they have not yet applied the 2010 Tort Law’s no-fault liability provision in environmental cases; to date, this law has only dealt with no-fault liability in relation to bodily injury.\textsuperscript{141} There are many environmental cases, however, in which the general principle of no-fault liability has been invoked.\textsuperscript{142} For example, the Supreme People’s Court of China in 2009 recently decided that, after 14 years of litigation, five factories involved in chemical dyes must pay damages (equivalent to U.S. $75,000 plus U.S. $15,000 in interest) to a farmer who lost his entire stock of 2.7 million tadpoles as a result of upstream pollution.\textsuperscript{143} Cases such as this set a strong precedent for future no-fault liability pollution litigation.

Chinese tort law creates strict liability for environmental pollution damage similar to CERCLA. Article 107(a) of CERCLA imposes strict, no-fault-based liability, which could be used to pierce the corporate veil and impose personal liability on company directors, corporate officers, lenders, and shareholders for corporate environmental damage.\textsuperscript{144} In interpreting environmental laws, “courts have not dismissed the general principles of corporate law.”\textsuperscript{145} The Supreme Court in \textit{United States v. Bestfoods}, for example, is careful to allow the corporate veil to be pierced under CERCLA only when directors are mismanaging their duties under corporate law.\textsuperscript{146} Although environmental negligence need not be found, fault under corporate law is thus required. In general, however, although the scope of

\textsuperscript{138} Id. at 90.


\textsuperscript{140} Pozzo & Wang, supra note 128, at 87.

\textsuperscript{141} Email from Xiaoqing Xiong, Vermont Law School (April 2012) (on file with author).

\textsuperscript{142} Pozzo & Wang, supra note 128, at 90.

\textsuperscript{143} Eight Cases That Mattered, CHINA DIALOGUE (July 26, 2011), https://perma.cc/YP9D-LQNT.


\textsuperscript{145} Id. at 703.

corporate environmental liability has expanded under CERCLA, United States courts “have not held corporate officers, individual shareholders, or parent corporations liable for cleanup costs.” Ultimately, in the United States, the wrongful act and the actor’s involvement are critical to impose liability.

Thus, by applying strict liability, where the polluter bears the burden of proof and liability is apportioned between and among polluters, China’s tort law provides great potential for litigating pollution damage. The remedies laid out in the 2010 Tort Law in China include removing the hazard and providing compensation for losses. The lack of reliance on proving negligence for environmental liability in China is a benefit for claimants.

2. Comparing the Privilege of Power Between the Individual and the State in the United States and China

In China, environmental tort legislation creates a potential private cause of action for climate change similar to public claims in the United States under CERCLA. Thus, private claims, rather than public claims, may be more common in China. This is an interesting contradiction to China’s tradition of law, which has been historically public in nature, rather than private. It does make sense, however, that if the State is the understood authority over public resources, it would not be left to the citizen to litigate offenses that are public in nature. In China, the relevant tort subject matter is not the environment per se, but the loss of rights for other people, not the rights of natural resources.

Similarly, where in the United States the individual is seen to have a larger role in ensuring justice by protecting his or her rights through litigation, with a less active state, the public’s natural resources (such as the air or climate) would fall more under the authority of individuals through public interest claims. Instead of encouraging individuals to take action in pursuing public-interest claims, cases like Connecticut v. American

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147. Ong, supra note 144, at 703.
148. Id.
150. Pozzo & Wang, supra note 128, at 96.
151. WANG, supra note 133, at 199–200 (2012) (translating and summarizing the Tort Liability Law of 2009, especially article 2, on personal rights, and article 68, on environmental liability); see infra pp. 15–17.
152. Pozzo & Wang, supra note 128, at 95.
Electric Power afford greater responsibility to the states to address these public issues. In contrast, depending on the outcome of China’s 2010 Tort Law interpretations in responding to environmental harms, China may be moving closer to placing the burden of liability for climate change in the hands of private actors to pursue claims against corporate directors. The question remains whether power concentrated in the hands of the State or in the individual is more effective in fighting climate change.

IV. PARTICIPATION IN CLIMATE GOVERNANCE IN THE UNITED STATES AND CHINA

The functional similarity in the privilege of power between the state and the individual and challenges to public-interest litigation based on corporate-director liability in both countries suggests that great opportunity for public participation in climate governance may exist in these similarities and outside the realm of litigation. Both China and the United States consist of large populations with globalized, modern-industrial, mostly urban lifestyles that, through the ineffectiveness of litigation, may share individual feelings of disempowerment and disengagement in climate-change governance. Regardless of contrasting democratic and legal traditions, the functional similarity in the opportunities for public participation in climate governance in the United States and China, however, suggests an underlying, untapped solidarity among individuals in both societies in relation to climate change.

For example, the “New Sustainability” scenario envisions a revolution in values and consciousness, where society turns to “dimensions of fulfillment [encompassed in] the quality of life, the quality of human solidarity and the quality of the earth.” The New Sustainability vision recognizes this human solidarity and identifies the framework in which it can be activated. In this, the “equal participation movement . . . contribute[s] . . . to openness and accountability of political

157. *Id.* at x.
and institutional processes,” but is fundamentally built on the globalization of civil society in which networks and alliances across traditional boundaries, known as VBOs, proliferate.158 Importantly, “VBOs dedicated to action...provided the staying power for permanent change...[by harnessing] the willingness of people, individually and in groups, to take responsibility for solving problems themselves.”159

One model of climate governance is the creation of VBO climate eco-teams, each comprised of citizens of both the United States and China. Through regular, biweekly or monthly exchanges, facilitated by translation and, as necessary, neutral guidance, climate eco-team members would discuss the challenges and opportunities in their respective communities, share resources, and find inspiration and support from others who are tackling surprisingly similar problems across the globe. Through dialogue, brainstorming, and growing trust, climate eco-team members would create a psychological and emotional platform for individuals from different countries to enunciate first that they care, and secondly, articulate what adaptation and mitigation efforts they can reasonably make in their respective lives. This initiative could be expanded, where transboundary teams compete against other similarly comprised teams. Because making incremental changes in lifestyle is critical but difficult, by improving the sense of human connection in embarking on this change, climate eco-teams would facilitate this transition to climate sustainability and help people see this abstract problem in more meaningful, manageable, and positively reinforcing terms.

CONCLUSION

The legal tradition in China dictates that corporations are based on kinship and a sense of collective duty, which extends to the wider community and even the entire empire. Modern SOEs in China maintain the theoretical framework of family. Also, in all forms of corporation (public and private) in China, the notion of mandatory directorship creates an impetus under current law, for greater director duty of care for social concerns than would be found in the United States. In the United States and China, corporate law relies on tort law for director-duty-of-care liability for environmental damages. The new tort law in China enables plaintiffs to circumvent the often-difficult task of proving negligence in pollution and climate-change cases and has made important headway on the ground. In

158. Id. at 87.
159. Id.
fact, China’s 2010 Tort Law creates a claim of action similar to public statutory claims in the United States. Interestingly, Chinese tort law places potential climate-change litigation more in the sphere of private rights of nuisance. This contrasts with United States tort law, where public rights over nuisance have been more commonly the subject of climate litigation in the United States. This difference between the United States and China is not surprising because, to the Chinese, public matters are the responsibility of the State, whereas in the United States, the individual is empowered to engage in the legal forum to protect what is public. The implementation of China’s 2010 Tort Law remains a notorious challenge, however. And, despite the law’s strict liability regime, the Supreme People’s Court has not ruled on whether its interpretation includes environmental pollution.

Despite the power of the State in China to create a greater duty of care for the environment, the political will for this is mixed. Corporate law in both the United States and China creates functionally similar barriers and opportunities for public participation in climate governance in both countries. Greater solidarity may be possible through other forums of public participation. With the corporation and its concept of agency as the dominant model for organizing resources, the differences between nation states are radically less apparent in determining the production of goods, services, and resulting waste. In fact, the most powerful venue for public participation may be through new VBOs, such as climate eco-teams, in which people facing similar challenges on opposite sides of the globe may be motivated to reduce their carbon emissions, adapt to climate change, and share their experiences, resources, and ideas in an open and unjudgmental environment. This value-based, team-oriented process of creative problem solving to meet the personal challenges in making a shift toward a more carbon-neutral lifestyle is a model of participation in climate governance that needs more attention.
STUCK IN LIMBO: CAN OFFSHORE WIND EVER BREAK FREE IN NEW ENGLAND AMID A MAZE OF REGULATORY AND POLITICAL CHALLENGES?

Bradford Alexander Hillman

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INTRODUCTION

The Roman poet and philosopher Lucretius once wrote that “[a]ir, I should explain, becomes wind when it is agitated,” and for over a thousand years mankind has tried to harness the “agitation” of which Lucretius spoke. Initially, humans harnessed the power of the wind through windmills, which historical records indicate were used as early as 500-900 A.D. in Persia, and possibly China as well. These early civilizations used the windmills for grain-grinding, water-pumping, and transportation. The logic of putting to use a virtually unlimited (albeit intermittent) freely flowing source of energy was as obvious to these early civilizations as it is to modern ones. More and more countries have explored and erected the contemporary version of the windmill: the wind turbine. These large devices have the potential to provide every kilowatt of electricity that our planet presently uses and beyond.

The benefits of using wind energy are both logical and profound. Fossil fuel prices have reached epic heights and the oil market remains highly volatile. Furthermore, the planet’s fossil fuel reserves are principally in the possession of a number of countries that are either antagonistic toward the United States and its allies or are unreliable or undesirable allies themselves. Thus, the United States is desperately seeking to achieve energy independence through domestic sources, such as wind.

1. Lucretius, On the Nature of Things 196 (Martin Ferguson Smith trans., Hackett Publ’g Co. 2001) (c. 50 B.C.E.).
4. Berry, supra note 2.
5. See id. (describing the rich history of windmills and how harnessing the wind as an energy source continues today).
the planet’s ecosystems and species. Consequently, replacing traditional fossil fuels, or “dirty fuels,” which allegedly emit carbon through burning and that the scientific community opines are responsible for anthropogenic climate change, with renewable sources is an essential step in combating climate-change concerns.

Here in the United States, the drive to adopt wind energy has encountered larger hurdles and less enthusiasm than it has in Europe and elsewhere for a number of legal and political reasons. American society’s propensity to be far more litigious than many of our developed-world counterparts, coupled with political gridlock on an unprecedented scale at the federal level in recent years, has stifled the growth of this industry.

While the onshore wind industry in the United States has seen arguable success, the offshore wind industry—despite less intermittency, potentially fewer environmental concerns, and greater overall energy potential—has struggled and remains in limbo throughout most of the country. These barriers leave America’s potential untapped; the United States as a whole in 2014 used an estimated 3,764 gigawatt hours (GWh) of electricity, yet possesses an estimated 4,150 gigawatts of offshore wind energy potential.

This article examines the potential for—and regulatory and political challenges to—offshore wind energy in a specific region of the United States: New England. Part I examines the general advantages of renewable energy and offshore wind as opposed to onshore wind. Part II examines New England’s offshore wind energy potential and the benefits that

harnessing this potential would bring to the region. Part III examines the regulatory process for offshore wind and the regulatory and political challenges that the offshore wind industry has faced thus far in New England. Part IV tells the tale of two case studies—Cape Wind, Massachusetts, and Statoil Hywind, Maine—to illustrate the challenges that New England offshore wind industry has and will continue to face. Finally, Part V of this article analyzes the future challenges to offshore wind in New England and reconciles these challenges with the benefits of offshore wind in New England by offering several solutions going forward. This article concludes that robustly pursuing offshore wind in New England is in the best interests of the region and the United States as a whole.

I. ADVANTAGES OF RENEWABLE ENERGY AND OFFSHORE WIND

A. Advantages of Renewable Energy

Renewable energy is seen by many as the energy of the future, with a multitude of critical advantages to traditional, fossil fuel sources of energy. First, renewable energy is clean, as it does not emit greenhouse gasses. Given the substantial body of scientists, scholars, politicians, and governments that fully embrace the argument that anthropogenic climate change is real and that the repercussions for not reducing greenhouse gas emissions could be catastrophic, the move toward clean energy sources becomes more urgent and politically encouraged all the time. Critics argue that the actual production and assembly of solar panels, wind turbines, etc., creates pollution and thus, calling renewable energy “clean” is an oxymoron. However, this process still creates less pollution than harvesting hydrocarbons. Eventually, the renewable-energy apparatus will

be manufactured with nontoxic, recyclable materials and powered by renewable energy itself, thus creating no pollution or waste.  

Second, renewable energy is predictable.  Notwithstanding the intermittency of renewable energy, which will become less of a problem as energy storage technologies continue to rapidly advance, renewable energy has few, if any, negative economic externalities. Hydrocarbons, on the other hand, have a number of externalities. First, hydrocarbons are traded on international energy markets. These markets fluctuate often and sometimes drastically, which can positively or negatively affect governments, private companies, and people alike. Second, the market price of hydrocarbons on the energy market often does not reflect government subsidies, pollution, the threat of fuel exhaustion, and energy dependence that some countries can have on others. 

Third, renewable energy is theoretically unlimited. The current estimates for solar power alone suggest that enough solar energy hits the planet in a single hour of the day to power all human civilization for an entire year. Unless or until the sun stops shining or the moon ceases to exist, solar, wind, tidal, and other forms of renewable energy will theoretically continue to renew themselves an infinite amount of times, providing inexhaustible sources of energy. Fossil fuels, on the other hand, are created by the anaerobic decomposition of dead organisms that takes millions of years to occur. Thus, the eventual exhaustion of fossil fuels is

32. See DAVID TIMMONS ET AL., THE ECONOMICS OF RENEWABLE ENERGY, GLOB. DEV. & ENV’T INST. (2014) (explaining that the negative externalities from renewable sources are significantly lower than externalities from coal).
35. Id.
36. See generally The Hidden Costs of Fossil Fuels, supra note 33 (noting significant health and economic costs not included in the price of fossil fuels).
39. Wadhwa, supra note 37.
inevitable as humans are harvesting these fossil fuels in massive quantities every year, not every few million years.\footnote{The End of Fossil Fuels, ECOTRICITY, https://perma.cc/E6XP-6WZC (last visited Jan. 5, 2017).}  

Fourth, within the near future—perhaps as few as five to ten years—the cost of renewable energy may be cheaper than that of fossil fuels in every major sector of the United States energy market: electricity, heating, and transportation.\footnote{See Tom Randall, Fossil Fuels Just Lost the Race Against Renewables, RENEWABLE ENERGY WORLD (Apr. 15, 2015), https://perma.cc/7RQ5-QCNS (noting that in energy markets throughout the world, the plummeting price of renewables will cause renewables to overtake fossil fuels).} In the electricity sector, solar and onshore wind are already close to what is known as grid parity—the point at which the cost per kilowatt-hour (kWh) of electricity generated by solar, wind, or other renewable sources is equal to that of electricity generated by fossil fuels.\footnote{What Is Grid Parity?, RENEWABLE ENERGY ADVISORS, https://perma.cc/4BG3-2QMH (last visited Jan. 5, 2017) (defining grid parity).} While offshore wind is still a long way from grid parity, the possibility that projects may begin to actually achieve completion will drive costs down as the incentive to reduce the cost of offshore wind is created.\footnote{Michael W. Drunsic et al., Can U.S. Offshore Clear Cost Reduction Hurdle?, NORTH AM. WINDPOWER, https://perma.cc/FM5L-HS5K (last visited Jan. 5, 2017).} In the heating sector, an intense effort is being made to promote the adoption of energy efficient heat and hot water pumps,\footnote{See, e.g., Heat Pump and Cooling System Rebates, EFFICIENCY VT., https://perma.cc/7QTK-T9MW (last visited Dec. 3, 2016) (offering significant rebates for purchasing energy-efficient heat pumps in Vermont).} thus eventually removing fossil fuels from the heating sector and lowering energy use through energy efficiency.\footnote{Steven Nadel, Should We Promote Heat Pumps to Save Energy and Reduce Greenhouse Gas Emissions?, AM. COUNCIL FOR AN ENERGY-EFFICIENT ECON. (May 4, 2016, 10:00 AM), https://perma.cc/T623-3AVN.} In the transportation sector, there is a vast financial push in the public\footnote{See generally DAVID HOWELL, U.S. DEP’T OF ENERGY, OVERVIEW OF THE DOE ADVANCED BATTERY R&D PROGRAM (June 16, 2014), https://perma.cc/AB88-MUCM (presenting on the DOE’s battery research and development program).} and private\footnote{Lauren Sommer, Silicon Valley in Race for Battery Breakthrough, KQED SCI. (Nov. 1, 2013), https://perma.cc/2R2E-XCQE.} sectors to reduce the cost of batteries.\footnote{Christopher Martin, The $5 Billion Race to Build a Better Battery, BLOOMBERG MKTS., (Apr. 14, 2015, 12:01 AM), https://perma.cc/Q78U-XP3E.} This cost reduction would greatly reduce the cost of electric vehicles, making them cost-competitive if not cheaper than combustion-engine vehicles; thus, the adoption of electric vehicles would vastly expand\footnote{Nikki Gordon-Bloomfield, New Study Suggests Electric Car Battery Prices at Tipping Point for Mass-Production, TRANSPORT EVOLVED (Apr. 14, 2015), https://perma.cc/Y496-C7H8.} and eventually remove the oil industry’s dominance of the transportation sector. Further, major United States corporations are adopting renewable energy for their energy
needs, attracted by stable energy prices and the long-term cost savings associated with such transactions. As this trend expands, renewable energy technologies, like with any market, will continue to drop in price as they are mass-produced and adopted, only hastening renewable energy’s seemingly inevitable eclipse of fossil fuels.

B. Advantages of Offshore Wind over Onshore Wind

The advantages of offshore wind over onshore wind are substantial. First, the winds offshore are typically stronger and less intermittent than onshore winds. Although there are additional construction and maintenance costs to offshore wind turbines and farms, these costs can be offset by the reduced intermittency, and thus, offshore wind has greater return than onshore wind. For instance, the average capacity factor (“[t]he ratio of the net electricity generated, for the time considered, to the energy that could have been generated at continuous full-power operation during the same period”) for onshore wind is 40.35%, whereas the average capacity factor for offshore wind is 43%.

Second, more predictable offshore wind conditions reduce wind shear, which causes the wear and tear of turbine components. The reduction in wind shear that offshore wind farms offer can extend the life of wind turbines from an estimated twenty to twenty-five years (typical for onshore turbines) to an estimated fifty years for offshore wind turbines.

Third, offshore wind farms can be built near population centers without facing the problems commonly associated with close proximity to homes and other buildings that onshore wind farms face. As “more than half of

55. See ROI Twice as Great for Offshore Wind, RENEWABLES INT’L (June 6, 2013), https://perma.cc/U9WD-DT5N (demonstrating research that shows that less variability in offshore wind reduces the cost).
57. HANS EISING JORGENSEN ET AL., EUR. WIND ENERGY ASS’N, INTRODUCTION TO OFFSHORE WIND RESOURCES 3 (2011).
the U.S. population” resides on the east and west coasts, this proximity to population centers is immensely important for the United States.⁶⁰

Fourth, wind turbines that are situated far enough offshore are unlikely to provoke complaints regarding aesthetic concerns.⁶¹ This may seem of lesser importance compared to the previous three factors, but ultimately it may be the most important factor of all. For example, the threat to aesthetics that Cape Wind presented to the residents of Cape Cod has been substantially responsible for the extreme legal paralysis that has afflicted the Cape Wind project from the beginning.⁶² Deep-water offshore wind farms have the potential to create little to no aesthetic impact to the residents of the areas where they are built, minimizing the threat of a Cape Wind-style legal battle that paralyzes the project.⁶³

II. NEW ENGLAND OFFSHORE WIND: POTENTIAL AND BENEFITS

New England comprises six states: Connecticut (CT), Maine (ME), Massachusetts (MA), New Hampshire (NH), Rhode Island (RI), and Vermont (VT).⁶⁴ Their aggregate population is 14,727,584,⁶⁵ and their aggregate land area is 62,685 square miles.⁶⁶ The region is known for its cold winters,⁶⁷ abundant rainfall,⁶⁸ mountains,⁶⁹ and for being rich in natural resources, such as timber⁷⁰ and fresh water.⁷¹ Coastal New England has an aggregate population of 14,101,542,⁷² an aggregate land area of 53,468 square miles,⁷³ and an aggregate coastline of 473 miles.⁷⁴

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60. Kaplan, supra note 58, at 190.
61. Id. at 219.
63. Kaplan, supra note 58, at 219.
72. State & County QuickFacts, supra note 65.
73. Land and Water Area of States, supra note 66.
Despite being one of the richest regions in the United States for certain types of energy, such as biomass (timber), New England is relatively unique in that it possesses not a single known barrel of oil, cubic foot of natural gas, or ton of coal; in other words, not a single known unit of fossil fuels. Consequently, New England’s electric rates are higher than the national average. According to the Energy Information Administration (EIA), a division of the United States Department of Energy (DOE), while the February 2016 national Average Residential Retail Price of Electricity (ARRPE) was 12.15 cents per kWh, coastal New England’s February 2016 regional ARRPE was 19.49 cents per kWh, breaking down per coastal state as follows:

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<th>STATE</th>
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<th>MA</th>
<th>NH</th>
<th>RI</th>
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</thead>
<tbody>
<tr>
<td>ARRPE (cents/kWh)</td>
<td>20.68</td>
<td>17.83</td>
<td>19.78</td>
<td>18.37</td>
<td>18.78</td>
</tr>
</tbody>
</table>

These higher electric rates have only been exacerbated in the last few years as more residential, commercial, and industrial buildings—seizing on cheap natural gas prices from the hydraulic fracturing boom—have converted to natural gas as their primary source of heating and electricity; however, New England’s natural gas infrastructure remains insufficient to meet the increasing demand, causing energy prices to spike. These above-average electric and energy costs stifle economic growth in New England by creating an unfriendly environment for businesses not wanting to pay high energy costs.

Notwithstanding New England’s absence of fossil fuels, there is one energy source that New England has in abundance: offshore wind. The
National Renewable Energy Laboratory (NREL), a national laboratory of the DOE, has estimated that coastal New England possess as much as 362 aggregate gigawatts (GW) of potential wind energy, or Estimated Technical Potential for Offshore Wind Power (ETPOWP), breaking down by state as follows:

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</thead>
<tbody>
<tr>
<td>ETPOWP (GW)</td>
<td>7</td>
<td>147</td>
<td>184</td>
<td>3</td>
<td>21</td>
</tr>
</tbody>
</table>

Meanwhile, according to the EIA, in 2014 New England had an aggregate regional annual electricity consumption (EC) of 114,413 megawatt hours (MWh), or 114.413 GWh (1,000 megawatts = 1 gigawatt), breaking down by state as follows:

<table>
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<th>MA</th>
<th>NH</th>
<th>RI</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC (GW)</td>
<td>29.354</td>
<td>12.003</td>
<td>54.469</td>
<td>10.944</td>
<td>7.643</td>
</tr>
</tbody>
</table>

Thus, with an aggregate offshore wind energy potential of 362 gigawatts (even taking into account an average capacity factor of 43%, the energy potential would still equal 155.66 GW) and an aggregate electricity consumption for 2014 of 114,413 GWh, New England’s offshore wind energy potential—if fully harnessed—could supply every last KWh the region needs. Based on the 2014 EIA electricity consumption estimates, the NREL offshore wind energy potential estimates, and taking into account an average capacity factor of 43%, this creates 40.247 GW of surplus energy. This surplus should theoretically suffice to accommodate any increase in the electric needs of the region going forward, especially as energy efficient technologies are promoted and adopted throughout the

85. Id.
86. 2014 Electricity Consumption Estimates, supra note 20.
87. LOPEZ ET AL., supra note 84.
88. Shahan, supra note 56.
89. 2014 Electricity Consumption Estimates, supra at note 20.


In December of 2009, Maine’s Ocean Energy Task Force (OETF) issued its Final Report to Maine Governor John E. Baldacci.\footnote{EDISON ELEC. INST., TRANSPORTATION ELECTRIFICATION: UTILITY FLEETS LEADING THE CHARGE 32 (2014), https://perma.cc/T6GA-AQTZ.} The Final Report stated that to fully electrify Maine’s heating and transportation sectors, Maine’s electricity use would increase between 3.8 and 5 GW per
year,\textsuperscript{100} or a maximum of roughly 41.66\% of Maine’s 2014 annual electric consumption of 12.003 GWh. If this 41.66\% maximum increase in electricity use was applied to all coastal New England states, then New England’s aggregate 114.413 GWh of yearly use would increase by roughly 48.5 GW to 162.1 GW of annual electricity use. This amount would exceed New England’s total wind energy potential of 155.66 GW by roughly 6.41 GW. This could easily be compensated for by other renewable energy sources, such as onshore wind, solar, and marine hydrokinetic.

These estimates are of course only hypothetical, academic, and subject to a multitude of variables. However, based on a comparison of the estimates by the NREL for New England’s offshore wind energy potential,\textsuperscript{101} the estimates by the EIA for New England’s 2014 electricity use,\textsuperscript{102} and the electrification estimates of the OETF\textsuperscript{103} as applied to all New England states, New England’s offshore wind energy potential should suffice to provide nearly all of the region’s electrical use, including the region’s increased electrical use if and when the region fully electrifies its heating and transportation sectors.\textsuperscript{104} Thus, by fully electrifying New England’s heating and transportation sectors and fully harnessing New England’s offshore wind energy potential—supplemented slightly by other forms of renewable energy—New England could achieve total regional energy independence, powering itself 100\% with carbon-free, domestic energy.\textsuperscript{105} This would shield the region from the energy volatility that goes hand-in-hand with fossil fuels and reduce energy costs long term.\textsuperscript{106}

III. REGULATORY AND POLITICAL CHALLENGES TO DATE

For all its vast potential in offshore wind, no other region has highlighted the challenges that face offshore wind like New England. These challenges can be primarily classified under two categories: (1) regulatory challenges and (2) political challenges. The regulatory and political challenges to offshore wind in New England revolve around a combination

\begin{itemize}
  \item [\textsuperscript{100}] Id. at 9.
  \item [\textsuperscript{101}] LOPEZ ET AL., supra note 84.
  \item [\textsuperscript{102}] 2014 Electricity Consumption Estimates, supra note 20.
  \item [\textsuperscript{103}] MAINE OCEAN ENERGY TASK FORCE REPORT, supra note 99.
  \item [\textsuperscript{104}] See supra Part II (calculating New England’s capacity to supply its energy through offshore wind).
  \item [\textsuperscript{106}] See JURGEN WEISS & MARK SARRO, THE BRATTEL GROUP, THE IMPORTANCE OF LONG-TERM CONTRACTING FOR FACILITATING RENEWABLE ENERGY PROJECT DEVELOPMENT 6 (2013), https://perma.cc/X7FR-UU6T (illustrating the benefits of renewable energy in a New York case study, including eliminating the volatility of fossil fuels).
\end{itemize}
of environmental concerns, the lack of cohesive federal and state regulatory processes for offshore wind, and political resistance to offshore wind. These challenges have bogged down offshore wind in New England in a series of lawsuits and discouraged investment in the region’s offshore wind industry due to the lack of predictability and maze of regulatory procedures—both state and federal—that an offshore wind investor must navigate.

A. Regulatory Challenges

The regulatory challenges to offshore wind are vast and perhaps more debilitating to the promotion of offshore wind than the political challenges. Indeed, the legal and regulatory framework surrounding offshore wind and other forms of offshore energy are being referred to as a “vortex.”\textsuperscript{107} The regulatory scheme with regard to offshore wind energy has been described as a “patchwork quilt of federal, state and local agencies,”\textsuperscript{108} with several agencies having jurisdiction over particular sectors of the offshore wind industry but no one agency having the authority to regulate the entire industry.\textsuperscript{109} In fact, prior to 2005, it was not even clear whether any federal agency had the authority to approve the use of federal waters for offshore wind development.\textsuperscript{110} Fortunately, this uncertainty was resolved by § 388 of the Energy Policy Act of 2005, which granted the Department of the Interior the authority over offshore wind leasing, easements, and rights-of-way for the development of “energy from sources other than oil and gas.”\textsuperscript{111} This Act also led to the creation of the Department of Interior’s Minerals Management Service, which Secretary of the Interior, Ken Salazar, later trifurcated into the Office of Natural Resources Revenue, the Bureau of Safety and Environmental Enforcement (BSEE), and most importantly for offshore wind, the Bureau of Ocean Energy Management (BOEM).\textsuperscript{112}

Prior to even commencing the regulatory process, there are initial hurdles that developers and investors have to take into account. First, there is a great deal of uncertainty among both developers and investors with regard to the permitting process.\textsuperscript{113} The Departments of Interior and Energy have reported that the biggest challenges facing offshore wind development


\textsuperscript{108} Id. at 333 (citing Ann E. Drobot, Transitioning to a Sustainable Energy Economy: The Call for National Cooperative Watershed Planning, 41 ENVTL. L. 707, 741 (2011)).

\textsuperscript{109} Id.

\textsuperscript{110} Id.

\textsuperscript{111} Id. at 333–34.

\textsuperscript{112} The Reorganization of the Former MMS, BUREAU OF OCEAN ENERGY MGMT., https://perma.cc/FZ3C-8S66 (last visited Oct. 27, 2016).

are “the relatively high cost of energy, technical challenges,” and that there are “permitting challenges related to the lack of experience with permitting processes for projects in both state and federal waters,”\textsuperscript{114}

Second, the long duration of offshore wind projects creates regulatory uncertainty and exposes the projects to substantial regulatory risks.\textsuperscript{115} Changes in the electricity market, the enactment or expiration of tax credits, and the possibility of lawsuits can all challenge the regulatory process and create uncertainty that can deter investors and developers from undertaking such large and expensive projects.\textsuperscript{116}

When it comes to the actual regulatory process before federal and state entities, the process can be categorized under two primary steps:\textsuperscript{117} (1) the permitting and leasing of the offshore wind project with (a) the BOEM in federal waters, or (b) the state’s regulatory agencies in state waters; and (2) additional scrutiny by a multitude of state or federal agencies pursuant to an extensive list of federal and/or state statutes and programs.\textsuperscript{118}

1. The Offshore Wind Permitting and Leasing Process

The United States’s federal waters consist of four primary jurisdictional zones: the federal territorial seas, the contiguous zone, the Exclusive Economic Zone (EEZ), and the Outer Continental Shelf (OCS).\textsuperscript{119} As it pertains to offshore wind projects, the OCS is the relevant federal jurisdictional zone, and the OCS commences at three nautical miles from the coastline.\textsuperscript{120} Therefore, any offshore wind projects that are located within three nautical miles from a state’s coastline are under the sole jurisdiction of that state with regard to leasing and permitting, though the projects are still subject to federal statutes and regulations.\textsuperscript{121}

The leasing and permitting process at the state level varies from state to state throughout New England.\textsuperscript{122} In Maine, for instance, pursuant to An Act to Facilitate Testing and Demonstration of Renewable Ocean Energy Project Roadmap 2013 (2013) (explaining the various processes of gaining approval through the different steps in Maine through federal and state agencies).

\textsuperscript{114} Id.
\textsuperscript{115} Id.
\textsuperscript{116} Id. at 251.
\textsuperscript{117} See generally JEFF THALER, PERMITTING AND LEASING FOR MAINE OFFSHORE WIND ENERGY PROJECTS: OFFSHORE WIND ENERGY PROJECT ROADMAP 2013 (2013) (explaining the various processes of gaining approval through the different steps in Maine through federal and state agencies).
\textsuperscript{118} Moran, supra note 107, at 328.
\textsuperscript{119} Id. at 330.
\textsuperscript{120} THALER, supra note 117, at 20.
\textsuperscript{121} Id. at 9.
Technology (LD 1465), the first step is to apply to Maine’s Department of Environmental Protection (DEP) to seek a general permit. If a general permit is granted by the DEP and the “project is confined within the test site” then that is the only leasing and permitting step at the state level. “However, if a cable is run from the energy device to shore, then a permit” pursuant to the Maine Natural Resources Protection Act is:

required for dredging, soil replacement, bulldozing, filling, drilling, or construction or alteration to permanent structures in or on any protected natural resource or any land that is adjacent to and could be washed into a coastal wetland, pond, river, stream, brook, or “significant wildlife habitat” located in a freshwater wetland.

Further, the state’s utilities commission must approve electric contracts for the offshore wind project’s produced energy.

The leasing and permitting process at the federal level belongs exclusively to the BOEM, pursuant to § 388 of the Energy Policy Act of 2005. The BOEM has promulgated a Fact Sheet addressing the “Wind Energy Commercial Leasing Process” (Leasing Process). The Fact Sheet states:

In 2009, President Barack Obama announced final regulations for the Outer Continental Shelf (OCS) Renewable Energy program, which was authorized by the Energy Policy Act of 2005 (EPAct). Department of Interior’s Bureau of Ocean Energy Management is responsible for implementing these regulations, which provide a framework for issuing leases ... that support production and transmission of renewable energy, including offshore wind.

The BOEM has established four phases in the Leasing Process: (1) Planning and Analysis; (2) Leasing; (3) Site Assessment; and (4)
Construction and Operations. In the Planning and Analysis phase, the BOEM seeks to identify suitable areas for wind energy leasing, conducts a variety of collaborations and communications with various interested and affected parties, and conducts environmental analysis and compliance reviews. In the Leasing phase, the BOEM issues either a competitive or noncompetitive lease, both of which are exclusive, but the lease does “not grant the right to construct any facilities.” The BOEM must continue to approve any “lease area plans” before the lessee can proceed. In the Site Assessment phase, the lessee must submit detailed plans for meteorological towers or buoys on the site, which must be approved, or approved with modifications, by the BOEM. In the Construction and Operations Phase, the lessee submits detailed plans for the construction and operation of the wind energy project on the lease, and then the BOEM conducts environmental and technical reviews of the plans, which must be approved, or approved with modifications, by the BOEM. Once all of these phases have been successfully completed, the BOEM can approve the project. However, the Federal Energy Regulatory Commission (FERC) must approve electric contracts for the energy produced by the offshore wind project.

2. Additional Federal and State Regulation

The permitting and leasing process is only the first step. Further complicating the process is the fact that, even if the state agencies or the BOEM approve the offshore lease, there are a multitude of additional federal and state agencies that have jurisdiction over some aspect of offshore wind permitting. Federal agencies include: the Army Corps of Engineers (ACOE), FERC, the United States Fish and Wildlife Service (FWS), the National Marine Fisheries Service (NMFS), the National Park Service, the Federal Aviation Administration, the Department of Defense, the United States Coast Guard, and the United States Environmental Protection Agency (EPA). State agencies include: state environmental

131. Id.
132. Id. at 2.
133. Id.
134. Id.
135. Id.
136. Id.
137. Id. at 1.
138. Moran, supra note 107, at 337.
139. See Thaler, supra note 117, at 18 (listing federal agencies that could require a “consistency review”).
140. See id. at 9–16 (providing the statutory framework for various federal agencies to have authority over aspects of offshore wind permitting).
protection agencies, public utilities commissions, land-use agencies, and others.\textsuperscript{141}

The various federal agencies exercise their regulatory authority pursuant to the following extensive list of federal statutes and programs: Rivers and Harbors Act (RHA) § 10 Permit;\textsuperscript{142} Ports and Waterways Safety Act (PWSA) Private Aids to Navigation;\textsuperscript{143} Federal Aviation Act (FAA);\textsuperscript{144} Clean Water Act (CWA) § 404 Permit;\textsuperscript{145} National Environmental Policy Act (NEPA);\textsuperscript{146} Clean Air Act (CAA);\textsuperscript{147} Endangered Species Act (ESA);\textsuperscript{148} Migratory Bird Treaty Act (MBTA);\textsuperscript{149} Marine Mammals Protection Act (MMPA);\textsuperscript{150} Magnuson-Stevens Fishery Conservation Act (MSFCA);\textsuperscript{151} and National Historic Preservation Act (NHPA) § 106.\textsuperscript{152}

Pursuant to § 10 of the RHA, the ACOE is granted broad authority to regulate the construction of any structure that may obstruct any “navigable...waters of the United States.”\textsuperscript{153} Although Congress originally intended this authority to be directed toward rivers, canals, ports, and harbors,\textsuperscript{154} § 10 of the RHA gives the ACOE the jurisdiction to regulate the construction of “power transmission line(s)” and “permanently floating vessel(s),” both of which are key components of the offshore wind industry and its development.\textsuperscript{155}

Pursuant to the PWSA, the Coast Guard is tasked with ensuring “safe navigation through U.S. waters while protecting the marine environment.”\textsuperscript{156} The Coast Guard consults with the Secretary of the Interior and other federal and state authorities in order to examine the impact of offshore projects on navigation and may provide either a permit or a letter of no objection for the project.\textsuperscript{157}

\textsuperscript{141} See id. at 6 (providing a list of some of the agencies required by Maine’s LD 1465).
\textsuperscript{142} Id. at 9–10.
\textsuperscript{143} Id. at 10.
\textsuperscript{144} Id.
\textsuperscript{145} Id. at 11.
\textsuperscript{146} Id. at 11–13.
\textsuperscript{147} Id. at 13.
\textsuperscript{148} Id. at 13–14.
\textsuperscript{149} Id. at 14–15.
\textsuperscript{150} Id. at 15.
\textsuperscript{151} Id.
\textsuperscript{152} Id. at 15–16.
\textsuperscript{153} 33 U.S.C. § 403 (2012).
\textsuperscript{154} Minnehaha Creek Watershed Dist. v. Hoffman, 449 F. Supp. 876, 884 (D. Minn. 1978) (noting that the “clear...intent and purpose of [the RHA] was to insure free navigability of interstate commerce through federal regulation of the subject waterbodies”), rev’d in part on other grounds, 597 F.2d 617 (8th Cir. 1979).
\textsuperscript{155} 33 C.F.R. § 322.2(b) (2009).
\textsuperscript{156} THALER, supra note 117, at 10.
\textsuperscript{157} 33 U.S.C. § 1223(c)(3)(B); THALER, supra note 117, at 10.
Pursuant to the FAA, the Federal Aviation Administration must consider the effects of offshore wind projects on airspace safety.\textsuperscript{158} There are concerns about wind turbines interfering with radar and causing confusion for air traffic controllers.\textsuperscript{159} The Federal Aviation Administration must also regulate, provide public notice, and may grant approval with regard to structures and obstructions that are over a certain height (200 feet is a structure requiring public notice, 499 feet is an obstruction) or built near an airport.\textsuperscript{160}

Pursuant to § 404 of the CWA, the ACOE can authorize dredge-and-fill activities in waters of the United States.\textsuperscript{161} The CWA is jointly administered by the ACOE and the EPA; however, the ACOE is the authoritative agency with regard to granting the kinds of dredge-and-fill permits that offshore wind project developers would need.\textsuperscript{162} The ACOE must consult with other federal and state agencies to evaluate the effects of the proposed activity on the environment, culture, history, and other considerations.\textsuperscript{163}

Pursuant to NEPA, federal agencies are obligated “to consider every significant aspect of the environmental impact of a proposed federal action,” and to “ensure that the responsible agency will inform the public that it has indeed considered environmental concerns in its decision-making process.”\textsuperscript{164} Therefore, before any federal agencies—such as the ACOE—can issue permits to offshore wind projects, that agency must “take a hard look at the environmental consequences” of a proposed activity, a process that includes “undertaking a public interest review and consideration of alternatives.”\textsuperscript{165} A federal agency formalizes this analysis with an Environmental Assessment (EA), and if there is a finding of a significant environmental impact, then the agency must complete an Environmental Impact Statement (EIS).\textsuperscript{166}

Pursuant to the CAA, the EPA must determine if a proposed project “could have an adverse impact on air quality.”\textsuperscript{167} For offshore wind projects, that generally translates to: Will the construction and decommission of the project adversely affect air quality?\textsuperscript{168}

\begin{footnotes}
\footnotetext[158]{THALER, supra note 117, at 10.}
\footnotetext[159]{Id.}
\footnotetext[160]{14 C.F.R. § 77.5, 77.9 (2016); THALER, supra note 117, at 10.}
\footnotetext[161]{33 U.S.C. § 1344 (2012).}
\footnotetext[162]{THALER, supra note 117, at 11.}
\footnotetext[163]{Id.}
\footnotetext[165]{Marvin C. Bynum II, Comment, Testing the Waters: Assessing Wisconsin’s Regulatory Climate for Offshore Wind, 93 MARQ. L. REV. 1533, 1560 (2010) (internal quotations omitted).}
\footnotetext[166]{THALER, supra note 117, at 12.}
\footnotetext[167]{Id. at 13.}
\footnotetext[168]{Id.}
\end{footnotes}
Pursuant to the ESA, a “taking” of an endangered or threatened species that is listed under the ESA is prohibited.169 The FWS and the NMFS are the administering agencies for the ESA, and they must be consulted by other federal agencies and offshore wind project developers to ensure that the offshore wind project will not “jeopardize the continued existence of any endangered or threatened species . . . or adversely impact the species’ habitat.”170 With offshore wind projects, the chief ESA concern is that the rotating turbine blades could harm or kill listed endangered or threatened species.171

Pursuant to the MBTA, it is illegal to engage in activities—such as offshore wind projects—that would result in the “taking” of listed migratory birds.172 Like the ESA, the FWS administers the MBTA and must conduct an EA or EIS to determine if there is a risk of harming migratory birds with the offshore wind project.173 With offshore wind projects, like with the ESA, the concern is that the rotating turbine blades could harm or kill listed migratory birds.174

Pursuant to the MMPA, the “taking” of marine mammals is prohibited unless permitted by law.175 The FWS is also the administering agency for this statute and must conduct “analysis, mitigation, and monitoring measures” prior to authorizing any permits under this statute.176 If it is found that a marine mammal could be harmed, the FWS can still authorize the project as long as the “taking” of the marine mammal is unintentional and limited to small numbers in a specific geographic region.177

Pursuant to the MSFCA, the NMFS, a division of the National Oceanic and Atmospheric Administration (NOAA), is the lead agency charged with assessing whether a proposed project would negatively impact the essential fish habitat (EFH) of “federally managed fish and invertebrate species.”178 The NMFS must be consulted for any offshore wind project in order to ensure that there will be no negative impacts to said fish and invertebrate species.179 Further, “the parties in consultation are required to use the best

176. Thaler, supra note 117, at 15.
177. Id.
179. Thaler, supra note 117, at 15.
available scientific information to mitigate the potential impacts on the EFH.\textsuperscript{180}

Pursuant to § 106 of the NHPA, the construction of any offshore wind project “cannot be located on a historic property listed in the National Register of Historic places,” as well as state, tribal, and other historic lists and lands.\textsuperscript{181} The agencies to be consulted under NHPA are the National Park Service (NPS) and the applicable state or tribal agencies.\textsuperscript{182} Additionally, the “visual effect on historic properties within the ‘Area of Potential Effect’ (APE) needs to be taken into consideration as well.”\textsuperscript{183}

Further, each of the New England states has its own environmental and regulatory statutes and regulations that must be met.\textsuperscript{184} These environmental and regulatory processes proceed through the states’ environmental agencies and utility commissions, are generally open to public comments and protests, and can often take a long time.\textsuperscript{185} Additionally, as will be elaborated on under the political challenges section, the environmental or regulatory processes in the state agencies and commissions are potentially vulnerable to influence and interference by politicians, which can only further exacerbate the already difficult regulatory process for offshore wind in the states.\textsuperscript{186}

\section*{B. Political Challenges}

The United States has faced vast political challenges and obstacles to promoting offshore wind power on both the state and federal level. Despite the previously cited estimates by the NREL that the United States has as much as 4,150 GW of offshore wind potential,\textsuperscript{187} the United States has not produced a single kWh of electricity from offshore wind to date.\textsuperscript{188}

\begin{thebibliography}{99}
\bibitem{180} 50 C.F.R. § 600.920(d) (2009).
\bibitem{181} THALER, supra note 117, at 15.
\bibitem{182} Id.
\bibitem{183} Id.
\bibitem{186} See \textit{ENERGY & POLICY INST., ATTACKS ON RENEWABLE ENERGY STANDARDS AND NET METERING POLICIES BY FOSSIL FUEL INTERESTS & FRONT GROUPS} 2013-2014, at 20, 22 (2014) (explaining that the House Energy and Environment Committee Chairman, Dennis Hedke, has ties to the fossil fuel industry and how Maine Governor, Paul LePage, has influenced the regulatory process).
\bibitem{187} SCHWARTZ ET AL., supra note 21.
\end{thebibliography}
There are several key reasons for this lack of progress from a political perspective. First and foremost among these reasons is the nature of mineral ownership in the United States. In most countries around the world, ownership of mineral rights is held by the government—the state. The United States is relatively unique in the sense that private landowners own the mineral rights beneath their land and are generally free to convey and lease these rights as they see fit. The conflict that arises between private mineral ownership and wind power, as well as the other renewable energy sources, is one of economic competitiveness that does not exist in those countries where the government owns the mineral rights. In the United States, the success of renewable energy is not in the economic interests of the fossil fuel industry because every kilowatt of electricity generated by renewable sources is a kilowatt less that American ratepayers need to purchase from the fossil fuel industry. Private mineral ownership in the United States creates a zero-sum game in a sense, whereby it is economically damaging to the fossil fuel industry to see renewable energy succeed unless fossil fuel companies diversified into renewable fuels.

While a number of fossil fuel companies have experimented with renewable energy divisions, most have sold off those interests, with only a few remaining.

This competition spills into the political arena when oil, gas, and coal companies and corporations make large financial contributions to political candidates who deny climate change or favor the fossil fuel industry over the renewables industry. For instance, in the 2012 election, Koch Industries, a massive fossil fuel corporation run by brothers Charles G. and David H. Koch, contributed $412,670,666 to Republican candidates’ campaigns, primarily candidates who supported the fossil fuel industry and did not

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190. Id.
191. Id.
192. See GABE ELSNER & MATT KASPER, ENERGY & POLICY INST., ATTACKS ON RENEWABLE ENERGY POLICY BY FOSSIL FUEL INTERESTS 2013-2014, at 3 (2014) (highlighting the risk of cheap clean energy to the fossil fuel industry).
193. See id. at 3–5 (detailing the fossil fuel industry’s attempt to repeal or weaken renewable energy standards).
support the renewables industry.\textsuperscript{196} Koch Industries’s contributions are the most extreme example of this political obstacle to wind and other renewable energies, but it has become a general trend on both the federal and state level, whereupon Republican candidates who have received large contributions from the fossil fuel industry tend to resist any efforts in Congress or state legislatures to promote renewable energy.\textsuperscript{197} As previously stated, this dilemma does not exist in most countries, including European countries, where the government owns the mineral rights, and thus, there is no competing industry with wind and other renewable energies that would create the kind of political paralysis that has been seen in the United States.\textsuperscript{198}

Second, political representatives and leaders often do not feel comfortable voting in favor of the high costs of wind power.\textsuperscript{199} As previously stated, wind has not yet achieved total grid parity in the United States, which means that, in order to purchase electricity produced by wind turbines, ratepayers currently need to pay more for electricity produced by wind than they would for electricity produced by coal or natural gas.\textsuperscript{200} Just as it is difficult for any politician to tell his or her constituents that he or she favors increasing taxes,\textsuperscript{201} it is also difficult for any politician to tell his or her constituents that he or she favors building wind infrastructure that will increase the constituents’ electric rates.\textsuperscript{202} There is evidence that this concern is being alleviated, if not completely eliminated, with state utility companies discovering that wind power contracts actually produce substantial long-term savings for ratepayers.\textsuperscript{203}

\begin{footnotesize}
\begin{enumerate}
\item[197.] See, e.g., ELSNER & KASPER, supra note 192, at 18, 20 (detailing how Koch Industries donates to anti-clean-energy organizations).
\item[198.] See Mineral Rights, supra note 189 (highlighting how most governments retain mineral rights instead of private citizens).
\item[199.] See, e.g., Paul C. Barton, Wind Blowing Against Alexander’s Energy Arguments, USA TODAY (Mar. 26, 2013, 9:11 PM), https://perma.cc/4CAG-N324 (reporting that a Tennessee Republican Senator has continually voted against a wind tax credit because it is “[a] huge waste of money”).
\item[200.] See Drunsic, supra note 44 (emphasizing that one of the hurdles to renewable energy projects is cost reduction to the ratepayer).
\item[201.] See Todd Tinkelmany, Campus Connection: Raising Taxes Political Suicide? Maybe Not, MADISON.COM (May 21, 2010), https://perma.cc/5UU-KCVU3 (arguing that raising taxes for politicians is typically career suicide).
\item[202.] See James Taylor, Electricity Prices Soaring in Top Wind Power States, FORBES.COM (Oct. 17, 2014, 8:12 AM), https://perma.cc/2SKV-R8FJ (highlighting the high costs of wind power to taxpayers and associated job loss).
\item[203.] CHARLES RIVER ASSOC., ANALYSIS OF THE IMPACT OF CAPE WIND ON NEW ENGLAND ENERGY PRICES I (Feb. 8, 2010) (finding that Cape Wind was estimated to reduce overall electricity prices in Massachusetts by an average of $185 million annually); Transcript of Direct Testimony at 11, Okla. Gas & Elec. Co., PUD 201100087 (Corp. Comm’n of Okla. July 28, 2011) (estimating, through direct testimony of Jesse B. Langston on behalf of Oklahoma Gas and Electric
\end{enumerate}
\end{footnotesize}
IV. A TALE OF TWO PROJECTS—CAPE WIND, MASSACHUSETTS AND STATOI HYWIND, MAINE—AND THE DAUNTING GLIMPSE THAT THEY GIVE INTO THE CHALLENGES FACING OFFSHORE WIND IN NEW ENGLAND

The legal and regulatory challenges to offshore wind in New England—and to an extent from a national perspective in the United States as well—are well-illustrated by the story of Cape Wind, an offshore wind project in Massachusetts. Environmental lawsuits, a maze of regulatory challenges, and the resistance of affluent and politically powerful property owners all created the perfect storm of resistance to hopelessly bog down what was supposed to be America’s first offshore wind farm and the start of a new era in clean energy generation in the United States.

The political challenges to offshore wind in New England—and to an extent from a national perspective as well—are well-illustrated by a case study from Maine. This case study involved the Norwegian energy corporation’s, Statoil’s, history and plans for offshore wind in Maine, and the role and challenges that politics, particularly different political positions from different gubernatorial administrations—one Democrat, one Republican—can play on the development of offshore wind.

A. Cape Wind, Massachusetts

In November of 2001, Cape Wind Associates, under its President, Jim Gordon, first proposed the Cape Wind Energy Project (Cape Wind).\(^{204}\) Cape Wind would be a 130-turbine wind farm off the coast of Cape Cod, Massachusetts.\(^{205}\) Estimates from 2013 projected that the project would generate up to 420 megawatts of energy\(^ {206}\) and estimated that it would supply not only 10% of the electricity required in southeastern Massachusetts, but also 1% of the total projected electricity demand in all of New England.\(^ {207}\) Cape Wind was advertised as having the potential to prevent emissions of approximately 802 tons of sulfur dioxide, 497 tons of

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\(^{205}\) Id.

\(^{206}\) Id.

\(^{207}\) CHARLES RIVER ASSOCS., supra note 203, at 1.
nitrous oxide, and 733,876 tons of carbon dioxide. Finally, studies indicated that Cape Wind had the potential to reduce overall electricity prices in Massachusetts by an average of $185 million annually.

For Massachusetts, a left-leaning state, the economic advantages were only half of the equation, with the environmental benefits being the other half. Cape Wind was projected to achieve the aforementioned economic benefits without causing significant environmental harm. The Department of the Interior prepared an EIS and a Biological Assessment for the project, and both studies concluded that the construction and operation of Cape Wind would have negligible impacts on wildlife in general and no significant impact on any species listed under the ESA.

Ironically, despite the multitude of studies indicating that Cape Wind would bring substantial economic benefits to Massachusetts with negligible environmental impacts, many of the Massachusetts residents living on Cape Cod adamantly opposed the Cape Wind project from the beginning. One of the primary difficulties was the fact that the project would extend over 24 square miles in Nantucket Sound, which is either a permanent home or a summer home to many wealthy Americans, some of whom are very politically powerful, such as the Kennedy family. Even Robert F. Kennedy, despite being a strong environmental advocate, has publicly opposed Cape Wind and raised environmental and aesthetic concerns about the project that often seemed disingenuous given the environmental studies that concluded that the project would have negligible impacts. However, the publicity raised by Kennedy and the Alliance to Protect

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209. CHARLES RIVER ASSOC'S., supra note 203, at 1.
211. Id. at E-1.
213. CAPE WIND ENERGY FINAL EIS, supra note 210, at E-11; CAPE WIND BIOLOGICAL ASSESSMENT, supra note 212, at 5-1–73.
215. Ziza, supra note 208, at 606.
218. Love, supra note 216.
Nantucket Sound, the primary opposition group to Cape Wind, rallied opposition groups around environmental, aesthetic, and recreational concerns.\(^{219}\) The Alliance to Protect Nantucket Sound—along with business opposition groups, Native American tribes, and Massachusetts’s Governor, Mitt Romney—was responsible for filing a multitude of legal and regulatory challenges to Cape Wind, bogging the project down for years and greatly contributing to its potential demise.\(^{220}\)

At the federal level, the ACOE was tasked with permitting Cape Wind and took roughly three years from the time the project was first proposed to complete an EIS pursuant to NEPA.\(^{221}\) As many as 5,000 public comments were submitted on the ACOE’s EIS, only to have the entire process rendered moot by the passage of the Energy Policy Act of 2005, which shifted jurisdiction for offshore wind permitting from the ACOE to the Department of the Interior.\(^{222}\)

Much to the dismay of the Cape Wind developers, the Department of the Interior chose to conduct its own independent EIS—despite the already lengthy EIS process conducted by the ACOE—and took several more years to complete the process, only giving final federal approval to Cape Wind in April of 2010.\(^{223}\) Following the federal approval of Cape Wind in April of 2010, events seemed to be in favor of the successful completion of the project. First, in October of 2010, the Department of the Interior granted a 28-year lease to Cape Wind.\(^{224}\) Then in January of 2011, the ACOE and the EPA granted permits to Cape Wind.\(^{225}\) Then in April of 2011 the Bureau of Ocean Energy Management, Regulation and Enforcement granted its necessary approval to the project.\(^{226}\)

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\(^{219}\) See generally Save Our Sound: Alliance to Protect Nantucket Sound, supra note 214 (rallying opposition behind concerns about endangered species, economic impacts, and groundwater impacts).


\(^{221}\) Tom Zeller, Jr., Cape Wind: Regulation, Litigation and the Struggle to Develop Offshore Wind Power in the U.S., HUFFINGTON POST (Mar. 1, 2013, 10:41 AM), https://perma.cc/A7L8-5FFX.

\(^{222}\) Id.

\(^{223}\) Quilter, supra note 220.

\(^{224}\) Cape Wind, supra note 204.


At the state level, according to an article published by the Boston Globe, in order to move forward, Cape Wind needed the following state authorizations:

Eight state and local permits, including a license and a water quality certification from the state DEP; highway access permits from the Massachusetts Highway Department; a license for a railway crossing from the Executive Office of Transportation; orders of conditions from the Yarmouth and Barnstable Conservation Commissions; and road opening permits from Yarmouth and Barnstable.227

Cape Wind successfully overcame one state hurdle after another over the long course of the years parallel to the federal permitting and regulatory process. Cape Wind overcame its first hurdle on May 11, 2005, when the Massachusetts Energy Facilities Siting Board approved Cape Wind’s application to construct the project.228 The decision was appealed to the Massachusetts Supreme Judicial Court, which affirmed the decision.229 In March of 2007 the Massachusetts Secretary of Energy and Environmental Affairs granted approval for the project pursuant to the Massachusetts Environmental Policy Act (MEPA).230 However, in October of 2007 the Cape Cod Commission declined to approve Cape Wind without additional studies on the impacts by the developers.231 This decision was then overturned in May of 2009 when the Massachusetts Energy Facilities Siting Board issued what was called a “Super Permit” for Cape Wind, overriding the Cape Cod Commission’s decision and eliminating the need for Cape Wind to obtain any additional state or local approvals.232

Most significantly on the state level, the Massachusetts Supreme Judicial Court weighed in on Cape Wind with two major decisions. First, the Supreme Court held on August 31, 2010, that the state had the power to overrule community opposition and grant a multitude of local permits to

227. Stephanie Ebbert, Cape Wind Seeks to Skip Permit Wars, BOSTON.COM (Nov. 22, 2007), https://perma.cc/CF59-7Q6D.
229. All. to Protect Nantucket Sound, 959 N.E.2d at 413.
Cape Wind that the project needed to start construction. Second, the Supreme Court held on December 28, 2011, that a novel power purchase agreement between Cape Wind and National Grid, one of Massachusetts’s major utilities, was valid, and in so doing, the Supreme Court “unanimously rejected every argument advanced by critics.” Shortly thereafter, following the Massachusetts Supreme Judicial Court’s approval of the National Grid Power Purchase Agreement, Cape Wind obtained approval by the Massachusetts Public Utilities Commission for its Power Purchase Agreement with NStar, another major utility in Massachusetts.

By 2013, Cape Wind appeared poised to succeed at long last. The project had obtained federal and state approval, finalized Power Purchase Agreements, and its developers were in the final stages of securing financing and were expected to begin construction by the end of 2013.

On March 14, 2014, a federal district judge dismissed the 26th and perhaps final lawsuit against Cape Wind, stating that “there comes a point at which the right to litigate can become a vexatious abuse of the democratic process.” But, then it all fell apart.

On January 7, 2015, National Grid and Northeast Utilities, which had merged and acquired NStar, terminated their contracts with Cape Wind, claiming that the developers had failed to meet the December 31, 2014, deadline contained in the 2012 Power Purchase Agreements to obtain financing and commence construction. The contract termination was seen as a potential death-blow to the $2.5 billion Cape Wind project and was swiftly followed by more bad news. On March 3, 2015, a $4.5 million deal between Massachusetts and Cape Wind to use a terminal in New Bedford, Massachusetts as a staging and construction site was mutually terminated. Finally, in what was seen as perhaps the most symbolic act since the Power Purchase Agreement terminations, Mark Rodgers, Cape

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233. See Litigation History of Cape Wind, supra note 220 (citing the Massachusetts Supreme Judicial Court opinion upholding the Energy Facilities Siting Board’s authority to grant a permit for Cape Wind).
236. Alex Gullen, Offshore Wind Power Set to Sail, POLITICO (June 28, 2013, 12:06 AM), https://perma.cc/9YW-F6SVU.
Wind communications director for more than 13 years, resigned on March 12, 2015. Rodgers’s resignation was argued by some as a clear indication that even those most invested in the project had come to realize that Cape Wind could not and would not succeed.241

Despite these seemingly calamitous events, there may still be hope for Cape Wind. Whether any attempt to revive Cape Wind is successful remains to be seen, but there are some hopeful signs. On January 16, 2015, Massachusetts Representative, Patricia Haddad, submitted a bill to the Massachusetts Legislature that would mandate that utilities buy electricity from offshore wind sources.242 Meanwhile, Cape Wind’s President, Jim Gordon, is among several individuals working toward creating a coalition to promote offshore wind, including the formation of a trade group called Offshore Wind Massachusetts.243 Environmental groups and local residents have also been rallying and pushing to save Cape Wind, arguing strongly for the use of renewable energy sources to reduce fossil fuel dependency.244

Cape Wind’s ultimate fate remains to be seen but much will depend on the political climate in the country, as articulated in other sections of this article. However, at the very least, Cape Wind served as a scapegoat, alerting other offshore wind developers of the risks and challenges faced and allowing them to plan ahead on how best to avoid the terrible process that Cape Wind has endured.

B. Statoil Hywind, Maine

John E. Baldacci, Democratic Governor of Maine from 2003 to 2011, made it a key policy goal of his administration to use the State of Maine’s vast offshore wind resources, with his administration aggressively pushing for the Maine Wind Energy Act of 2008.245 Baldacci’s goal was to counterbalance a number of Maine’s weaknesses—a relatively small and poor economy and no indigenous fossil fuels—by harnessing Maine’s offshore wind as an indigenous energy source that could invite billions of dollars of investment into the state, create thousands of jobs, and eventually

achieve energy independence for Maine and New England, all while reducing carbon emissions and protecting Maine’s environment.\(^{246}\)

The primary architect of Baldacci’s plan for the future of Maine’s offshore wind industry was Habib Dagher, a professor and the director of Advanced Structures and Composite Center at the University of Maine.\(^{247}\) Dagher’s initial plan was for a 20-year, 20-billion dollar investment into Maine’s offshore wind industry that would construct and install enough wind turbines to provide five gigawatts of electricity, or nearly half of what Maine uses on a yearly basis.\(^{248}\) However, Dagher has made it clear that the ultimate goal for the future is to harness all 150 estimated gigawatts of wind energy potential that the Gulf of Maine has to offer.\(^{249}\) In order to facilitate the exploration and utilization of Maine’s offshore wind industry, a partnership called Maine Aqua Ventus (Aqua Ventus) was formed between the University of Maine, construction company Cianbro, and energy/utility provider Emera.\(^{250}\)

Maine’s first attempt to create an offshore wind industry revolved around a partnership with Oregon-based Principle Power in 2008.\(^{251}\) However, Principle Power abandoned its plans to work with Aqua Ventus two years later in 2010, claiming that Maine had parochial politics and that the University of Maine set unreasonable conditions.\(^{252}\) The University denied these claims, yet Principle Power took their technology and investment to Portugal instead.\(^{253}\)

In June of 2009, Baldacci, Dagher, other members of Aqua Ventus, and Maine’s Congressional Delegation traveled to Washington, D.C. to meet with DOE Secretary Dr. Steven Chu to discuss Maine’s offshore wind potential.\(^{254}\) During that meeting, Secretary Chu advised that Baldacci and the Aqua Ventus team should travel to Norway to view first-hand the world’s first deep-water offshore wind turbine that had only just been installed by the Norwegian energy corporation, Statoil.\(^{255}\)

249. Richardson, supra note 247.
252. Id. at 3.
253. Id.
255. Id.
Statoil is a Norwegian, multinational oil and gas company headquartered in Stavenger, Norway.\(^{256}\) Statoil’s net income for the last three years was NOK 37.6 billion in 2010, NOK 78.4 billion in 2011, and NOK 69.5 billion in 2012.\(^{257}\) Statoil is among several hydrocarbon-oriented energy companies that have launched renewable energy divisions in order to acquire a market-share of what is undoubtedly a major future sector of energy, if not the major future sector.\(^{258}\) Statoil’s Wind Power Division focuses on offshore wind, with Statoil constructing and installing the first floating offshore wind turbine in the world on June 6, 2009.\(^{259}\) At the writing of this article, Statoil now has five offshore wind farms, all of which are located in Norway and the United Kingdom.\(^{260}\)

In September of 2009, Governor Baldacci, Habib Dagher, staffers of Maine’s Congressional Delegation, and academic and business members of the Aqua Ventus partnership traveled to Europe on an international offshore wind exploratory venture.\(^{261}\) The Maine Delegation visited Spain, Germany, and finally Norway.\(^{262}\) On September 25, 2009, in Norway, Statoil took the Maine Delegation to view the Hywind Demo, Statoil’s 2.3 megawatt deep-water offshore wind turbine—the first of its kind.\(^{263}\) The Maine Delegation and Statoil formalized their desire to forge an alliance on offshore wind by signing a Letter of Intent to do business together.\(^{264}\)

Then, on November 17, 2009, Statoil sent three members of its Wind Power Division to Maine to observe Maine’s infrastructure and capacity with regard to offshore wind potential.\(^{265}\) Representing Statoil were Knut Aanstad, head of business development for Wind Power; Sjur Bratland, asset manager for Hywind; and Knut Erik Steen, technical manager for Hywind.\(^{266}\) The Statoil representatives toured Cianbro Eastern Manufacturing Facility in Brewer, the Fox Islands Community Wind Project in Vinalhaven, the Brunswick Naval Air Station, and Bath Iron Works.\(^{267}\)


\(^{257}\) Id.

\(^{258}\) Id.

\(^{259}\) Prachi Patel, Floating Wind Turbines to Be Tested, IEEE SPECTRUM (Jun. 22, 2009, 4:00 PM), https://perma.cc/8LBO-WR8K.

\(^{260}\) Annual Report 2012, supra note 256.


\(^{262}\) Id.

\(^{263}\) Governor Highlights Maine as Premier Location for Wind Power Investments, VOTE SMART (Nov. 17, 2009), https://perma.cc/4EZG-YZDV.

\(^{264}\) Id.

\(^{265}\) Id.

\(^{266}\) Id.

\(^{267}\) Id.
Impressed by Maine’s infrastructure and potential as an offshore wind partner, Statoil entered into contract negotiations with Maine to build, as a start, a $120 million Hywind Maine project.268 The planned project was for four, 3-megawatt wind turbines placed 12 miles out to sea near Boothbay Harbor.269 In 2009 and 2010, the Maine Legislature enacted legislation that authorized the Maine Public Utilities Commission to conduct a competitive bid process for long-term offshore wind development.270 Statoil won the bid and the contract negotiations with Maine officials lasted several years and culminated on January 24, 2013, with the Maine Public Utilities Commission granting Statoil’s Term Sheet for the contract.271 Maine appeared poised to become a hub of offshore wind in the United States,272 with the financial backing of a multibillion dollar international energy corporation with years of deep-water offshore wind experience and “sufficient offshore wind energy potential in the Gulf of Maine to power the entire state of Maine.”273 But, then it all fell apart.

On November 2, 2010, Republican Paul LePage won the election for Maine Governor with 37.6% of the vote in a five-way race.274 LePage is considered the most conservative governor in Maine’s history and the most conservative governor of any state currently in office.275 LePage’s contempt for renewable energy is well known, with LePage even telling the Skowhegan Area Chamber of Commerce that the University of Maine at Presque Isle’s award-winning campus wind turbine has an “electric motor” that the University turns on whenever visitors come to the University so that the University “can show people wind power works”; this claim was categorically denied by the University.276

Assuming office on January 5, 2011, LePage was a polar opposite277 to John Baldacci on wind energy.278 LePage, who had made reducing Maine’s

269. Id.
271. Turkel, supra note 268.
272. Id.
277. Compare Houx, supra note 251 (showing Governor John Baldacci’s support for Maine’s off-shore wind development and partnership with Statoil), with Kevin Miller, LePage’s Critical Wind-Power Stance Creating Uncertainty, BANGOR DAILY NEWS (May 27, 2012, 5:06 PM),
above-average electric rates a top priority for his administration, publicly criticized the Maine Public Utilities Commission’s decision to approve Statoil’s Term Sheet in his 2013 State of the State speech. The following year, LePage threatened to veto a highly-popular and bipartisan omnibus energy bill, LD 1559, that was on the verge of passing in the Maine Legislature unless a provision was added to a separate bill, LD 1472, which would reopen the bidding process for the wind energy project that the Maine Public Utilities Commission had awarded to Statoil in January of 2013 to allow Maine Aqua Ventus to submit a competing bid. Both chambers of the Maine Legislature were controlled by the Democratic Party at the time, but the Democrats held only simple majorities, not veto-overriding super-majorities in the chambers. Nevertheless, the Maine House marshalled the votes of enough Republican House members to override LePage’s veto. However, when it came to a vote in the Maine Senate, there were insufficient votes to override LePage’s veto. Upon the passage of LD 1472, Statoil wrote a letter to the Maine Public Utilities Commission expressing its concerns about the now-uncertain fate of its contract with the Maine Public Utilities Commission, which Statoil had expected to be finalized by the summer of 2013, and announcing that it put the Hywind Maine project on hold.

Then came the straw that broke the camel’s back. On August 30, 2014, Maine Aqua Ventus, which previously worked as a partner with Statoil until the two entities went their separate ways and became competitors for a federal offshore wind grant, seized the opportunity presented by LD 1472 and submitted a bid for the Maine Public Utility Commission’s offshore
wind contract.\textsuperscript{285} Shortly thereafter on October 15, 2013, Statoil announced that, as a result of the political uncertainty stemming from the passage of LD 1472, it would withdraw its operations from Maine.\textsuperscript{286} Four years after first signing the Letter of Intent with Governor Baldacci, the alliance with Statoil—and all of the hopes and potential that the alliance seemed to promise—was at an end.

In the aftermath of Statoil’s departure, a flurry of political and media activity ensued. Many blamed Governor LePage for Statoil’s withdrawal, with critics ranging from the Sierra Club to LePage’s 2014 gubernatorial opponents, Democrat Mike Michaud and Independent Eliot Cutler.\textsuperscript{287} Democrat Justin Alfond, then Maine Senate President, wrote an editorial in the Portland Press Herald, criticizing LePage and the Maine Republicans’ efforts regarding LD 1472 and Statoil.\textsuperscript{288} Alfond argued that the true and devastating loss of Statoil’s departure was not necessarily the loss of the wind energy investment—though that loss was potentially grave—but the reputation that Maine made for itself with the international business community: a reputation that a deal is not a deal and a handshake is not a handshake in Maine.\textsuperscript{289} Alfond pointed out that Maine’s wind-energy resources are vast and that exploiting them is highly popular among the vast majority of Mainers.\textsuperscript{290} Thus, whether LePage or anyone else agreed, from a political perspective, with the investment into wind energy, it remains an important domestic source of energy for Maine and a great opportunity was lost, possibly for good.\textsuperscript{291} Republican Michael Thibodeau, the Maine Senate Minority Leader, responded to Alfond’s editorial with one of his own several months later after Aqua Ventus had been approved by the Maine Public Utilities Commission for the offshore wind project.\textsuperscript{292} Thibodeau countered Alfond by arguing that Aqua Ventus’s project would cost Maine ratepayers less than Statoil’s project would have, create more Maine jobs than Statoil’s would have, and ensure that a greater percentage of the


\textsuperscript{286} Whit Richardson, Statoil to Quit Work on $120 Million Offshore Wind Project in Maine, BANGOR DAILY NEWS (Oct. 15, 2013), https://perma.cc/V2XV-KXAY.

\textsuperscript{287} Christopher Cousins, Political Foes Blast LePage for His Role in Statoil Departure from Maine; Supporters Say It Clears Way for UMaine Project, BANGOR DAILY NEWS (Oct. 28, 2016, 12:17 AM), https://perma.cc/5N2Q-H3BJ.

\textsuperscript{288} Justin Alfond, Opinion, Killing of Statoil Project for Political Reasons Hurt Maine and Its Workers, PORTLAND PRESS HERALD (Oct. 29, 2016), https://perma.cc/2F46-DYNW.

\textsuperscript{289} Id.

\textsuperscript{290} Id.

\textsuperscript{291} Id.

offshore wind investment went directly to Maine companies than Statoil’s would have.  

Only salting the wound of Statoil’s departure was the decision by the DOE on May 7, 2014—not even seven months after Statoil’s departure—not to select Maine Aqua Ventus for a highly-coveted $47 million dollar federal grant in the Offshore Wind Advance Technology Demonstration Projects competition.  

Six projects competed for the grant: (1) Baryonyx Corporation in Port Isabel, Texas; (2) Dominion Virginia Power in Virginia Beach, Virginia; (3) Fishermen’s Energy Atlantic City Windfarm in Atlantic City, New Jersey; (4) Lake Erie Energy Development Corporation in Cleveland, Ohio; (5) Maine Aqua Ventus in Monhegan Island, Maine; and (6) Principle Power in Coos Bay, Oregon.  

Fishermen’s Energy, Dominion Power, and Principle Power, the very same entity that had abandoned its plans in 2010 to work with Aqua Ventus in Maine, were the three winners of the grants, while Baryonyx, Lake Erie, and Aqua Ventus were the losers. Principle Power was viewed as Aqua Ventus’s primary competitor. Although the DOE officially stated that the reason for passing over Aqua Ventus was because Principle Power had credibly demonstrated that its floating-turbine design was less expensive than Aqua Ventus’s, many in the industry wondered if what had happened with Statoil did not affect the decision behind the scenes.  

With Statoil’s departure and the collapse of Aqua Ventus’s funding hopes, many in Maine feared that a once-in-a-generation opportunity had been lost. Maine had the opportunity to become the hub of the offshore wind industry and its cutting-edge technology, secure billions in investment in Maine’s small economy, create thousands of jobs, and achieve energy independence for Maine and New England in an environmentally responsible and safe manner. This loss was compounded when it was announced on July 15, 2014, that Statoil was investing $2.5 billion dollars in an offshore wind farm in Norwich, England. It was seen as a glimpse of the titanic industry that could have been in Maine and a searing reminder of Maine’s lost opportunity. What happens next to Maine’s offshore wind

293.  
294.  
295.  
296.  
297.  
298.  
299.  
300.  
301.  

Id.
Turkel, supra note 251.
Id.
Turkel, supra note 294.
Turkel, supra note 251.
Maine Blows It with Statoil, supra note 279.
Eric Russell, Energy Company That Pulled out of Maine Invests $2.5 Billion in UK Offshore Wind Farm, PORTLAND PRESS HERALD (July 15, 2014), https://perma.cc/2EBW-RSHJ.
Id.
industry remains to be seen. However, the circumstances leading to Statoil’s departure well-illustrate just how political challenges have and may continue to damage New England’s offshore wind industry’s potential.

V. CHALLENGES GOING FORWARD AND POSSIBLE HOPES FOR PROGRESS AND SOLUTIONS: THE PATH FORWARD FOR OFFSHORE WIND

Despite the many and significant challenges to offshore wind in New England, there are viable solutions that could facilitate the creation and growth of offshore wind in the region.

One potential solution is to simply stay the current course and remain cautiously optimistic that several factors will begin to ease offshore wind’s progress and development. First, with every year that passes, wind turbine technology decreases in cost and increases in efficiency. As these costs and efficiencies continue to decrease and increase respectively, offshore wind will become more and more economically competitive, achieving grid parity in more and more instances to the point where it will be more difficult for politicians and the private sector—the fossil fuel industry aside—to resist adopting offshore wind and other renewable energies.

Second, the environmental studies on offshore wind’s potential negative environmental effects will continue to be conducted and could continue to conclude that offshore wind is an environmentally friendly source of energy, easing some of the legal challenges to offshore wind.

Another potential solution, and the one with which this author endorses and fully agrees, presents the best possibility for offshore wind’s future and was put forth by the Clean Energy Group (CEG) in its report “Up in the Air: What the Northeast States Should Do Together on Offshore Wind Before It’s Too Late.” In this report, the CEG focuses on offshore wind power in several Northeast states: Maine, New Hampshire, Massachusetts,


Rhode Island, Connecticut, New York, and New Jersey. The CEG report discusses a variety of benefits to these states—many of which coincide with the benefits to New England outlined in this article—that offshore wind could provide and concisely summarizes several of the obstacles that several of these states have run into, including the Cape Wind and Statoil Hywind projects summarized in this article. The CEG report concludes by opining that the obstacles that the individual states that it has listed have faced demonstrates that states acting individually is not a path for success on offshore wind and that what is needed is what the report terms a “Multi-State Consortium” that could collectively coordinate and act on offshore wind to produce more efficient, cost-effective projects and results on offshore wind. The CEG report concludes that without this type of multi-state coordination and action, offshore wind may soon reach the point where it loses its opportunity to become an economically competitive and viable industry in the United States for good.

Despite the grim outcome that the CEG Report warns of, recent events in New England give reason for cautious optimism. First, on January 29, 2015, the federal government held a competitive lease sale for offshore wind areas in federal waters. The leases are currently held by Deepwater Wind, Danish Oil and Natural Gas Energy (DONG), and Offshore MW. Construction commenced on Deepwater Wind’s Block Island project offshore of Rhode Island on April 27, 2015. The Block Island project will be a 30-megawatt, five-turbine wind farm that is scheduled to be online in 2016 and which would obtain the landmark status of being America’s first offshore wind farm.

Second, the arrival of the experienced European offshore wind company, DONG, and its plans to construct a massive offshore wind farm south of Martha’s Vineyard, Massachusetts has inspired a great deal of excitement in New England. DONG’s wind farm is slated to include as
many as 100 turbines, generating as much as 1,000 megawatts of electricity.\textsuperscript{317} Cementing DONG’s interest in New England’s offshore wind potential, Massachusetts recently passed an energy law that mandated the purchase of 1,600 megawatts of electricity generated by offshore wind over a decade,\textsuperscript{318} with one of DONG’s agents opining that the law and its 1,600-megawatt mandate would be “the last piece of the puzzle to get the industry going.”\textsuperscript{319}

Third, the devastating decision by the DOE to pass over Maine Aqua Ventus for the coveted $47 million federal grant turned out not to be as final as originally believed.\textsuperscript{320} The three winning projects in New Jersey, Oregon, and Virginia all failed to comply with the DOE’s requirements for the grant and thus, were not awarded the grants per the original timeframe.\textsuperscript{321} The three projects were given an extension until May 1, 2016, to meet the DOE’s requirements, after which, DOE ended up retracting its grant from Oregon and Virginia and reallocated the grant to Maine Aqua Ventus and to Lake Erie Energy Development Corporation.\textsuperscript{322} The surprise decision, which came on May 27, 2016, swiftly revitalized hopes that a booming offshore wind industry can be developed off of Maine’s coast and lay the foundation to attract the private investment necessary to complete the funding of the project.\textsuperscript{323} Indeed, on June 3, 2016, only two weeks after the DOE's decision, the French defense company, DCNS Group, announced that it is partnering with Aqua Ventus to assist in developing the offshore wind project.\textsuperscript{324} Although DCNS Group has not yet announced a financial commitment, the company has annual revenues of $3.47 billion and roughly 13,000 employees in ten countries.\textsuperscript{325}

CONCLUSION

Offshore wind in New England undoubtedly faces a difficult path forward: The regulatory process for offshore wind shows no signs of simplifying anytime in the near future; the legal challenges to offshore wind

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\item \textsuperscript{317} Id.
\item \textsuperscript{318} An Act to Promote Energy Diversity, ch. 188, sec. 12, § 83(C)(b), 2016 Mass. Acts.
\item \textsuperscript{319} Ryan, supra note 313.
\item \textsuperscript{320} Tux Turkel, Maine Offshore Wind Project Still Faces Money Hurdles, Despite Federal Grant, PORTLAND PRESS HERALD (Nov. 16, 2015), https://perma.cc/UAF2-HHAZ.
\item \textsuperscript{321} Id.
\item \textsuperscript{322} Darren Fishell, UMaine Offshore Wind Project in Line for Full Federal Funding, BANGOR DAILY NEWS (May 27, 2016, 11:33 AM), https://perma.cc/7EYG-RPV5.
\item \textsuperscript{323} Id.
\item \textsuperscript{324} Tux Turkel, French Defense Contractor Joins Maine Offshore Wind Power Project, PORTLAND PRESS HERALD (June 8, 2016), https://perma.cc/ED6D-KNUS.
\item \textsuperscript{325} Id.
\end{itemize}
\end{footnotesize}
will continue, especially as deep-water turbines are tested that may or may not have environmental impacts; and the political climate remains uncertain. However, New England retains vast potential in offshore wind that could bring a multitude of benefits to New England from reduced electric rates to energy independence to thousands of jobs and billions of dollars in investment. Cape Wind and Statoil Hywind provide grim pictures of how the various obstacles and challenges to offshore wind can delay or destroy these vast potential benefits.

Yet, there is a path forward. Whatever its difficulties in New England and the United States, offshore wind technology continues to expand globally, and the costs and efficiency of the technology will thus inevitably become more competitive and attractive to the public and private sectors. An offshore wind multi-state consortium is not politically impossible, and there are encouraging signs in the region from the federal leases, to the Massachusetts energy legislation, to DONG’s arrival in the United States, and finally to Maine Aqua Ventus winning the federal grant and partnering with DCNS Group. For the present, however, offshore wind in New England remains stuck in limbo.
In 2015, Wyoming became the ninth state to pass legislation penalizing citizens for reporting harmful agricultural practices.¹ This legislation

included two new statutes: the first created the crime of trespassing to collect resource data and became effective on March 5, 2015; this statute’s civil counterpart became effective on July 1, 2015. These over-broad statutes resemble existing or recently repealed “Ag Gag” laws. Wyoming’s laws, however, are distinguishable from existing Ag Gag laws. These involve accessing open land—both private and some public lands—rather than accessing a private agricultural facility. This Note compares and contrasts Wyoming’s “Data Trespass” laws with a recently repealed Ag Gag law from Idaho, and the Idaho District Court decision declaring that law unconstitutional.

Additionally, this Note uses ongoing litigation between Western Watersheds Project (WWP) and various NGOs against several Wyoming government officials to argue that Wyoming’s new Data Trespass laws violate the First Amendment’s Petition and Free Speech Clauses. The Data Trespass laws violate the Petition Clause because the restrictions that they have placed on resource data collection severely interfere with a citizen’s right to “petition the Government for a redress of grievances.” Citizens cannot petition the government without complete and accurate data. Furthermore, the new statutes require the government and courts to expunge from their systems and disregard as evidence any data that a citizen collected unlawfully. The Data Trespass laws violate the Free Speech Clause because they prohibit a specific type of speech and a specific message, and the laws are not narrowly tailored to further a significant governmental interest.

Lastly, the new trespass statutes undermine the public participation provisions in the Clean Water Act (CWA) and other environmental protection statutes. The statutes discourage citizen involvement in resource

(2016 Wyo. Sess. Laws 474 (amending the civil trespass statute); see also 2016 Wyo. Sess. Laws 481 (amending the criminal trespass statute); see Order Granting Motion to Dismiss at 26, Western Watersheds Project v. Att’y Gen., 15-CV-00169-SWS (D. Wyo. July 6, 2016) (granting Defendants’ motion to dismiss after Wyoming amended the trespass laws and reasoning that the First Amendment does not grant the right to trespass on private property).


data collection and hinder environmental groups and citizens‘ ability to bring suits against polluters.\textsuperscript{9} Citizen suits play a major role in resolving environmental issues. The uncertainty over what behaviors the statutes permit or prohibit discourages citizens from participating for fear of criminal charges or civil liability. This deterrence is problematic because agencies rely heavily on data that the public collects when issuing National Pollutant Discharge Elimination System (NPDES) permits,\textsuperscript{10} nonpoint source regulations,\textsuperscript{11} federal grazing permits,\textsuperscript{12} and other decisions that affect the environment. The CWA, along with other environmental statutes, require that the government encourage and facilitate public participation before implementing a regulation or granting a permit that will affect the environment.\textsuperscript{13} The public counts on the information that groups like WWP gather.

Concerned citizens created NGOs like WWP to protect the environment, and citizen involvement in resource data collection is crucial to enforcing the CWA due to scarce administrative resources.\textsuperscript{14} Public participation provisions in environmental statutes exist both to ensure that the public has a say in the decision-making process and to encourage public participation in gathering data and forming policy.\textsuperscript{15}

This Note uses information from the Bureau of Land Management (BLM), the Wyoming Department of Environmental Quality (WDEQ), the Environmental Protection Agency (EPA), the CWA, case law, and other

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\item \textsuperscript{9} See Clean Water Act, 33 U.S.C. § 1365(a) (2012) (“Any citizen may commence a civil action on his own behalf against any person . . . who is alleged to be in violation of an effluent standard or limitation.”).
\item \textsuperscript{10} See id. § 1342 (allowing State governments to issue NPDES permits so long as the public is notified and allowed a hearing on the issuance of any permit).
\item \textsuperscript{11} See id. § 1329(a)(1)(C) (“The Governor of each State shall, after notice and opportunity for public comment, prepare and submit to the Administrator for approval, a report which . . . describes the process, including intergovernmental coordination and public participation, for identifying best management practices and measures to control each category and subcategory of nonpoint sources.”).
\item \textsuperscript{12} See Federal Land Policy and Management Act, 43 U.S.C. § 1712(f) (2012) (“The Secretary shall allow an opportunity for public involvement . . . .; id. § 1739(e) (“[T]he Secretary, by regulation, shall establish procedures, including public hearings . . . to give . . . the public adequate notice and an opportunity to comment upon the formulation of standards and criteria for, and to participate in . . . the management of, the public lands.”).
\item \textsuperscript{13} 33 U.S.C. § 1342 (“[T]he Administrator may, after opportunity for public hearing, issue a permit for the discharge of any pollutant, or combination of pollutants . . . .”)
\item \textsuperscript{14} See Daniel J. Fiorino, Streams of Environmental Innovation: Four Decades of EPA Policy Reform, 44 ENVTL. L. REV. 723, 725, 742–43 (2014) (implying that public participation in environmental decision-making is an effort to mitigate scarce government resources).
\item \textsuperscript{15} See 33 U.S.C. § 1251 (2012) (“Public participation in the development, revision, and enforcement of any regulation, standard, effluent limitation, plan, or program established by the Administrator or any State under this chapter shall be provided for, encouraged, and assisted by the Administrator and the States.”).
\end{itemize}
secondary sources to explore the issues surrounding land ownership in the West that culminated with Wyoming’s unconstitutional new trespass laws. Part I introduces the Data Trespass laws and compares them to Wyoming’s existing criminal trespass statute. The section then provides an overview of the ongoing case between several Wyoming ranches and WWP that triggered the adoption of the new laws and the public perception of the laws. Part I also provides historic context for the conflicting views surrounding land ownership that allowed the legislation to pass. Part II introduces the trespass laws as a new kind of Ag Gag law, fully analyzes why the statutes violate the First Amendment’s Petition and Free Speech Clauses, and briefly discusses the ongoing case in the United States District Court for the District of Wyoming between WWP, National Press Photographers Association, Natural Resources Defense Council (NRDC), People for the Ethical Treatment of Animals (PETA), and Center for Food Safety against the Attorney General of Wyoming, the Director of the WDEQ, and other state officials. This Note concludes by describing the practical effect of the laws—stifling public participation.

I. RELEVANT BACKGROUND

A. Description of the New Trespass Laws

The Wyoming legislature passed two new laws in 2015. The first created a civil cause of action for trespassing to unlawfully collect resource data or unlawful collection of resource data. The second, more controversial law, created the crime of trespassing to unlawfully collect resource data or unlawful collection of resource data. Both the criminal law and the civil law mirror one another and only differ in the resultant penalties. The laws both provide for two actionable offenses. The first is trespassing to unlawfully collect resource data, which provides that a person is guilty of trespassing to unlawfully collect resource data if he or she “enters onto open land for the purpose of collecting resource data” without permission or statutory authority with the intention of submitting that data to a state or federal government agency. This means that someone who enters open land merely intending to collect resource data can be found guilty or liable. The provision also prohibits a person from

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16. Complaint for Declaratory and Injunctive Relief, supra note 5, at 3.
18. Id. § 6-3-414.
19. Id. §§ 6-3-414, 40-27-101.
20. Id.
crossing open land to collect resource data on adjacent lands, and it does not specify that the open land must be private open land.

The civil and criminal statutes both define open land as “land outside the exterior boundaries of any incorporated city, town, subdivision . . . or development.”21 “Collect” is defined as “to take a sample of material, acquire, gather, photograph, or otherwise preserve information in any form from open land which is submitted or intended to be submitted to any agency of the state or federal government.”22 An essential element is submittal or intent to submit data to the government. A person who enters open land and collects water samples or other resource data for their own personal use would not be liable or guilty under the statutes. “Resource data” is defined to mean data relating to land or land use, including but not limited to data regarding agriculture, minerals, geology, history, cultural artifacts, archeology, air, water, soil, conservation, habitat, vegetation or animal species. ‘Resource data’ does not include data:

(A) For surveying to determine property boundaries or the location of survey monuments;
(B) Used by a state or local governmental entity to assess property values;
(C) Collected or intended to be collected by a peace officer while engaged in the lawful performance of his official duties.23

The second component of both laws is unlawful collection of resource data, which creates a civil or criminal action for collecting resource data from private open land without proper authorization.24 The only difference between the civil and criminal statutes is the penalties. The penalties for the crime of trespassing to unlawfully collect resource data and unlawful collection of resource data are imprisonment for up to one year, a fine of up to $1,000, or both.25 A repeat offender may be imprisoned for no less than ten days, nor more than one year, given a fine of no more than $5,000, or both.26 A person who trespasses to unlawfully collect resource data or unlawfully collects resource data is liable in a civil action for all

22. Id. §§ 6-3-414(d)(i), 40-27-101(d)(i).
23. Id. §§ 6-3-414(d)(iv), 40-27-101(d)(iv).
24. Id. §§ 6-3-414, 40-27-101.
25. Id. § 6-3-414.
26. Id.
consequential and economic damages caused by the trespass, as well as litigation costs. However, both the civil and criminal laws include a provision stating that any data collected during an unlawful trespass may not be used as evidence in any civil, criminal, or administrative proceeding. Any governmental agency in possession of resource data collected unlawfully must expunge the data from its records. For example, water samples collected from public lands that would normally be evidence in an action against a polluter must be thrown out if the data collector crossed over private lands to reach the stream.

The new trespass laws place restrictions on access to private and public lands that go beyond those imposed by Wyoming’s preexisting trespass statute. Wyoming’s general trespass statute provides that a person is guilty of trespass if he “enters or remains on or in the land or premises of another person knowing he is not authorized to do so.” Notice of private property is given by a personal communication from the landowner or by posting of signs “reasonably likely to come to the attention of intruders.” Under this standard trespass law, a person entering property to collect resource data could only be guilty of trespass if he or she knowingly entered property owned by another. The new laws are problematic because they do not include any provisions on notice or intent, implying that a person who unknowingly or unintentionally trespasses, perhaps on unposted land, while attempting to collect resource data may be guilty or liable.

The patchwork of private and public ownership that characterizes Wyoming’s open land increases the unfairness from lack of notice or intent requirements in the new statutes. The uncertainty over whether a citizen may or may not enter open land to collect resource data discourages him or her from doing so for fear of criminal prosecution or civil liability, even though that entry may be legal under the new laws. So, what led the Wyoming legislature to adopt these laws that carve out such a narrow exception to the standard state trespass law?

27. Id. § 40-27-101.
28. Id. §§ 6-3-414, 40-27-101.
29. Id.
30. Id. § 6-3-303 (emphasis added).
31. Id.
32. See Wyoming v. Livingston, 443 F.3d 1211, 1216 (10th Cir. 2006) (alleging that Defendants violated Wyoming Statute § 6-3-303(a) when they knowingly entered the land of another without authorization).
B. Litigation that Prompted the New Trespass Laws

In June of 2014, a group of 15 Wyoming ranchers filed a trespass suit against WWP, Jonathan Ratner in his individual capacity and as director of WWP, and John Does 1 through 10. They alleged that in June of 2005 and May of 2010, Ratner submitted water samples that prove that he trespassed in the course of collecting those samples. Ratner submitted the samples to WDEQ to have the stream added to the CWA’s 303(d) list of impaired waters because the stream’s E. coli levels exceeded the federal limit by up to 200 times. The ranchers argued that Ratner could not possibly have reached the federal lands from which he took the samples without using their private road. Ratner, on the other hand, maintained that he accessed the stream through public access easements.

Ratner filed a motion to dismiss on December 11, 2014, arguing that

1. The ranchers failed to state a claim on which relief can be granted;
2. Any claim of trespass before June 2010 is barred by the statute of limitations;
3. The use of a road crossing private property is presumptively permissive and does not constitute a trespass;
4. Ratner and WWP have acquired prescriptive easements;
5. Ratner used existing right of way easements to cross the ranchers’ land;
6. The Doctrine of Public Necessity insulates Ratner against trespass claims;
7. Ratner can cross the ranchers’ private land if it is the only way to access public waters;
8. Equitable estoppel requires dismissal of the ranchers’ claims;

35. Budd-Falen Law Offices, supra note 33.
36. Id.; Jeremy P. Jacobs, High-Stakes Suit Pits Ranchers Against Water-Sampling Greens, E&E Pub., LLC (Nov. 18, 2014), https://perma.cc/4VKZ-3PX7; Defendant’s Memorandum of Points and Authority in Support of Motion to Dismiss at 2, Frank Ranches v. Ratner, No. 40007 (D. Wyo. Dec. 11, 2014) [hereinafter Defendant’s Motion to Dismiss].
37. Jacobs, supra note 36.
38. Id.
9. The ranchers have unclean hands.\textsuperscript{39}

The case is still ongoing in the District Court of Wyoming, but led in part to the Data Trespass laws.

Following enactment of the new trespass laws in early 2015, members of the public were quoted in the media expressing concern that the new laws could make it a crime to take photographs in national parks.\textsuperscript{40} While proponents of the legislation contend that the laws cannot apply to federal lands because Wyoming has no jurisdiction over those lands, the overbroad language of the statutes encompasses federal lands and could impact public state lands. \textsuperscript{41} Others argue that the laws stifle First Amendment rights and were designed to punish whistleblowers. \textsuperscript{42} On the other hand, some support the laws because they strengthen private property rights. Ranchers are tired of biased public interest groups “trespassing” over their lands to take samples in an attempt to put the ranchers out of business. \textsuperscript{43} Despite the mixed reactions to the new laws, there have not been any complaints or charges filed under the laws, so it is unclear how they will be implemented absent litigation interpreting the statutes. However, the laws will likely both strengthen private property rights and, because they also apply to some public open lands, silence environmental interest groups in violation of the First Amendment.

\textbf{C. Land Ownership in Wyoming}

History and politics have complicated the pattern of land ownership in the West. To promote western expansion in the nineteenth century, the federal government encouraged the construction of rail lines through the West by granting every other 640-acre parcel along rail corridors to a railroad company. \textsuperscript{44} The hope was that the lands remaining with the government would increase in value as the companies built rail lines, which the government would later sell at high prices. The plan was successful further east, but the government struggled to sell the lands in the arid

\begin{itemize}
\item \textsuperscript{39} Defendant’s Motion to Dismiss, \textit{supra} note 36, at 3–24.
\item \textsuperscript{40} Justin Pidot, \textit{Forbidden Data: Wyoming Just Criminalized Science}, SLATE (May 11, 2015, 10:04 AM), https://perma.cc/SJD3-LWRM.
\item \textsuperscript{42} \textit{Id.}
\item \textsuperscript{43} Budd-Falen Law Offices, \textit{supra} note 33.
\item \textsuperscript{44} CTR. FOR W. PRIORITIES, \textit{LANDLOCKED: MEASURING PUBLIC LAND ACCESS IN THE WEST} 5 (2013), https://perma.cc/H93R-JKZJ.
\end{itemize}
West.\textsuperscript{45} The result of this failed venture is the checkerboard pattern of public and private land that now plagues much of the West.

Gaining legal access to the checkerboard lands is difficult because crossing from one corner of public land to the corner of another public land is not allowed.\textsuperscript{46} Although there are no state or federal laws that address these “corner crossings,” BLM does not consider them legal entries.\textsuperscript{47} Consequently, Montana, Wyoming, New Mexico, Colorado, Utah, and Idaho each have over 150,000 acres of public lands that the public cannot access.\textsuperscript{48} Montana alone has nearly 2 million landlocked acres, followed by Wyoming with over 750,000 acres of landlocked public land that the public can only legally access through easements.\textsuperscript{49} This maze of private open lands, public open lands, private roads, and public easements makes it very difficult to determine whether a person is permitted to access property, and the new statutes do not require knowledge that one is trespassing in order to be convicted.\textsuperscript{50}

Politics are yet another factor that complicate land ownership in Wyoming. The history of public land ownership in the West is rife with conflicts, the most significant of which is the conflict between the state and the federal government for control of western lands. The federal government retained ownership and control over a large portion of western lands throughout much of the nineteenth century and granted Congress the authority to regulate the lands to promote development.\textsuperscript{51} As western states joined the union, however, they sought control over the federal lands within their own boundaries, typically to exploit the natural resources within the state.\textsuperscript{52}

Conflicts between the federal government and the states over management of the federal public lands resulted in four Sagebrush Rebellions.\textsuperscript{53} These Rebellions sought to address issues such as water rights, forest management, grazing fees, and resource exploitation.\textsuperscript{54} The

\textsuperscript{45} Id.
\textsuperscript{46} BUREAU OF LAND MGMT., WYOMING PUBLIC LAND ACCESS GUIDE 1, 2 (2013), https://perma.cc/T532-4XJL.
\textsuperscript{47} Id. at 2.
\textsuperscript{48} Id. at 3.
\textsuperscript{49} Id.
\textsuperscript{50} WYO. STAT. ANN. §§ 6-3-414, 40-27-101.
\textsuperscript{52} Id. at 15.
\textsuperscript{53} See id. at 14–18 (describing the causes and results of the four Sagebrush Rebellions from the 1880s until the late 1970s).
\textsuperscript{54} Id. at 15–17.
end result of these Rebellions was increased federal regulatory presence on western lands and the landowners’ lingering desire to have federal lands within state boundaries pass into state ownership. By the end of the four Sagebrush Rebellions, a new group surfaced claiming an interest in western lands—environmentalists seeking to prevent landowners from overexploiting resources. These divergent viewpoints finally clashed in the form of the Data Trespass laws.

D. Livestock Grazing in Wyoming

The tensions between environmentalists, ranchers, federal land agencies, and proponents of state land ownership are very apparent in Wyoming today. The federal government owns over 30 million acres of land in Wyoming, just under half of the state’s area; the state owns 3.6 million acres. Wyoming lawmakers are currently studying the effects on the state of a potential transfer of federal lands into state ownership. Local governments are split over the issues of grazing rights and conservation. Livestock, especially cattle ranching, is a vital component of Wyoming’s economy. In 2014, cattle production was valued at over $937 million. Wyoming had 11,400 farms and ranches in operation in 2014, and the cattle industry accounted for over half of all cash receipts in that year. Private grazing fees in 2014 averaged $21.00 per month, per head. Grazing fees on Wyoming’s trust lands were set at $4.64 in 2010 and generated around $5 million that year. Federal grazing fees are on average much lower than private and state grazing fees; in 2013 and 2014, federal grazing fees were

55. Id. at 16–17.
56. Id. at 18.
57. Id. at 1; CONG. RESEARCHerv., FEDERAL LAND OWNERSHIP: OVERVIEW AND DATA
58. Gregory Nickerson, Local Governments Take Sides in Transfer-of-Federal-Lands
59. Id.; see generally Memorandum of Agreement Between the State of Wyo. Dep’t of
   Env’tl. Quality & the U.S. Env’tl. Prot. Agency Region VIII (June 30, 1975), https://perma.cc/AB6T-
   LAEU [hereinafter Memorandum of Agreement] (outlining Wyoming’s agreement to issue and monitor
   NPDES permits).
60. NAT’L AGRIC. STATISTICS SERV., U.S. DEP’T OF AGRIC., WYOMING 2015
61. Id. at 22.
62. Id. at 25.
63. U.S. DEP’T OF INTERIOR, ECONOMIC REPORT FISCAL YEAR 2012, CHAPTER 8: FORAGE
   AND LIVESTOCK GRAZING 63 (2012).
set at the legal minimum of $1.35. Undoubtedly, the livestock industry benefits Wyoming’s economy, but it is not without costs.

Environmentalists are concerned about the devastating effects that livestock grazing has on Wyoming’s lands and waters. Grazing has damaged 80 percent of the streams and riparian ecosystems in the western United States. In 2000, Wyoming produced around 11 million tons of cattle waste, which is a significant source of pollutants like phosphorus, nitrogen, and bacteria. Increased bacteria and protozoa in streams are dangerous to humans because exposure through swimming or other contact can cause disease. Bacteria and protozoa enter streams directly from fecal matter and fecal runoff. Also injurious to water quality are buried microorganisms churned up by cattle hooves. Ranchers can solve these problems in large part by building fences to keep cattle away from streams.

In addition to directly threatening human health, poor grazing practices also adversely impact water species. Allowing cattle to graze on riparian lands destroys streamside vegetation and the shade it provides for the water, resulting in increased water temperature from greater sun exposure and threats to coldwater species. Birds and mammals also suffer from lost riparian habitat and lost food sources. Several states have enacted laws to protect the agricultural industry and stop citizens from investigating such environmental harms under the guise of protecting private property rights. Wyoming joined this group of states when it passed the new trespass laws seemingly to stifle environmentalists and to protect the profitable ranching industry.

64. Christine Glaser et al., Costs and Consequences: The Real Price of Livestock Grazing on America’s Public Lands, CTR. FOR BIOLOGICAL DIVERSITY (Jan. 2015), https://perma.cc/4GS4-EGPP.


66. John Carter, Stink Water: Declining Water Quality Due to Livestock Production, in WELFARE RANCHING: THE SUBSIDIZED DESTRUCTION OF THE AMERICAN WEST 189, 191 (George Wuerthner & Mollie Matteson eds., 2002); see WYOMING 2012 AGRICULTURAL STATISTICS, supra note 60, at 39 (suggesting that the number is likely lower today because the number of cattle in the state has declined).

67. Belsky et al., supra note 65, at 182.

68. Id.

69. Id.

70. Id.

71. Id.
II. FIRST AMENDMENT ANALYSES OF AG GAG LAWS

A. Idaho’s Invalidated Ag Gag Law

A First Amendment analysis of Idaho’s recently invalidated Ag Gag law strengthens the argument that Wyoming’s trespass law would also fail First Amendment scrutiny. Idaho was the eighth state to pass a law with the underlying motive of punishing citizens for reporting harmful agricultural practices. Idaho’s law and seven other state laws address citizens knowingly trespassing, gaining access to agricultural facilities through misrepresentation, or damaging agricultural facilities. While Wyoming’s laws are different because they address trespass to open land rather than a facility, they fit under the Ag Gag umbrella because the legislative intent was to silence speech that the legislature finds unfavorable. In particular, Idaho’s statute on “interference with agricultural production” is interesting to compare to Wyoming’s new statutes because the United States District Court for the District of Idaho recently deemed Idaho’s statute unconstitutional in Animal Legal Defense Fund v. Otter on August 3, 2015. The statute at issue stated:

(1) A person commits the crime of interference with agricultural production if the person knowingly:
(a) Is not employed by an agricultural production facility and enters an agricultural production facility by force, threat, misrepresentation or trespass;
(b) Obtains records of an agricultural production facility by force, threat, misrepresentation or trespass;
(c) Obtains employment with an agricultural production facility by force, threat, or misrepresentation with the intent to cause economic or other injury to the facility’s operations, livestock, crops, owners, personnel, equipment, buildings, premises, business interests or customers;

74.  Id.
75.  See Complaint for Declaratory and Injunctive Relief, supra note 5, at 4 (quoting Wyoming legislators who referred to the groups that inspired the new trespass laws as activists, extremists, nefarious, and evil); Animal Legal Defense Fund v. Otter, 118 F. Supp. 3d 1195, 1201 (D. Idaho 2015) (referring to a supporter of the bill who called the groups “terrorists and insinuated that their investigations were defamatory”).
(d) Enters an agricultural production facility that is not open to the public and, without the facility owner’s express consent or pursuant to judicial process or statutory authorization, makes audio or video recordings of the conduct of an agricultural production facility’s operations; or
(e) Intentionally causes physical damage or injury to the agricultural production facility’s operations, livestock, crops, personnel, equipment, buildings or premises. 77

In its opinion, the court employed a three-step First Amendment analysis. First, the plaintiff bears the burden of demonstrating that the First Amendment applies to the prohibited activity. 78 If the plaintiff meets this burden, the court then analyzes the context in which the expression took place to determine which First Amendment standards apply. 79 Under the final step, the court evaluates whether the state’s reasons for restricting the expression satisfy the applicable First Amendment standards. 80

The court found that the statute’s misrepresentation clause triggers the First Amendment, stating that a deception under Idaho’s statute would not cause a legally cognizable harm that the First Amendment does not protect, such as fraud or perjury. 81 The greatest harm that would result from a communication that the statute prohibits would arise from publishing a damaging story about a facility’s abusive practices. 82 The First Amendment was designed to protect exactly this type of speech that exposes misconduct and promotes dialogue on public-interest issues. 83

Under step two, the court found that the audiovisual recording provision discriminates both on content and on viewpoint, triggering the highest level of scrutiny. 84 Idaho argued that the audiovisual recording provision was not content-based because it did not regulate what was said, only where it was said. 85 This argument did not convince the court. The court reasoned that a person could not be prosecuted under the statute for merely standing in an agricultural facility but could, however, face up to a year in jail if the person then filmed animal abuse within the facility.

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Idaho Code § 18-7042.
Animal Legal Defense Fund, 118 F. Supp. 3d at 1202.
Id.
Id.
Id. at 1203.
Id. at 1204.
Id.
Id. at 1203–04.
Id. at 1205.
without the owner’s consent. Furthermore, a law can be content-based if the underlying purpose of the law is to suppress specific ideas. The legislative history of Idaho’s law reveals that its purpose was to protect agricultural facility owners by suppressing speech that criticized agricultural work practices. The court also found that the Idaho statute discriminated based on viewpoint because the effect of the consent provision was to “burden speech critical of the animal-agricultural industry.” Viewpoint-based restrictions also trigger the highest level of scrutiny.

Under the third step, because it was a content-based restriction, the court would only uphold the law if it was narrowly tailored to fulfill a compelling state interest. The court held that an interest in protecting personal privacy and private property was an important interest, but not a compelling interest under the context presented. Idaho erred in upholding the private property interests of agricultural production facilities—a heavily regulated industry—over the public’s interest in the safety of the food supply, the humane treatment of animals, and worker safety, which should be subject to public scrutiny. Even if protecting private property was a compelling interest, the statute was not narrowly tailored to fulfill that interest; Idaho already has civil and criminal laws that protect private property rights without violating free speech. Although Wyoming’s laws differ from Idaho’s, the similarities between the two strengthen the argument that Wyoming’s laws should be invalidated on First Amendment grounds.

B. Litigation over Wyoming’s Data Trespass Laws

WWP and several interested groups sued the Governor of Wyoming, the Attorney General of Wyoming, and various Wyoming government officials on September 29, 2015. WWP’s complaint raised various claims, including violations of the Free Speech and Petition Clauses of the First Amendment, violation of the Equal Protection Clause, and a preemption.

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86.  Id. at 1205–06.
87.  Id. at 1206.
88.  Id.
89.  Id. at 1207.
90.  See Animal Legal Defense Fund, 118 F. Supp. 3d at 1207.
91.  Id.
92.  Id.
93.  Id. at 1208.
94.  Id. at 1208.
95.  Complaint for Declaratory and Injunctive Relief, supra note 5.
The Wyoming Defendants filed a motion to dismiss and the United States District Court for the District of Wyoming filed an order granting in part and denying in part defendants’ motion to dismiss on December 28, 2015. This order dismissed the Governor as an improper defendant, but upheld the majority of WWP’s claims and began an analysis of the Free Speech and Petition Claims.

1. Claim Under the Free Speech Clause

   a. Legal Framework

   Although Wyoming’s Data Trespass laws are distinguishable from Idaho’s Ag Gag law, a similar First Amendment framework applies. The Idaho District Court opinion provides a helpful—although by no means controlling—analysis of an ag gag law and set of facts resembling the challenge against Wyoming’s trespass statutes. Additionally, the Wyoming District Court’s order on defendants’ motion to dismiss provides a thorough analysis of the Data Trespass statutes using First Amendment Supreme Court cases.

   Under step one of the First Amendment analysis, Wyoming’s laws must prohibit protected speech to trigger the First Amendment. Next, the Court uses the public or nonpublic nature of the forum to determine which First Amendment standard applies. If the forum is public, the Court decides whether the speech restriction is content-based or content-neutral. If the forum is nonpublic, the Court must decide whether the restriction is viewpoint-based or viewpoint-neutral. Under the third and final step, the Court then decides if the restriction survives under the relevant standard of scrutiny.

   A content-neutral restriction is subject to intermediate scrutiny, meaning that the restriction must further a substantial government interest

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96. Id. at 51–67; see Order Granting in Part and Denying in Part Defendants’ Motion to Dismiss at 17, 21–23, 33, Western Watersheds Project v. Att’y Gen., 15-CV-00169-SWS (D. Wyo. Dec. 28, 2015) (analyzing the substantive claims and dismissing the preemption claim because the trespass statutes do not conflict with the participation requirements under federal law).
97. See id. at 1.
98. See id. at 22 (dismissing Plaintiffs’ preemption claim and assessing the merits of Plaintiffs’ other substantive claims).
99. Id. at 28 (assessing the merits of Plaintiffs’ claims).
100. Id.
102. Id.
104. Id., 473 U.S. at 806.
105. Id. at 797.
and leave open alternative avenues of communication. A content-based restriction is subject to strict scrutiny and will only survive if it is the least restrictive means to further a compelling government interest. A viewpoint-neutral restriction must be reasonable, while a viewpoint-based restriction is subject to strict scrutiny. In the order on defendants’ motion to dismiss, the Wyoming District Court included a third level of scrutiny in the First Amendment analysis—an “exacting scrutiny” that applies to a restriction that burdens “core political speech.”

b. Analysis of Content-Based Restrictions

Both parties acknowledge that the new trespass statutes restrict protected speech and therefore trigger the First Amendment analysis. Courts have long held that photographs are protected speech under the First Amendment. The definition of “collect” under Wyoming’s challenged laws includes photographing information from open land that is submitted or intended to be submitted to a government agency. This provision suffices to trigger First Amendment protection.

Step two of the analysis identifies the level of scrutiny that the Wyoming laws must survive to remain valid based on the forum of the protected speech. WWP contends that the statutes are content-based restrictions because their prohibitions “apply only to a person who communicates or intends to communicate resource data on matters of public concern.” Additionally, WWP claims that the statutes are viewpoint-based because their prohibitions apply only to a person who collects resource data from open land without authorization. Authorization is given by the landowner, who consequently controls who may submit resource data to the government and is unlikely to authorize collecting unfavorable resource data.

108. McCullen, 134 S. Ct. at 2530; Cornelius, 473 U.S. at 808.
109. Order Granting in Part and Denying in Part Defendants’ Motion to Dismiss, supra note 96, at 28.
110. Id.
111. See United States v. Stevens, 559 U.S. 460, 468 (2010) (declaring that a statute prohibiting photographs, videos, or sound recordings that depict animal cruelty to be content-based restrictions under the First Amendment).
113. Complaint for Declaratory and Injunctive Relief, supra note 5, at 55.
114. Id.
115. Id.
The Wyoming District Court did not decide whether exacting, strict, or intermediate scrutiny applies, nor did it decide whether the forum was public or nonpublic because WWP’s Free Speech claim is plausible “under even the most lenient scrutiny.”116 The court analyzed Wyoming’s trespass statutes under the content-neutral (intermediate scrutiny) standard that applies to public forums and also briefly discussed whether the statutes were impermissibly motivated by the desire to suppress a certain viewpoint under the nonpublic forum standard.117

Wyoming argued that the statutes are content-neutral because they are “aimed at secondary effects of the speech” and were written in response to complaints from landowners about frequent trespassers entering their land for the purpose of collecting resource data to submit to regulatory agencies.118 Wyoming claims that, for this reason, the statutes’ primary aim is to prevent illegal trespass.119 The Wyoming District Court agreed with Wyoming that preventing illegal trespass is a substantial government interest, so the laws must be narrowly tailored to further that interest to survive intermediate scrutiny.120

Wyoming’s assertions about the purpose of the statutes raise two major issues about the illegality of the trespasses that they aim to prevent. First, Wyoming already has an existing statute to prevent trespass that requires a person knowingly enter private land to be guilty of trespass.121 A person accidentally wandering onto unposted open land to collect resource data could not be found guilty under the existing trespass statute. For this reason, Wyoming cannot argue that the new trespass statutes were in response to complaints about illegal trespass if those entries onto unposted land by resource data collectors were not illegal under the existing trespass statute.

Second, the new statutes’ provisions on public open lands do not further the interest of preventing illegal trespass. The public has the right to enter and use many public lands for recreational purposes. As the Wyoming District Court reasoned, “detering people from collecting resource data on public lands does nothing to deter people from trespassing.”122 If simply

117. Id. at 29–31.
118. Id. at 29.
119. Id.
120. Id.
121. See WYO. STAT. ANN. § 6-3-303 (“A person is guilty of criminal trespass if he enters . . . the land or premises of another person, knowing he is not authorized to do so.”).
122. Order Granting in Part and Denying in Part Defendants’ Motion to Dismiss, supra note 96, at 30.
wandering onto open land by itself is not a trespass, the additional action of collecting resource data on that land should not make it one.

The District Court found that the lesser mens rea and the requirement that agencies expunge any resource data collected illegally under the new trespass statutes casts enough doubt on Wyoming’s assertion that the statutes were passed solely to prevent trespass. The Court found that WWP stated a plausible claim even under the intermediate scrutiny standard but did not answer the ultimate question of whether the state interest of preventing illegal trespass justifies the restrictions on speech. The Idaho District Court in Animal Legal Defense Fund provides guidance for courts to consider when weighing the state interest against the restrictions on speech. The court reasoned that protecting the interests of a heavily regulated industry cannot contravene the public’s interest in the “safety of the food supply, worker safety, and the humane treatment of animals.” A similar reasoning applies in analyzing the Data Trespass statutes. Preventing illegal trespass is an important state interest, but it is not more important than the public’s interest in protecting the state’s lands and waters—especially when a landowner’s expectation of privacy is limited on unposted open land.

The Wyoming District Court did not answer the question of whether the Data Trespass laws are content-based or content-neutral, but instead, chose to analyze the statutes under the most lenient level of scrutiny for content-neutral restrictions. However, WWP argues that the statutes are content-based because they apply only to a person communicating resource data and are, therefore, subject to strict scrutiny.

The underlying purpose of the Data Trespass laws is to suppress the collection of resource data that, if submitted to the government, could harm Wyoming’s livestock industry. The Wyoming legislature enacted the laws shortly after WDEQ added three streams to a list of impaired waters and Frank Ranches v. Ratner commenced. Additionally, WWP’s complaint states that during legislative debates for the Data Trespass statutes, various legislators referred to groups like WWP as activists, extremists, and

123. Id. at 31–32.
124. Id. at 30.
126. See Order Granting in Part and Denying in Part Defendants’ Motion to Dismiss, supra note 96, at 29 (“Plaintiffs state a plausible claim under even the most lenient scrutiny.”).
127. Complaint for Declaratory and Injunctive Relief, supra note 5, at 55.
128. See id. at 3 (arguing that the Wyoming legislature enacted the new statutes because WWP’s data led the Wyoming DEQ to add three streams to the impaired waters list in 2012); see Budd-Falen Law Offices, supra note 33 (announcing Frank Ranches v. Ratner on June 11, 2014).
nefarious. This suggests that the Wyoming legislature passed the laws in an attempt to suppress groups like WWP that the legislature believes harbor negative feelings about the livestock industry and ranchers’ work practices.

The laws only apply to a person entering open land to collect resource data and give the landowner ultimate control over who is authorized to enter the land and what data that person can collect. Whether a landowner authorizes the data collection will likely depend on what the landowner thinks the collector will find. Additionally, the provision that requires agencies to expunge any data collected unlawfully under the statutes suggests that the laws are more about restricting the contents of the communication than they are about preventing trespass. These facts support the argument that the laws are content-based because the underlying purpose of the regulation is to suppress a particular topic or idea.

For the same reasons that the statutes would likely not survive intermediate scrutiny, they would also fail under strict scrutiny.

c. Analysis of Viewpoint-Based Restrictions

In addition to claiming that the Data Trespass statutes restrict protected speech based on content, WWP also classifies the statutes as viewpoint-based restrictions. The Wyoming District Court in its order granting in part and denying in part defendants’ motion to dismiss did not explicitly rule on whether the trespass statutes were viewpoint-based or view-point neutral but did find that WWP “sufficiently called the viewpoint neutrality of the statutes into doubt.” The court found that the damages provision under the civil statute “appears to identify a desire to suppress a particular content or viewpoint of speech.” Under that provision, a trespasser is liable for “all consequential and economic damages proximately caused by the trespass.” Basically, a trespasser would only be liable for consequential damages that resulted from reporting environmental violations but would not be liable for any damages if he reported resource data in compliance with environmental regulations because no harm would result. Furthermore, the court found that the existence of a statute already

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129. Complaint for Declaratory and Injunctive Relief, supra note 5, at 4.
131. See Reed v. Town of Gilbert, 135 S. Ct. 2218, 2227 (2015) (“Government regulation of speech is content based if a law applies to particular speech because of the topic discussed or the idea or message expressed.”).
133. Order Granting in Part and Denying in Part Defendants’ Motion to Dismiss, supra note 96, at 30.
134. Id.
designed to prevent trespass casts doubt on the neutrality of the statutes’ viewpoint.\textsuperscript{136} 

A regulation is a viewpoint-based restriction when it “makes it likely that prosecution will occur based on displeasure with the position taken by the speaker.”\textsuperscript{137} WWP’s complaint cites one senator referring to the incident between WWP and several ranchers as an “attack on property rights” by “a group of people that don’t necessarily see [things] the same way.”\textsuperscript{138} Furthermore, citizens cannot enter open land to collect resource data unless they have legal authorization or written or verbal permission to collect the “specified resource data.”\textsuperscript{139} The landowner can deny someone access to any resource data that the owner worries does not comply with environmental regulations. This all suggests that the statutes are an attempt to prevent citizen scientists from communicating unfavorable information about poor land conditions and water quality on open land to government agencies. If a court deems the Data Trespass statutes viewpoint-based restrictions, they would fail under strict scrutiny.

2. Claim Under the Petition Clause

WWP’s second First Amendment claim is that the Data Trespass laws violate the Petition Clause, which prohibits laws that abridge the right of the people “to petition the Government for a redress of grievances.”\textsuperscript{140} In its order on defendants’ motion to dismiss, the Wyoming District Court focused mainly on whether this claim should be analyzed together with, or separate from, the Free Speech Clause claim.\textsuperscript{141} It did not reach a decision on this issue and instead simply ruled that WWP’s Free Speech Clause claim was sufficient to state a claim for relief under the First Amendment.\textsuperscript{142} If the two claims are analyzed separately, however, the Data Trespass statutes directly violate the Petition Clause.

The statutes specify that a person must submit or intend to submit resource data to an agency of the state or federal government to violate them.\textsuperscript{143} The statutes also require that the government expunge from its records and disregard any data collected in violation of the statutes in

\begin{itemize}
  \item[136.] Order Granting in Part and Denying in Part Defendants’ Motion to Dismiss, \textit{supra} note 96, at 31.
  \item[138.] Complaint for Declaratory and Injunctive Relief, \textit{supra} note 5, at 4.
  \item[140.] \textit{U.S. Const.} amend. 1.
  \item[141.] Order Granting in Part and Denying in Part Defendants’ Motion to Dismiss, \textit{supra} note 96, at 33.
  \item[142.] \textit{Id.}
\end{itemize}
enforcement proceedings. Both of these provisions directly inhibit the public’s right to communicate concerns over harmful agricultural practices to the government and impede government agencies’ ability to correct harmful practices.

III. WYOMING’S LAWS VIOLATE PUBLIC PARTICIPATION REQUIREMENTS

In addition to the Petition Clause protecting the right of citizens to communicate with their government, various statutory provisions require the government to encourage and facilitate public participation in environmental decision-making and enforcement. While the Data Trespass laws do not expressly forbid citizens from collecting environmental resource data, they do discourage public participation in that process.

Specifically, the laws make it more difficult for NGOs like WWP, that have no statutory authority to enter private lands or open lands, to collect resource data because they now need express permission from a landowner to enter unposted open land or risk civil or criminal liability. Even if a group receives funding from a federal or state agency to collect data, such as academic researchers, these statutes require group members to get permission from the landowner to access the lands. The University of Wyoming’s Office of Research and Economic Development has dedicated a portion of its website to information about the new laws and provides permission forms for the University’s researchers to fill out to ensure legal access to both private and state lands. These forms request permission both to enter property and to collect specified resource data to ensure that the data is not thrown out.

While it is legitimate to require researchers to obtain permission from a landowner to knowingly enter private posted land, it is much less reasonable to require permission to enter or traverse open land when the researcher has no notice that the land is private. Wyoming’s checkerboard pattern of private, state, and federal land ownership exacerbates this issue.

144. Id. §§ 6-3-414, 40-27-101.
145. See 33 U.S.C. § 1318 (2012) ("[T]he Administrator or his authorized representative . . . shall have a right of entry to, upon, or through any premises in which an effluent source is located."); see also WYO. STAT. ANN. § 6-3-414 ("A person is guilty of trespassing to unlawfully collect resource data from private land if he . . . does not have . . . statutory, contractual, or other legal authorization . . . or written or verbal permission of the owner . . . ").
148. Id.
of notice—especially in large areas of open grazing land. The uncertainty over whether a researcher is on private or public land and whether she needs express permission to be on those lands, discourages the public from collecting resource data for fear of criminal prosecution. This effect is directly contrary to the CWA’s goal for states to encourage “public participation in the development, revision, and enforcement of any regulation, standard, effluent limitation, plan, or program.”

Public participation within the CWA includes, “providing access to the decision-making process, seeking input from and conducting dialogue with the public, assimilating public viewpoints and preferences, and demonstrating that those viewpoints and preferences have been considered by the decision-making official.” In addition to private citizens, “the public” under this provision includes, among other groups, environmental organizations, scientific and health societies, and educational associations. States are supposed to encourage public involvement in implementing environmental laws by using “all feasible means” to create opportunities for public participation.

When members of the public discover that an entity is violating an effluent limitation or other statutory provision, they may be entitled to file suit against the violator. Such suits are integral to improving water quality and other environmental standards because many state agencies responsible for enforcing environmental laws lack the resources to correct every violation. WDEQ, the agency responsible for implementing water quality standards throughout Wyoming, lists only eight staff members who are responsible for conducting site inspections for Wyoming Discharge Pollutant Elimination System (WYPDES) permit holders. The State Nonpoint Source Program, which operates through voluntary and incentive methods, is overseen by a taskforce of 13 citizens who represent different interest groups throughout the state.

The lack of professional-staff capacity to handle water quality issues has led citizens to pick up the slack on the issues that administrative

151. Id.
152. Id.
153. See 33 U.S.C. § 1365 (“[A]ny citizen may commence a civil action on his own behalf against any person . . . who is alleged to be in violation of an effluent standard or limitation . . . .”).
agencies fail to address.\textsuperscript{156} For example, water quality samples that WWP has submitted to WDEQ has led WDEQ to list three streams under section 303(d) of the CWA, with five other creeks on a section 303(d) draft list for 2014.\textsuperscript{157} Environmental victories in Wyoming resulting from citizen suits will likely be few and far between in the era of the Data Trespass laws because any resource data collected illegally must be expunged from any government database and disregarded in enforcement proceedings.\textsuperscript{158} With no evidence, there is no case.

Additionally, the CWA requires administrative agencies to provide opportunities for public hearings when issuing or altering NPDES permits.\textsuperscript{159} Although runoff and waste from rangelands are not regulated under the NPDES program because they are nonpoint sources, the overbroad trespass laws reach waterbodies that do fall within the NPDES program. EPA delegated implementation authority of the NPDES permit program to Wyoming, which has charged WDEQ with executing the WYPDES program.\textsuperscript{160} If a state fails to fulfill its obligations enumerated in its implementation plan, citizens can petition to have EPA withdraw its approval of the state’s NPDES program authority.\textsuperscript{161}

A pending petition requesting EPA to withdraw Wyoming’s NPDES program authority addresses Wyoming’s failure to follow public participation requirements.\textsuperscript{162} Specifically, the petition alleges that WDEQ issued permits to discharge pollutants without responding to substantive objections during the public comment period.\textsuperscript{163} The Data Trespass laws would only worsen this problem because WDEQ could not consider any data that a citizen scientist collected illegally under the statutes. Moreover, there would be far fewer substantive comments for agencies to consider because environmental groups will hesitate to enter land to collect resource data for fear of criminal prosecution or civil liability.

\textsuperscript{156} See David R. Hodas, Enforcement of Environmental Law in the Triangular Federal System: Can Three Not Be a Crowd when Enforcement Authority Is Shared by the United States, the States, and Their Citizens?, 54 Md. L. Rev. 1552, 1609 (1995) ("[Citizen suit activity] accounts annually for almost five times the number of judicial actions as the federal government, and is almost equal to the total of all state judicial actions combined.").
\textsuperscript{157} Complaint for Declaratory and Injunctive Relief, supra note 5, at 36.
\textsuperscript{158} WYO. STAT. ANN. §§ 6-3-414, 40-27-101.
\textsuperscript{159} 33 U.S.C. § 1342 (2012).
\textsuperscript{160} Id.; see generally Memorandum of Agreement, supra note 59 (outlining Wyoming’s agreement to issue and monitor NPDES permits).
\textsuperscript{161} 33 U.S.C. § 1342.
\textsuperscript{163} Id. at 32–33.
In addition to controlling point-source pollution, the CWA requires states to identify waters that will not maintain the applicable water quality standard without additional controls on nonpoint sources of pollution.\textsuperscript{164} Plans to bring waters into compliance with standards should use information from local public and private agencies and organizations with expertise in nonpoint sources of pollution to develop best management practices and other controls.\textsuperscript{165} Pollution from grazing lands is a nonpoint source and fits within this statutory provision. The Wyoming legislature likely passed the Data Trespass laws to shield this category of pollution; they apply only on open lands “outside the exterior boundaries of any incorporated city, town, subdivision, or development.”\textsuperscript{166} In addition, the legislature passed the laws shortly after the lawsuit commenced between a group of Wyoming ranchers and WWP after WWP’s data caused Wyoming to add a stream to the 303(d) list of impaired waters.\textsuperscript{167}

Public participation provisions appear throughout the CWA. These provisions ensure public involvement in decision-making and ensure that environmental agencies have complete and accurate data when making decisions on permits, state water quality standards, and enforcement proceedings. Wyoming’s Data Trespass laws violate these provisions because they discourage citizen involvement in data collection and prohibit government agencies from considering any resource data collected illegally under the laws.\textsuperscript{168}

CONCLUSION

The Wyoming legislature claims that it passed the Data Trespass laws to protect private property rights. However, a closer look reveals that the motive behind the laws was to hinder groups like WWP from investigating and reporting harmful agricultural practices. The statutes’ broad language allows them to apply to public lands, putting them within the scope of the First Amendment. The laws violate the Free Speech Clause of the First Amendment because they single out a particular type of speech and are not narrowly tailored to fulfill a compelling governmental interest. The laws also violate the Petition Clause because an entry onto open land only becomes illegal when a citizen communicates or intends to communicate collected resource data to a government agency. Finally, Wyoming’s laws

\begin{thebibliography}{99}
\bibitem{165} \textit{Id.} § 1329(a)(1)(C), (b)(3).
\bibitem{167} Jacobs, \textit{supra} note 36.
\end{thebibliography}
violate public participation provisions in the CWA because they severely discourage citizens from gathering resource data and from taking part in the decision-making process, which is essential to ensuring the safety of state waters.

Landowners, who post notice on their private property or explicitly inform trespassers that their entry is unauthorized, already have an avenue for redress under Wyoming’s pre-existing trespass statute: redress that does not interfere with the public’s ability to collect resource data. The Wyoming legislature missed the mark when it violated the First Amendment and prioritized private property interests over the safety of the state’s waters.